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COMPARATIVE ANALYSIS OF THE STOCK MARKET FOR TRADING GOODS OF COMPANIES IN DIFFERENT SECTORS AS A FACTOR IN THE DEVELOPMENT OF RETAIL AND PRODUCT PROMOTION

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ABSTRACT:

Retail occupies special attention in the process of formation and development of economic relationships between various business entities. For these purposes, it is advisable to study the dynamics of shares of individual trading companies in the context of various sectors of the economy. Based on this, the work examines the initial data for such companies, and also analyzes their mutual dynamics. The work presents a variety of graphs and diagrams that allow you to understand the progress of the study and evaluate the results obtained.

Key words: Retail, Quotes, Shares, Analysis, Comparison, Dynamics, Stock market, Product promotion, Economic sectors

INTRODUCTION

Trade in goods is one of the processes of development of economic relations between various business entities and consumers. This process is the stage when the produced product finds its consumer [1], [2].

During this process, there is also a movement of financial resources in the form of individual payments and taxes. This fills and ensures the continuity of the movement of the corresponding financial flows of a number of economic agents [3]-[6]. The retail process is also the basis for the functioning of various trading platforms. This, in turn, ensures employment and the development of relevant related processes. This determines the relevance of this work, its scientific and practical significance.

One of the directions for analyzing the development of retail and product promotion may be the study of stock market data [7]-[9]. Such a market is characterized by the presence of various securities, which allow one to assess the supply/demand ratio and understand the dynamics and characteristics of individual areas of trade. For these purposes, we can consider both the dynamics of individual stock indices and the dynamics of share prices of individual business entities.

Studying quotes for stock indices or shares allows you to consider their dynamics over time and evaluate possible fluctuations. Knowledge of this volatility contributes to the understanding of those processes that are characteristic of markets for certain goods. To carry out such a study, one should use both classical methods and approaches [10]-[20], and those that allow a non-standard approach to the process of studying data, obtaining additional information, and considering new directions in their study [21]-[31].

Here, mutual analysis of various data is also important. This allows you to evaluate the influence of such data on each other.

Thus, the main goal of this work is to conduct a comparative analysis of the stock market for trading goods of companies in different sectors. This also involves conducting a literature review on the research topic. Also an important component in revealing the objectives of the study is the mutual analysis of data, which allows us to evaluate additional conditions in the development of retail and product promotion.

Related work

Retail as a factor in product promotion occupies a special place in the research of various authors. Here you can see both theoretical and practical work. At the same time, in our study, an important element of analysis is the connection with the stock market.

E. K. Kelley and P. C. Tetlock analyze the relationship between retail and stock prices [32]. This analysis is carried out on the basis of short retail sales. The authors show that retail short selling predicts negative stock returns. However, the predictive power of retail short selling remains for one year and is not replaced by institutional short selling [32]. The authors also note that retail short sellers have an understanding of the retail investor community and small firm fundamentals [32]. This is important in promoting products.

K. K. Ullrich and S. Transchel consider the discrepancy between supply and demand in terms of the efficiency of the stock market [33]. At the same time, attention is turning to retail trade. The authors also note that volatility of inventory performance relative to volatility of demand is a predictor of future stock returns. For the purposes of such analysis, the three-factor model of Fama and French is used, which is supplemented by the momentum factor [33]. It is also noted that market inefficiency results from the inability of investors to incorporate all the information contained in stocks into stock valuations.

S. Nuridah, R. M. Sitohang, A. S. Sofura and E. Sagitarius study the relationship between the impact of return on sales and growth on stock price [34]. For this analysis, a purposive sampling method is used. The work examines data for the period 2019-2021. The analytical method used is multiple linear regression, hypothesis testing using t-test to test partial regression coefficients and F-test to test simultaneous coefficients [34]. The results show that the variable return on equity partly does not have a significant impact on stock prices. However, sales growth partially has a positive and significant impact on stock prices. At the same time, variable return on equity and sales growth simultaneously have a positive and significant impact on stock prices [34]. This study is important for understanding the retail and promotion process.

I. G. Putri and H. Rahyuda study the impact of capital structure and sales growth on firm value [35]. Such an analysis is carried out using the return on assets indicator on the value of the company, using a direct and indirect indicator of book value, using the return on assets indicator as an indicator of return on assets [35]. The analysis used reports from 51 consumer goods companies for the period 2013-2018. The results show a relationship between company stock prices and sales growth.

B. Bustani, K. Kurniaty and R. Widianti study the impact of company earnings per share based on data from the Indonesian stock exchange [36]. The paper examines the subsector of food and beverage companies in the period 2014-2018. The study sample consisted of 12 companies out of 26 food and beverage companies that met the researchers' criteria [36]. Statistical equation modeling was used for analysis. The study results confirmed the significant impact of earnings per share.

The diversity of such analysis shows its importance in relation to the topic of research. In this case, various methods and approaches for research can be used.

Dynamics of stock quotes for individual companies

This section examines price dynamics for shares of individual companies, which are listed on the US stock market. In Fig. 1 shows the dynamics of quotes for shares of companies selling consumer goods Kimberly-Clark Corporation (KMB) and General Mills Inc (GIS).

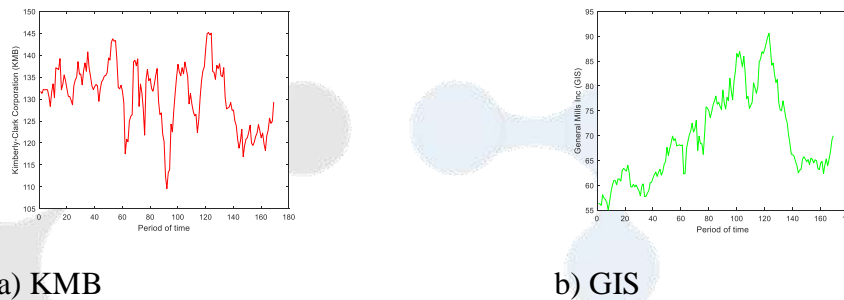


Figure 1: Stock quotes for Kimberly-Clark Corporation and General Mills Inc

In Fig. 2 shows the dynamics of quotes for shares of companies selling computer equipment NetApp Inc and Dell Technologies Inc.

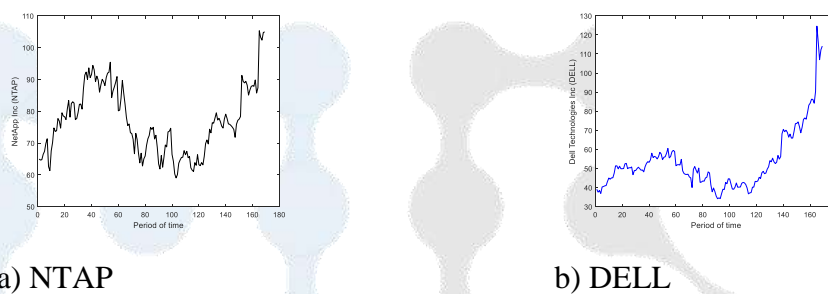


Figure 2: Stock quotes for NetApp Inc and Dell Technologies Inc

For the data in Fig. 1, it is worth noting the diverse dynamics of stock quotes of the relevant companies. The share price of Kimberly-Clark Corporation (KMB) is constantly changing: it goes up and down. This occurs throughout the entire studied interval. At the same time, the dynamics of such changes have been decreasing recently.

At the same time, the dynamics of General Mills Inc (GIS) shares initially increases sharply, but in the last period of the studied interval it also rapidly decreases. Such changes should accordingly be considered as reflecting the dynamics of sales of such goods and their promotion on the market. In the first case, we note the instability of sales, and in the second, the influence of an external factor that caused a decrease in stock prices.

Data Fig. 2 are more consistent than the data in Fig. 1. But at the same time, we see that the share price of NetApp Inc shows a more significant increase in the first third of the period under study than the share price of Dell Technologies Inc. What is the same for these quotes is that in the last third of the period under study the price increases sharply. A manifestation of this growth is most likely an increase in sales of computer equipment.

In Fig. 3 shows the dynamics of stock quotes for companies that retail clothing Dillards Inc and Burlington Stores Inc.



a) DDS

b) BURL

Figure 3: Stock quotes for Dillards Inc and Burlington Stores Inc

In Fig. 3 also shows varied price dynamics for the shares of Dillards Inc and Burlington Stores Inc. Dillards Inc stock quotes are characterized by general growth over the time interval under study.

At the same time, we may see some decline or increase in prices for Dillards Inc. shares. In general, it should be noted that sales for this group of products have increased. This should be taken into account when planning the promotion of such goods, entering the securities market, and forming investment strategies.

Burlington Stores Inc sells branded clothing. This affects the dynamics of the respective shares. One can observe a period of significant decline in demand for branded clothing and, as a consequence, a decrease in stock prices for this company. It should also be noted that there was a period of instability in demand and fluctuations in stock prices. All this is important for taking into account the strategy for promoting goods, the retail process, and entering the stock market.

Thus, we can see the influence of supply/demand on the dynamics of stock quotes of companies associated with the sale of various goods. At the same time, supply/demand is influenced by a number of external factors.

Comparative assessment of the mutual dynamics of the studied data

This section analyzes the mutual dynamics of the data under study. The purpose of such a study is to determine the periods of mutual influence of stock quotes. This will allow you to understand the dynamics of the corresponding segment of the securities market, which is important for developing investment strategies and determining the time to enter the market. In turn, this can be used to optimize the retail process and develop a product promotion strategy.

For the purposes of this study, wavelet ideology is used. Among its methods, wavelet coherence estimation stands out. If we have two series of data ($f(t)$ and $g(t)$), each of which reflects the dynamics of an indicator over time t , then we can determine the value of wavelet coherence between the following series of data using the following formula [37]-[39]:

$$Q^2(a,b) = \frac{|A(a^{-1}W_{f(t)g(t)}(a,b))|^2}{A(a^{-1}|W_{f(t)}(a,b)|^2)A(a^{-1}|W_{g(t)}(a,b)|^2)},$$

where:

$W(a,b)$ – values of transverse wavelet spectra,

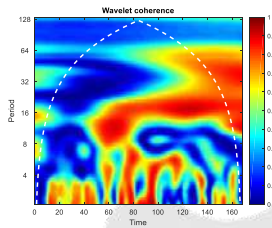
a,b – the scale and center of time localization that determine the scale of the wavelet transform,

$f(t), g(t)$ – series of data that we study,

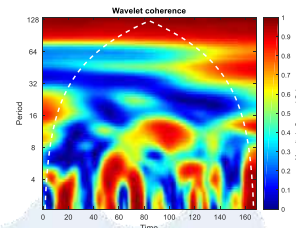
A – smoothing operator,

$Q^2(a,b)$ – square of the wavelet coherence coefficient. $0 \leq Q^2(a,b) \leq 1$. If these values tend to zero, then we have a weak correlation. Otherwise we have a strong correlation [40], [41].

In Fig. 4 shows wavelet coherence estimates for the data in Fig. 1 and Fig. 2.



a) for the data Fig. 1



b) for the data Fig. 2

Figure 4: Wavelet coherence estimates for the data Fig. 1 and Fig. 2

Data Fig. 4 indicate the presence of fragmentary estimates in the relationship between the dynamics of stock quotes for the Kimberly-Clark Corporation/General Mills Inc pair and the NetApp Inc/Dell Technologies Inc pair. In the first case, there is a denser fragmentation of such estimates. However, in the second case, although the fragmentation is not as dense, the assessments are mutual over longer intervals. It is also worth noting the depth of such relationships. This allows you to predict the promotion of goods taking into account the activities of potential competitors.

In Fig. 5 shows wavelet coherence estimates for the data in Fig. 3.

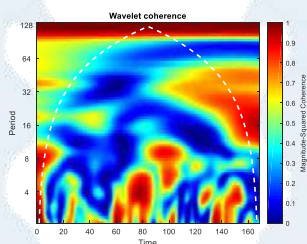


Figure 5: Wavelet coherence estimates for the data Fig. 3

Here it is also worth noting the fragmented relationship in the dynamics of stock prices of Dillard's Inc and Burlington Stores Inc. Moreover, such fragmentation is observed in the middle of the period under study and at the end of such a period. Overall, this suggests little correlation between the stock price movements of Dillard's Inc and Burlington Stores Inc. This is explained by the fact that these companies trade different types of goods.

In general, the presented estimates allow us to speak about the possibility of forecasting in the promotion of relevant products on the market, based on the dynamics of company stock prices.

CONCLUSION

In this paper, attention is paid to a comparative analysis of the stock market for trading goods of companies in different sectors of the economy. Such analysis is proposed to be used for the purposes of retail development and product promotion. To clarify individual aspects of the analysis, a critical analysis of the relevant literature sources was carried out.

Based on the wavelet methodology, the relationship between stock quotes of different companies belonging to the same group that trades the same goods is shown. For these purposes, wavelet coherence estimates are used.

The results obtained should be used to predict the development of the retail market and product promotion, substantiate investment strategies and the timing of entry into the securities market.

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ANALYSIS OF THE IMPACT OF INDIRECT TAXES ON THE FORMATION OF
BUDGET REVENUES IN MULTIFACTOR ECONOMETRIC MODELING

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Abstract: The importance of indirect taxes in the formation of state budget revenues plays a significant role. As a result of the reforms carried out in our country, it can be seen that today we have made a step forward in all areas. Of course, this good news does not exclude news in the tax field. This article describes in detail the factors influencing the effect of indirect taxes on state budget revenues through multifactor econometric modeling.

In developed countries, indirect taxes are relatively less important in their tax structure. In these countries, on average, indirect taxes make up less than 40 percent of total tax revenue. The purpose of indirect taxes in developed countries is to keep the general public in the tax net. Indirect taxes are basically taxes that can be transferred to another legal entity or individual. They are usually charged to the manufacturer or supplier, who then pass the tax on to the consumer. The most common example of an indirect tax is the excise tax on cigarettes and alcohol. Indirect taxes and direct taxes differ in many ways. In our country, the share of indirect taxes in the state budget is more than 40%.

Key words: state budget, tax, indirect taxes, MOLS(EKKU) method, multifactor econometric model, correlation matrix.

Аннотация: Значение косвенных налогов в формировании доходов государственного бюджета играет значительную роль. В результате реформ, проведенных в нашей стране, видно, что сегодня мы сделали шаг вперед во всех сферах. Конечно, эта хорошая новость не исключает новостей в налоговой сфере. В данной статье подробно описаны факторы, влияющие на влияние косвенных налогов на доходы государственного бюджета посредством многофакторного эконометрического моделирования.

В развитых странах косвенные налоги играют сравнительно меньшую роль в их налоговой структуре. В этих странах в среднем косвенные налоги составляют менее 40 процентов совокупных налоговых поступлений. Целью косвенных налогов в развитых странах является удержание населения в налоговой сети. Косвенные налоги – это, по сути, налоги, которые могут быть переданы другому юридическому или физическому лицу. Обычно они взимаются с производителя или поставщика, которые затем перекладывают налог на потребителя. Наиболее распространенным примером косвенного налога является акциз на сигареты и алкоголь. Косвенные налоги и прямые налоги во многом различаются. В нашей стране доля косвенных налогов в государственном бюджете составляет более 40%.

Ключевые слова: государственный бюджет, налог, косвенные налоги, метод ЭККУ, многофакторная эконометрическая модель, корреляционная матрица.

ENTER.

In the global tax practice, it is possible to assess the level of development of the economy of a country depending on the ratio of direct and indirect taxes in the structure of state budget revenues. For example, in the USA, the weight of real taxes in the structure of budget revenues is

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close to 90%, which indicates that this country's economy is highly developed. Indirect taxes include value-added tax, excise tax, customs duty, taxes on the use of gasoline, diesel fuel and gas by individuals for vehicles. The fact that the state budget of the Republic of Uzbekistan has a tendency to increase the social expenses requires the continuous increase of the state budget revenues. As a result of this, it is necessary to ensure a high weight of the budget income from stable sources of income, such as value added tax and excise tax. As mentioned above, direct and indirect taxes form a single tax system and are interconnected. The role of indirect taxes in European countries is higher than in the USA, Japan, Canada and Australia. In European countries, indirect taxes account for more than 40 percent of the total tax revenue, and in some countries it is 50 percent. The group of countries with this indicator above 50 percent includes Mexico, Turkey and Korea. In the USA, Japan, Canada and Australia, this figure is 25-30 percent. [2]

It is known that taxes are directly related to the emergence of the state, that is, the state uses taxes as a financial source to fulfill its tasks. The application of taxes is an objectivity, because not all subjects of society operate in the real sector, that is, in the production sector. There are also sectors in society that are rejected by others or whose activities are economically ineffective, which require the objective application of taxes. More precisely, the division of society into non-profitable (defense, medicine, science, education, culture, etc.) and profitable sectors and the natural necessity of financing the non-profitable sector make it necessary to apply taxes objectively, although the social services of the non-profitable sector are mainly provided by the state are carried out, so that the taxes that arise as a way of financing them will also directly belong to the state.

Taxes, which are the main source of budget revenues for the state, are of great importance. The effectiveness of taxes in the transition to a market economy can be expressed in two cases: firstly, the need to provide funds for a number of tasks of the state, and secondly, they are the rules of the market economy.

State budget revenues in 2023 will amount to 231 trillion soums, this figure has increased by 14.4% compared to 2022 and reached 29 trillion soums. In particular, receipts from taxes to the state budget amounted to 184.5 trillion soums. Indirect taxes made up the main part of the income from taxes, this amount was 83 trillion or 36% of the total revenues of the State budget. This situation ensured an increase of 11 trillion soums or 15.3% compared to 2022. In these indicators, the growth of indirect taxes did not show very sharp quantitative indicators.

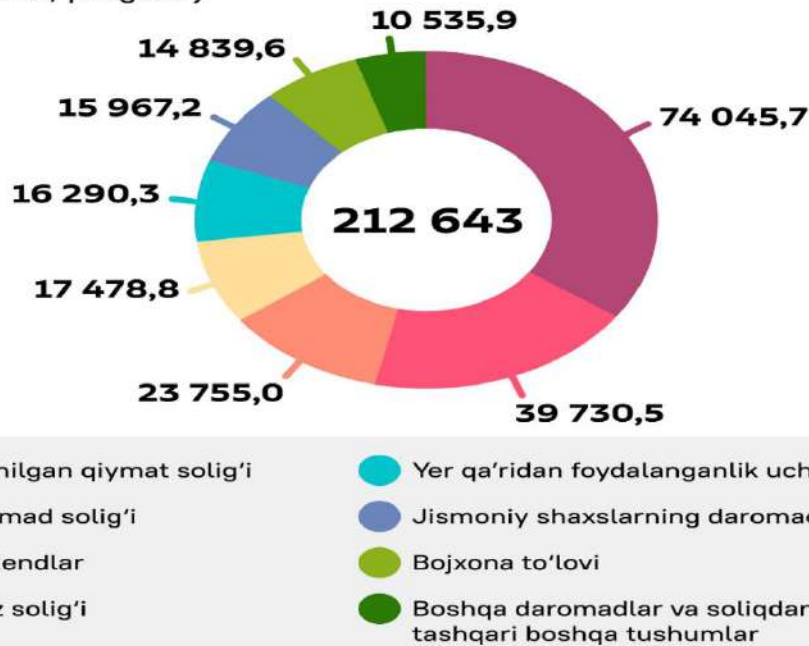
2023 ЙИЛ ДАВЛАТ БЮДЖЕТИ ДАРОМАДЛАРИ ПРОГНОЗИНИНГ ТАРКИБИ, МЛРД СЎМ



Figure 1. Composition of the state budget revenue forecast, billion soums¹

The reason is that in 2023, the rate of excise tax on some products was set at 34,500 soums per liter of ethyl alcohol without added water in the excise goods. Starting from February 1, 2023, the excise tax rates on oil products and manufactured alcohol and tobacco products were indexed to 10%. Starting from January 1, 2023, the excise tax rates on the import of rectified ethyl alcohol from food raw materials, alcohol and tobacco products from January 1, 2023 have been reduced

O‘zbekistonning 2024-yilgi respublika byudjeti daromadlari tarkibi
(mlrd so‘m, prognoz)



by 5%.

Figure 2. The composition of the revenues of the 2024 republican budget of Uzbekistan²

As a result, the reduction of the tax burden did not lead to a very high increase in the share of these indirect taxes in the state budget. In addition, the reduction of the tax burden of VAT from 15% to 12% showed that the tax payments of entrepreneurs who pay this indirect tax, that is, VAT tax, will decrease.

The share of indirect taxes in the state budget revenues for 2024 is expected to increase by 20.3% compared to the share of indirect taxes in budget revenues in 2023. This means that our tax-paying enterprises that create additional value have increased, and changes in indirect taxes in our new tax code also have a positive effect on this.

Results and analysis. As part of our research, we will study the influence of various factors on the volume of indirect taxes. Based on logical thinking, we have selected several factors and assumed that they will affect the size of the resulting sign curve taxes. [3]. These factors are:

Factors affecting indirect taxes (trln, soum)³

1-Table

¹ https://api.mf.uz/media/document_files/Budjet_23_uz.pdf

²

³ <https://stat.uz/uz/>

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Years	Indirect taxes	Wholesale trade	Retail	Export	Import
n	y	x_1	x_2	x_3	x_4
2013	31,2618	22,001	46,863	175,4525	170,8499
2014	39,6737	25,512	51,033	165,9354	171,3081
2015	46,0905	29,156	63,027	153,2154	152,1039
2016	50,422	35,396	81,278	148,1594	148,6852
2017	61,9395	38,799	95,952	153,7833	171,6516
2018	94,6427	57,481	113,971	171,3866	238,131
2019	112,8193	86,538	141,385	213,8689	297,5809
2020	112,009	128,741	168,649	185,0029	259,1337
2021	134,0484	183,112	216,694	204,1194	312,4695
2022	175,637	258,444	270,687	236,348	376,905
2023	196,1008	1675,712	295,319	298,9	466,725

To verify the correctness of this hypothesis, we conducted a multi-factor correlation analysis. (Table 1). The results are presented in Table 2. For this we used MS Excel's Analyz dannyx package.

Correlation matrix of our analysis ⁴

	y	x_1	x_2	x_3	x_4
y	1				
x_1	0,705024	1			
x_2	0,987968	0,704558	1		
x_3	0,899872	0,862998	0,882529	1	
x_4	0,976434	0,784276	0,957462	0,968882	1

According to Table 2, we evaluate the 1st condition of creating a multifactor model according to the connection between y (resulting factor sign) and x (influencing factor sign). x_2, x_3, x_4 are closely connected with y , that is, they satisfy the condition $r_{yx_i} \geq 0,8$. And since x_1 is

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denser than average with y, we exclude it from the analysis. Also, according to the 2nd condition of creating a multifactor model, that is, the x's should not be closely related to each other. Therefore, we get the following values:

1. x_1 va x_2 $r_{x_1x_2} = 0,7$
2. x_1 va x_4 $r_{x_1x_4} = 0,78$

The above values are not mutually multicollinear and they can participate in the model at the same time, so the following models can be created according to the results of the correlation analysis.

1. $y = a_1 + b_1 * x_1 + b_2 * x_2$
2. $y = a_2 + b_2 * x_1 + b_4 * x_4$

First, we identify the first model. For this we use EKKU (Least Squares Method).

$$\begin{aligned} na + b_1 \sum x_1 + b_2 \sum x_2 &= \sum y \\ a \sum x_1 + b_1 \sum x_1^2 + b_2 \sum x_1x_2 &= \sum yx_1 \\ a \sum x_2 + b_1 \sum x_1x_2 + b_2 \sum x_2^2 &= \sum yx_2 \end{aligned}$$

First, we calculated the value of the indicators required in the formula. (Table 3).

Some calculations ⁵

n	y	x_1	x_2	x_1^2	x_2^2	yx_1	yx_2	x_1x_2
1	31,2618	22,001	46,863	484,0704	2196,141	687,809	1465,021	1031,061
2	39,6737	25,512	51,033	650,893	2604,397	1012,18	2024,679	1301,993
3	46,0905	29,156	63,027	850,084	3972,417	1343,823	2904,951	1837,631
4	50,422	35,396	81,278	1252,909	6606,157	1784,76	4098,212	2876,963
5	61,9395	38,799	95,952	1505,415	9206,892	2403,233	5943,252	3722,929
6	94,6427	57,481	113,971	3304,176	12989,56	5440,248	10786,593	6551,32
7	112,8193	86,538	141,385	7488,872	19989,75	9763,187	15950,969	12235,22
8	112,009	128,741	168,649	16574,433	28442,5	14420,232	18890,21	21712,17
9	134,0484	183,112	216,694	33530,107	46956,56	24545,908	29047,568	39679,45
10	175,637	258,444	270,687	66793,321	73271,53	45392,335	47542,678	69957,48
11	196,1008	1675,712	295,319	2808012,7	87213,71	328608,58	57912,425	494870,9
Jami	1054,644	2540,898	1544,862	2940447,0	293449,61	435402,30	196566,564	655777
				02	8	1		

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O'rtacha	95,877	230,991	140,442	267313,36 4	26677,238	39582,027	17869,688	59616,1
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We get the function of the econometric model in the form $y = a + b_1x_1 + b_2x_2$. To find the unknown parameters a, b_1, b_2 , we create a system of equations:

$$\begin{cases} na + b_1 \sum x_1 + b_2 \sum x_2 = \sum y \\ a \sum x_1 + b_1 \sum x_1^2 + b_2 \sum x_1x_2 = \sum yx_1 \\ a \sum x_2 + b_1 \sum x_1x_2 + b_2 \sum x_2^2 = \sum yx_2 \end{cases}$$

$$\begin{cases} 11a + 2540,898b_1 + 1544,862b_2 = 1054,644 \\ 2540,898a + 2940447,002b_1 + 655777b_2 = 435402,301 \\ 1544,862a + 655777b_1 + 293449,618b_2 = 196566,564 \end{cases}$$

Δ - we find the determinant of the system of equations:

$$\Delta = \begin{vmatrix} 11 & 2540,898 & 1544,862 \\ 2540,898 & 2940447,002 & 655777 \\ 1544,862 & 655777 & 293449,618 \end{vmatrix}$$

$$= (11 \cdot 2940447,002 \cdot 293449,618 + 2540,898 \cdot 655777 \cdot 1544,862 + 2540,898 \cdot 655777 \cdot 1544,862) - (1544,862 \cdot 2940447,002 \cdot 1544,862 + 2540,898 \cdot 2540,898 \cdot 293449,618 + 655777 \cdot 655777 \cdot 11) = \mathbf{997598384727,04}$$

Determinants of the system $\Delta a, \Delta b_1, \Delta b_2$ are obtained by replacing the corresponding column of the matrix with the information on the left side of the system:

$$\Delta a = \begin{vmatrix} 1054,644 & 2540,898 & 1544,862 \\ 435402,301 & 2940447,002 & 655777 \\ 196566,564 & 655777 & 293449,618 \end{vmatrix} = \mathbf{7315460782778,1}$$

$$\Delta b_1 = \begin{vmatrix} 11 & 1054,644 & 1544,862 \\ 2540,898 & 435402,301 & 655777 \\ 1544,862 & 196566,564 & 293449,618 \end{vmatrix} = \mathbf{1419587463562,7}$$

$$\Delta b_2 = \begin{vmatrix} 11 & 2540,898 & 1054,644 \\ 2540,898 & 2940447,002 & 435402,301 \\ 1544,862 & 655777 & 196566,564 \end{vmatrix} = \mathbf{623885838073,47}$$

We find the parameters of the equation:

$$a = \frac{\Delta a}{\Delta} = \frac{7315460782778,1}{997598384727,04} = \mathbf{7,33}$$

$$b_1 = \frac{\Delta b_1}{\Delta} = \frac{1419587463562,7}{997598384727,04} = \mathbf{1,42}$$

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$$b_2 = \frac{\Delta b_2}{\Delta} = \frac{623885838073,47}{997598384727,04} = 0,63$$

Thus, the general appearance of our model was as follows:

$$y = 7,33 + 1,42x_1 + 0,63x_2$$

Conclusion: If other factors remain unchanged, increasing the volume of x_1 wholesale trade by 1 trillion soums will increase indirect taxes to the republic's budget by 1.42 trillion. An increase in the volume of retail trade by 1 trillion soums leads to an increase in y , i.e., the indirect tax, by 0.63 trillion soums, if the effects of other factors remain unchanged.

When we evaluated the second model in this way, it looked like this:

$$y = 0,362 + 2,065x_1 + 0,36x_4$$

Conclusion: If other factors remain unchanged, increasing the volume of x_1 wholesale trade by 1 trillion soums will increase indirect taxes to the republic's budget by 2,065 trillion. An increase in the volume of imports by 1 trillion soums will lead to an increase in y , i.e., the indirect tax by 0.36 trillion soums, if the effects of other factors remain unchanged. Therefore, increasing the volume of wholesale and retail trade in order to increase the amount of indirect taxes falling into the budget will lead to a positive result for our state budget.

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METHODS OF BALANCING LOCAL BUDGETS AND THEM THE ROLE OF
REGIONS IN DEVELOPMENT

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ABSTRACT

In the article, the balance of the local budget, the role of regions in the development and formation of the revenue base of local budgets, local scientific and practical way to ensure the efficiency of budget revenues and expenditures aspects are highlighted. Based on the study, practical recommendations were developed.

Key words: local budget, local budget revenues, local taxes and fees, local budget sustainability, gross domestic product, gross regional product.

АННОТАЦИЯ

В статье сбалансированность местного бюджета, роль регионов в развитии и формировании доходной базы местных бюджетов, местная научно-практический способ обеспечения эффективности доходов и расходов бюджета аспекты выделены. На основе исследования были разработаны практические рекомендации.

Ключевые слова: местный бюджет, доходы местного бюджета, местные налоги и сборы, устойчивость местного бюджета, валовой внутренний продукт, валовой региональный продукт.

Introduction: The approval of the 2023 budget was connected with the introduction of a new practice. The State budget of the Republic of Uzbekistan was adopted by the Oliy Majlis in the form of a law, that is, to further increase the openness and transparency of the preparation of the Law "On the State Budget of the Republic of Uzbekistan for 2023" in accordance with international standards and budget information, the budget the procedure for strengthening parliamentary and public control over the formation and expenditure of funds was established. Budget funds of the first level distributors based on the decision of the Cabinet of Ministers of the Republic of Uzbekistan up to 10% of the budget allocated from the republic budget own limited amounts financed from local budgets transfer to the organizations under his control and the local budget itself allocation for financing is also of particular importance.

From 2023, the budget policy is aimed at implementing a more well-thought-out fiscal policy, proportional growth of economic indicators and ensuring the stability of the country's financial system. Local competent bodies are required to actively participate in the work of ensuring the completeness of budget revenues, taking into account the rational use of the territory's opportunities, strengthening the sources of income of local budgets and consistently increasing their independence. From this point of view, the issues of methods of regulation of local budgets are important in forming the revenue potential of the regions, in their socio-economic development, in ensuring the active development of economic sectors, in improving the infrastructure, in providing social support to the population, in timely allocation of local budget expenses. is of particular importance in financing.

Indicators such as GDP per capita, industrial output, paid services, and paid income differ between regions due to differences in the resource potential of the country's regions, population density, and the level of development of industrial sectors. The deepening of these differences, in turn, has a negative impact on the efficiency of the national economy, and capital flight from regions with a low level of development may occur. This deepens the difference in the levels of economic development between different regions.

Reforms in the budget system carried out in our republic in recent years are considered the basis for ensuring the stability of local budgets' sources of income. Currently, the importance of local budgets in ensuring the financial stability of regions is increasing, therefore strengthening the income of local budgets is of great importance.

Analysis and results: The state redistributes resources to reduce the level of regional inequality in the level of economic indicators, using the tools of budget-tax and monetary policy. As resource-rich, industrially developed regions have a high share of state budget revenues, budget funds are distributed among regions with the aim of accelerating the level of development of less developed regions, taking into account social needs.

One of the important elements of the territorial economic policy of the state is to increase the share of national taxes falling into the centralized budget, which is left at the discretion of the regions, to give tax incentives to enterprises operating at the expense of investments made in certain regions, to provide them with preferential loans, and to establish free economic zones.

The importance of local budgets in the socio-economic development of the region is very great. Because the region, in addition to the funds allocated from the centralized budget, mainly relies on local budget funds in fulfilling its social and economic tasks. Public education, healthcare, cultural and sports institutions, local self-governing bodies, and allowances for low-income families are financed through local budgets. In the system of economic methods of management, local budgets play an active role in ensuring the comprehensive development of a separate area, establishing the optimal regional reproduction ratios and improving the standard of living of the population.

As mentioned above, local budgets are used by state authorities to solve socio-economic issues. As an economic tool of management, they are:

Firstly, the broad scale of describing all aspects of regional production;

Secondly, due to the redistributive nature of this economic category, it is manifested in the form of a high level of influence.

At this point, it would be appropriate to provide information about the following macroeconomic indicators of the development of Surkhandarya region for 2023 and forecast indicators for 2024-2025.

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№	Indicators	for 2022	Forecast for 2023	The target is 2024	The target is 2025
1	Gross regional product, trillion soums	30,9	37,3	42,6	48,7
2	Growth rate of gross regional product, in percent	104,0	107,5	107,4	107,7
3	Consumer price index in December compared to December of the previous year, in percent	109,5	102,4	102,1	101,1
4	Growth rate of industrial products, in percent	104,4	109,0	108,0	110,0
5	Growth rate of production in agriculture, forestry and fisheries, in percent	102,5	103,7	103,9	104,2
6	Growth rate of retail turnover, in percent	113,0	114,0	115,0	117,0

Table 1. Forecast indicators of macroeconomic indicators of the development of Surkhandarya region for 2023 and goals for 2024-2025⁶

According to the table, we can analyze as follows, the Gross Territorial Product of the region increased by 6.4 trillion soums in 2023 compared to 2022. In general, the forecasted indicators for 2024-2025 are an average annual growth of 5-6 trillion soums. The growth rate of the gross regional product increased by 3.5% in 2023 compared to 2022. The forecasted indicator for 2024 was not an increase compared to 2023. The growth rate of the gross regional product for 2025 is set at 0.2% growth. The growth rate of industrial products is set to increase by 4.6% in 2023 compared to 2022. For 2024-2025, the growth rate of industrial products is set at an average of 2%.

As can be seen from the above indicators, if the gross regional product indicator and the growth rate of industrial products are higher, local budget revenues will increase at a higher level.

The system of management budget methods is distinguished by its flexibility, which arises from the fact that the system of budget methods is constantly formed through a system of levers in accordance with the changing goals and issues of the development of local government bodies, not at a certain time. At this point, it is expedient to emphasize that the legal bases for the formation of local budgets are the Law "On the Budget System", the "Budget Code" of the Republic of

⁶ compiled by the author based on surkhonstat.uz data

Uzbekistan. are decisions on the forecast of macroeconomic indicators and parameters of the state budget, as well as legislative documents on the budget.

Local budgets are mainly formed through local taxes and fees. Local taxes include: (Figure 1) The above local taxes and fees are considered as local budget revenues and are reflected as income in the local budget estimate.

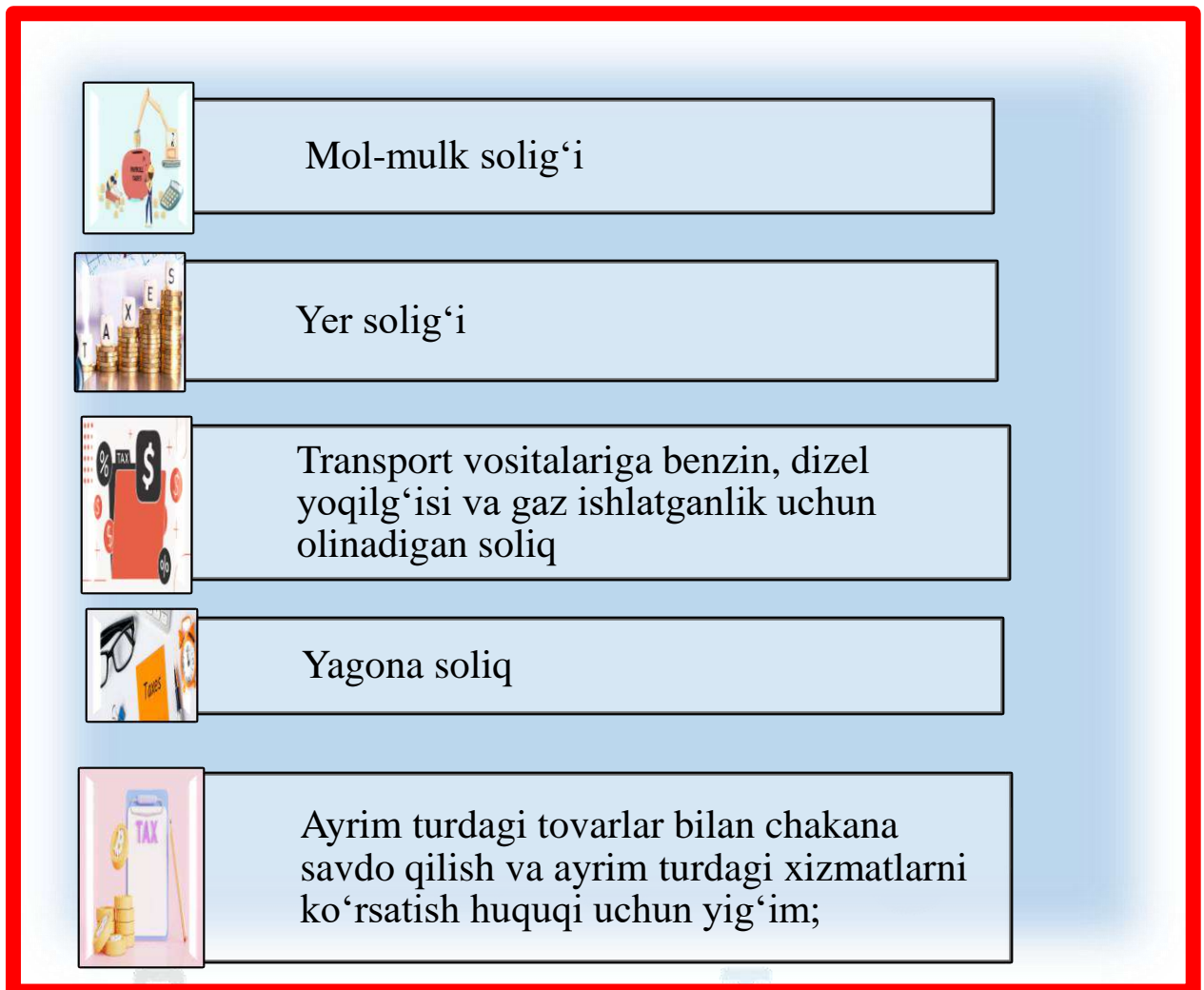


Figure 1. Local taxes⁷

Local budgets are the main support of the state's policy on social protection of the population.

Therefore, almost 100% of the social protection costs of the population are financed by local budgets, that is, the cost part of the local budget estimate is mainly the costs for social protection. About 80% of total social sector expenditures are financed through local budgets. Local budgets are important in the implementation of national economic and social tasks, first of all, in the distribution of state funds and the development of social infrastructure.

Balancing of budgets is carried out through the distribution of sources of income between budgets in the manner prescribed by law, i.e., the procedure for the distribution of state budget revenues, in order to ensure the minimum level of revenues necessary for regional budgets. There are four ways to balance my budget:

⁷ Author's development based on theoretical data

- determination and distribution of regulatory sources of budget revenues;
- self-distribution of budget funds;
- providing indiscriminate support to lower budgets from the funds of higher level budgets (subsidies, subsidies, transfers and subsidies);
- loans allocated from one budget to other budgets.

The higher the share of local budget funds in the socio-economic development of the regions, the more potential this region has in fulfilling its tasks.

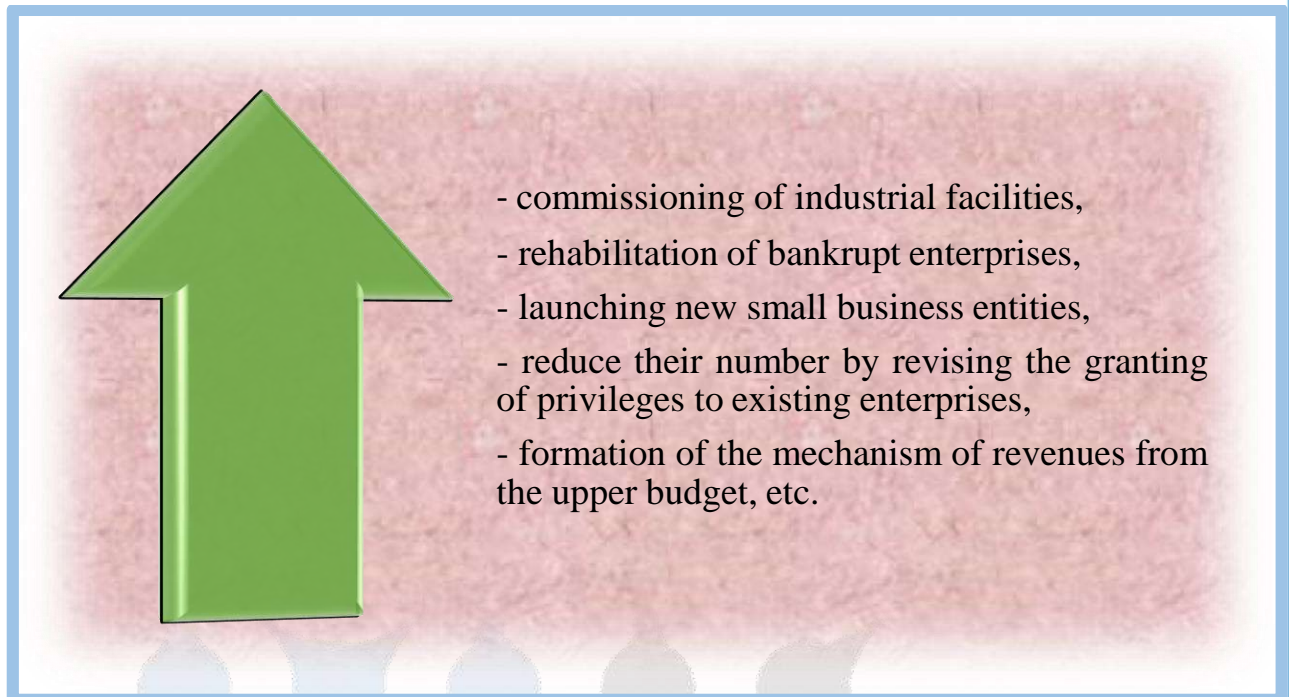


Figure 2. Areas of the program aimed at increasing the revenue base of local budgets and reducing the receipt of subsidies⁸

The high level of use of local budget funds by regions of the country leads to an increase in funds allocated to programs at the republic level and facilitates their implementation. Therefore, a program aimed at increasing the revenue base of local budgets and reducing the receipt of subsidies was developed, the main directions of which are as follows: (Fig. 2)

At the same time, the development of the following sectors of the economy has a direct impact on the increase of local budgets' sources of income:

- industrial production,
- attraction of new technologies for processing of agricultural products in regions specialized in agriculture,
- development of the service sector, etc.

Some economists recognize that these factors can be achieved by increasing the powers and responsibilities of local government bodies, while some economists recognize that they can be achieved by achieving proportionality of income and expenditure. In particular, according to A. Islamkulov, local budget revenues, on the one hand, are the result of the distribution of the value of the gross domestic product among the participants of the production process, and on the other hand, this value is considered and it serves to form a locally important fund. In addition,

⁸ Author's development based on theoretical data

during the entire period of the formation and development of the budget system of the Republic of Uzbekistan, local budgets, as a lower link, were overloaded with the functions assigned to them. H. Qabulov noted that the financial capabilities of local budgets are constantly changing, sometimes they increase and sometimes decrease due to the large number of local taxes and levies, but the tax legislation covers only a part of the revenue base of the budgets at different levels, provides for budgets on an ongoing basis. Therefore, there is another additional method of balancing income and expenses - regulation through the budget.

Conclusion: Based on the above considerations and analysis, we can conclude that in order to ensure the financial stability of local budgets and increase their independence, it is appropriate to take into account regulation through the budget, because the most important mechanism for redistributing funds between them in order to ensure this balance is the budget, revenues and expenses of system budgets. Secondly, it is necessary to develop ways to increase regional funds and establish a rational use of them. Thirdly, a properly built and effective mechanism of local budget regulation is one of the positive factors in the formation of the region's income potential. In order to increase the territorial resources of each region, the gross product of the region is increased, and the basis of this lies in the further increase of local production in that region.

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ABSTRACT: The article considers the current state and development of the poultry industry on the example of Surkhandarya region. The research describes the main trends in the development of poultry. Comparative and dynamic statistical methods of statistics using local statistical data were widely used in the course of the research work. In particular, feathers are used in the production of household goods, toys, fishing gear and poultry feed. Poultry manure is a valuable fertilizer in the wet state. In addition, dry poultry manure is used in the production of mixed fodder in an unconventional way.

KEYWORDS: market economy, agriculture, animal husbandry, food security, poultry, broiler, agricultural enterprises, farms, economic efficiency, product cost, export, import, dynamics, population, living standards, employment.

INTRODUCTION

Today, the country is taking consistent measures to further develop the poultry industry and increase the volume of production of finished products for export and expand the range of products, as well as to provide the population with quality and affordable poultry products. We can see that the Resolution of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev dated November 13, 2018 "On additional measures for further development of poultry" and a number of decrees and resolutions of our government on the development of poultry pay great attention to the development of this sector. In his Address to the Parliament, the President of the Republic of Uzbekistan noted that "... we must sharply increase the volume of food production through the development of poultry." Poultry is one of the most important branches of animal husbandry, which provides the population with dietary food products (eggs and poultry), industry with raw materials (feathers, feed). Poultry manure is also a valuable organic fertilizer for growing agricultural crops. The poultry industry is a low-cost, market-oriented, cost-effective sector, which plays an important role not only in improving the living standards of the population, but also in providing employment. Therefore, there is a need for a comprehensive economic statistical analysis of the development of the poultry industry.

MATERIALS AND METHODS

The development of the poultry industry has been studied by a number of foreign and local scientists using economic statistical methods. In particular, E. Darde developed a methodology for statistical analysis of the livestock sector, which divided livestock enterprises into three categories: agricultural enterprises, farms and households, and in its analysis used the methods of statistical grouping, comparison and dynamic analysis of statistics [4].

N. Bykova widely used statistical methods in studying the role of the poultry industry in ensuring national and regional food security [3].

L. Gulyayev used the methods of dynamic, monographic and comparative analysis of the current state and development trends of the poultry industry [5]. The author considers the widespread use of a cluster system, which covers the process from the cultivation of poultry

products to its sale, as well as the deep processing of poultry products as a necessary factor in the development of this industry.

One of the scientists of our country, H.R. Rakhmankulov used typological and analytical grouping, dynamic, comparative and monographic analysis methods in the study of reducing the cost of production and increasing the profitability of farms in the livestock sector in Surkhandarya region. Livestock farms were divided into state farms, collective farms, and specialized poultry farms [7].

V.I. Nechaev analyzed the current state and main trends in the development of the poultry industry and the poultry market in the Russian Federation using the main methods of statistics. In this analysis, three categories of poultry farms: agricultural enterprises, population farms and dekhkan (farmer) farms were carried out over the years [6].

Based on the above considerations, we consider it expedient to implement comparative and dynamic analysis of three categories of poultry farms in Surkhandarya region: agricultural enterprises, farms and households, taking into account the specifics of the development of this sector in the development of the poultry sector.

It is known that poultry eggs and meat are used for food purposes. Eggs are made primarily from chicken, quail and tsesarka. Eggs contain the most important nutrients and biologically active substances for human health. According to experts, poultry eggs contain 13% protein, 11% fat, 1% mineral and vitamin complex. In terms of nutrition, 10 chicken eggs weigh 0.8 kg. corresponds to beef. Eggs contain about 85% water, the rest is pure protein, vitamins and enzymes. Poultry egg yolk contains 52% water, 32% fat and about 16% protein.

Poultry is also distinguished by its high nutritional and dietary qualities. The highest quality poultry is obtained from broilers. They are grown on specialized farms. The white meat of broilers contains 20% nutritious protein, 1-2% fat, 92% essential amino acids. Therefore, in developed countries, more attention is paid to the cultivation of broilers in conditions where the feed base is limited. In addition, poultry by-products are also widely used in industry. In particular, feathers are used in the production of household goods, toys, fishing gear and poultry feed. Poultry manure is a valuable fertilizer in the wet state. In addition, dry poultry manure is used in the production of mixed fodder in an unconventional way. It contains many vitamins and minerals that are part of a mixed diet. Incubation and slaughter wastes are also used in the production of mixed fodder.

When there are sufficient conditions for the development of poultry, there are specific features that determine the economic efficiency of poultry development:

- □ Poultry farming is one of the fastest growing industries. It is characterized by high rates of reproduction of poultry, low consumption of material resources per unit of output and low labor costs;
- □ Due to the low level of seasonality, it is possible to evenly distribute the volume of production and sales of poultry products throughout the year, which is important in the context of inflation;
- □ Since poultry products are a basic necessity, the demand for them will always be stable, regardless of the economic and political situation in the country;
- □ Eggs and poultry go directly into the process of trade and processing, so there is no direct supply and demand for it;

- Poultry farming is a sector that is quick to adapt to sharp changes in production compared to other livestock sectors, as the number of poultries is not so dependent on the size and quality of land;

- In foreign experience, the main producers of poultry products are specialized enterprises (poultry factories), which can produce the bulk of poultry products. The production process in these enterprises covers everything from the incubation process of eggs to the feeding process;

- Poultry feeding is mainly carried out at the expense of purchased feed (mixed and vitamin-fortified feed), so the development of this industry is closely linked to the grain market and the volume of mixed feed production.

Poultry farms have four sectors, as in the Commonwealth countries: egg, meat, egg-meat and breeding. In our country, as in other countries of the world, chickens are mainly used in poultry. They make up almost half of the total poultry in the world, providing 95% of eggs and 85% of poultry meat. At present, Surkhandarya region produces 194 eggs per capita, compared to 221 at the national level. According to international standards, the consumption of eggs is 219, the national consumption is 112. Currently, egg production in our country is at the level of international standards, and more than 109 eggs are produced above national standards.

In 2019, the country produced 221 eggs per capita, while in Kazakhstan this figure was 236 in 2013. Today, Uzbekistan has developed a national norm of consumption of eggs and poultry: 121 eggs and 9.6 kg of poultry per capita. The demand for eggs in our country is mainly met by domestic production. That is, 80% of the product is exported to the domestic market and 20% of the product is exported to the foreign market. The level of poultry production currently remains dependent on imports. According to the Food and Agriculture Organization of the United Nations, the average world meat consumption is 38.7 kg.

In the ranking of world meat consumption, Uzbekistan ranks 120th out of 177 countries with a population per capita of 25.8 kg. According to medical standards, a person should consume an average of about 60 kg of meat per year (160 grams per day), while consuming 28 kg per year is equivalent to 75 grams per day.

Uzbekistan produces 43 kg of live weight meat per capita. According to medical standards, it should weigh 55-58 kg, which lags behind neighboring Kazakhstan and Kyrgyzstan. Poultry farming is slowly transitioning to a path of rapid development. In our country, according to national traditions (meat consumption consists mainly of mutton and beef), the level of consumption of poultry meat lags behind. The average consumption of poultry meat in Kazakhstan is about 35 kg, in Turkmenistan - 12 kg, in Kyrgyzstan - 6 kg, in Uzbekistan - 5.8 kg, and in Tajikistan - 3 kg. Given the increase in the price of beef and mutton, we can also observe an increase in the consumption of poultry meat.

The main objectives of the statistical study of poultry are:

- to determine the level of development of poultry, their individual branches and the processes that take place in them;

- coverage of the status and development of poultry farming in individual agricultural enterprises, their groups and various economic categories operating in the poultry sector;

- study of the situation with the placement of poultry in the regions of the country;

- assessment of the conditions of production of poultry products and identification of reserves to increase the volume and improve the quality of poultry products;

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• □ to determine the place and role of poultry in the agro-industrial complex, including the livestock sector.

The system of poultry statistics should always provide a reliable and comprehensive coverage of the state of the industry, reveal the laws of its development and the most important interrelationships, assess production efficiency and regulatory measures, reveal existing imbalances, eliminate them and use available resources.

This system primarily covers two specific indicators:

1. Indicators of the number of heads of agricultural poultry - indicators of quantity, composition, quality, movement and use. This is the need for constant updating (care) of farm poultry, which requires the study of specific indicators of herd reproduction.

2. In accordance with the indicators of gross output of poultry (volume, composition, quality, formation and movement), productivity Poultry farming is mainly concentrated on specialized poultry farms and private households. The dynamics of the number of poultry heads for all farm categories are described in Table 1 below.

TABLE 1. DYNAMICS OF THE NUMBER OF POULTRY BIRDS IN SURKHANDARYA REGION

Years	In all farms	Including by economic categories (in thousands)		
		In agricultural enterprises	On farms	In households
2007	1359,7	236,3	76,4	1047
2008	1640,4	286,7	195,9	1157,8
2009	1834,6	334,4	244,6	1255,6
2010	1978,8	419,8	208,5	1350,5
2011	2352,5	590,5	232,9	1529,1
2012	2673,2	654,2	237,0	1782,0
2013	2873,0	703,4	228,6	1941,0
2014	3085,9	737,9	216,5	2131,5
2015	3351,7	892,0	215,1	2244,6
2016	3985,3	1153,8	282,9	2548,6
2017	3997,3	1231,3	327,7	2438,3
2017	4099,9	1320,5	342,8	2436,6
2018	4554,4	1332,4	729,6	2492,4
2019	4808,5	1201,8	1099,1	2507,6
2020	4893,7	2140,7	245,0	2508,0
2021	4978,3	2175,3	398,3	2404,7
2022	5128,3	2435,9	435,3	2257,1

Source: Surkhandarya regional statistics department

In 2012, there were 2673.2 thousand heads of poultry in all categories of farms, in 2015 this figure increased by 25.4% and amounted to 3351.7 thousand heads. From 2009 to 2020, the number of birds in Surkhandarya region has been growing steadily. At the beginning of 2020, this figure reached 4,893.7 thousand (about 2.6 times more than in 2009 and 1.8 times more than in 2012).

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In 2009-2020, the increase in the number of poultry in all categories of farms increased by 3059.1 thousand heads, while in agricultural enterprises in 2020 increased by 6.4 times compared to 2009, 3.2 times compared to 2012 and reached 2140.7 thousand heads. The number of poultry on farms in 2020 reached 245 thousand, which is 3 times less than in 2018 and 4.5 times less than in 2019. In 2020, this figure increased by 2 times compared to 2009 and 1.4 times compared to 2012, and the number of poultry amounted to 2508.0 thousand heads. The share of agricultural enterprises in the total number of poultry in the region increased from 18.23% in 2009 to 32.21% in 2017, and in 2020 amounted to 43.7%.

The share of farms in Surkhandarya region in 2009 amounted to 13.33%, and a downward trend can be observed until 2017. While the number of birds will increase in 2018 and 2019, we can observe that in 2020 the number of birds will decrease. In 2020, it doubled compared to 2018, and decreased by 4.5 times compared to 2019, and in 2020 the share of farms was 5%.

The share of households has been declining from year to year. In 2007, the share of households in the total number of poultry was 77%, and from 2007 to 2018 the share of households has a steady downward trend. In 2010, this figure was 68.4%, in 2017 it was 61%, in 2018 it was 54.7%, and in 2020 it was 51.2%.

TABLE 2. INDICATORS OF POULTRY PRODUCTION IN SURKHANDARYA REGION

Poultry products	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Thousands of eggs	21499	23948	27318	31178	33400	46375	51300	52474	52097	54214
Including										
Farms	4266	4777	12578	13740	30500	96518	75952	78186	83355	86746
In households	14872	16888	18722	21226	21800	24320	21833	22563	21359	22769
In agricultural enterprises	62002	65819	73383	85777	85498	124030	218721	220918	224018	227698
Poultry meat (in tons)	2448	2525	2669	2707	2756	2539	1605	2023	2884	2734
Including										
Farms	48	49	58	74	12	69	64	73	75	78
In households	2260	2331	2496	2552	2392	2188	1253	1629	2475	2311
In agricultural enterprises	140	145	115	81	352	282	288	321	334	345

Source: Surkhandarya regional statistics department

According to the table, egg production in Surkhandarya region has increased due to an increase in the number of poultry. The volume of egg production in the region in 2019 increased

by 2.4 times compared to 2013 and 1.5 times compared to 2017. While the share of households in egg production was 69% in 2013, in 2019 this figure decreased to 42.6%. The share of specialized agricultural enterprises increased from 29% to 42.6%. The share of farms has also increased.

During the analyzed period, the volume of poultry production increased steadily from 2013 to 2017. In 2018 and 2019, poultry production decreased. That is, in 2019, it decreased by 33% compared to 2013, and by 52% compared to 2017.

Poultry farming in the region is mainly accounted for by households. The share of farms in this category was 92.3% in 2013, and in 2019 it was 78% due to a decrease in the volume of poultry meat. During this period, the share of farms and specialized agricultural enterprises increased.

In Surkhandarya region, egg production per capita in 2007 was 175 eggs, and from 2008 to 2014 it decreased to 77 eggs. In 2015-2016, it increased by 185-191 units. In 2017-2019, there was a decrease in egg production per capita.

Based on the economic statistical analysis of the development of poultry in Surkhandarya region, we came to the following conclusions:

- In Surkhandarya region, poultry production has changed mainly due to an increase in the number of poultry. We can observe changes in the number of birds across different farm categories. In the past, poultry products were mainly distributed to households, but now it can be seen that the share of agricultural enterprises and households has decreased, while the share of farms has increased. In many countries, poultry production is mainly performed by agricultural enterprises;

- When all the necessary conditions are in place in poultry, the impact of seasonality on its development is minimal. This situation can be observed in farms transferred to the industrial basis. It is not always possible to provide such conditions in households. Such conditions can be provided in agricultural enterprises and farms. Therefore, poultry production has increased in this category of farms;

- In recent years, the price of meat products has increased significantly. The main reason for this is the increased costs associated with growing them. Poultry production has increased mainly due to the fact that their products are fast-growing and low-cost, as well as their rapid recovery;

- The government is creating all the necessary conditions for the development of poultry farming and the promotion of export activities. This leads to an increase in poultry production and an increase in productivity.

CONCLUSION

Based on the above, in order to further develop the poultry industry in Surkhandarya region, first of all, it is necessary to introduce modern technologies in this area, modernize production processes and expand exports of finished products:

It is necessary to promote the development of other species of birds in Surkhandarya region. Depending on the conditions of the regions, it is necessary to establish farms engaged in the cultivation of other types of poultry: ducks, geese, turkeys, quails, sparrows, hawks;

Not only increase the production of poultry products in the form of eggs and poultry, but also increase the export of products through their processing and the introduction of recycling of poultry waste;

Reducing the impact of the poultry industry on the environment, timely elimination of poultry diseases and attention to the cultivation of environmentally friendly products;

Establishment of import-substituting nutritional and vitaminized feed production in poultry farming in the region;

Training of specialists engaged in this activity in poultry farms and increase of their experience in poultry farms in the development of poultry farming.

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Kalit so`z: qamish, tabiatga, hayvonot, DSP, ovloq joylarda, Ijtimoiy soha obyektlari

Anatatsiya: Qurilish sohasida qo`llaniladigan DSP maxsulotini ishlab chiqarish, arzon, sifatli, ekologik tabiiy maxsulotni mahalliyashgan kichchik korxonalarini qurish va undan foydalanish g`oyasi yoritilgan. Surxondaryo viloyati hududida o`sadigan qamishzorlardan foydalanish ko`zda tutilgan.

Аннотация: Освещена идея производства древесностружечных изделий, применяемых в строительной отрасли, строительства и использования на локализованных малых предприятиях недорогой, качественной, экологической натуральной продукции. Планируется использовать тростниковые заросли, произрастающие в Сурхандарьинской области.

Synopsis: The idea of manufacturing chipboard products used in the construction industry, building and using localized small enterprises of low-cost, high-quality, ecological natural products is highlighted. It is planned to use reed beds growing in Surkhandarya region.

Oddiygina qamishdan mebel tayyorlanishiga ishonasizmi? Surxondaryo viloyatida 10 ming gektar yer maydonida yovvoyi tarzda qamish o`sadi. Termiz va Muzrabot tumani aholisi yaxshi bilishadi, bundan bir necha yil oldin, Kuz mavsumida qamishzorlarning yoqilishi oqibatida qamishning qora kuyindisi tevarak-atrofni ifloslantirib, kishini xunob qilar edi. Qamishzorlar yoqilishi tabiatga, hayvonot olamiga jiddiy zarar yetkazib, atmosferani ifloslar edi. 2017-yildan boshlab bunday salbiy holatlarga chekqo`yildi. Ijtimoiy soha obyektlari, noturar va aholi turar joylari uchun sifatli, arzon, zamonaviy qurilish materiallari zarur bo`lmoqda. Qurilish ishlari qiymatining 55—60 foizini qurilish materiallari tashkil etishini, zamonaviy arxitektura yangi, sifatli, arzon, yengil va zilzilabardosh, innovatsion qurilish materiallarini talab etishini inobatga oladigan bo`lsak, tarmoq taraqqiyoti ahamiyatini his qilish qiyin emas. 2017-yilga qadar tarmoqda 7995 ta korxonalar mavjud bo`lgan. Ayni kunda yurtimizda 10552 ta qurilish materiallari ishlab chiqaruvchi korxonalar faoliyat yuritmoqda. O`tgan yili 120 turdagi qurilish materiallari ishlab chiqarilgan bo`lsa, bugungi kunda ular soni 180 dan oshib ketdi.

Surxondaryo viloyatida ham qamishdan DSP ishlab chiqarish bo`yicha yirik loyiha amalga oshirilmoqda. Muzrobod tumanida “Surxon KSP-Grand” MChJ tomonidan yillik quvvati 150 ming kub metr DSP ishlab chiqarish yo`lga qo`yiladi. Loyiha qiymati 9,1 mln dollar bo`lib, bu yerda 200 ta doimiy va 2000 ga yaqin mavsumiy ish o`rinlari yaratiladi. Hozirda bu yerda uskunalarini o`rnatish va qurilish-montaj ishlari davom etyapti. Ushbu loyiha ham momaygina daromat va tabiatni ifloslanishiga qarshi kurashga kata yordam beradi. Qshloqlarni chekka joylarini, ovloq joylarda o`sovchi qamish va shunga o`xshash osmliklardan tozalash maqsadida fermerlar yoki toza xudud ishchilari tomonidan yondirilib yuboriladi, buning tutuni va bu blan

birga uning uchayotgan kuli maxaliy axoliga zarar keltiradi. Shunday ov;loq joylarda xar xil zara kunandalar ozlariga uy qilib olishadi va tabiyki maxali axoliga zarar bermasdan qoymaydi. Bizning ushbu loyihimiz ushbu talofatlarni oldini olib va keraksz qamish-u xas xashaklarida qurilish uchun muxim bolgan maxsulot yani Dspni ishlab chiqaramiz. Yog`och qirindilaridan tayorlangan dspga nisbatan qamishdan tayotlangan dspni umri uzoq boladi, nega deganda yog`ochga nisbatan qamishning namni oziga tortish darajasi kam roq boladi, nam tekkandan keyin barchamizga malomki dsp shishadi va ozining mustaxkamlik sifat darajasini kamaytiradi.

Ushbu loyihaning asosiy mazmunlaridan biri atrof muhitni tozalash musrlar va yondrilgandan kingi tutinlarning bolmasligi atrof muxitning tozalash va u blan birga chiqindidan qurilish materialini ishlab chiqarish, yurtimizga kopayib borayotgan ishsizlarni ish blan ta`minlash va ishlab chiqilgan maxsulotni chetellarga inport qilish va katta daromat keltirish. Ushbu qurilish materialining ijtimoiy iqtisodiy rivojlanishiga ta`siri, chettan kelayotgan dsp maxsulotiga nisbatan ancha arzon shu blan birgalikda 100ga yaqin insonlarni ish blan ta`minlaydi.

Ushbu loyihaning asosiy yangilik tomoni keraksiz atrof muxitning ifloslanishiga sabab bolayotgan qamish va shunga oxshash narsalardan foydalanib qurilish materialini bolgan dsp maxsuloti tayorlanadi. Va holangki ushbu maxsulot yogoch qirindisidan tayorlangan dspdan mustaxkam va kam xarajatli.

Ishdan kutilayotgan natija atrof muxitni tozalash va ishsizlarni ish blan taminlashdan tashqadi arziyas axlat xas xashaklardan qurilish materyalini ishlab chiqarish kam xarajat qilib kop foyda tushiriladi. Maxsulotning sifatini yog`och qirindisidan ishlab chiqarilga dspdan kora balandligi unga bolgan haridorni kopaytiradi, qamish va yog`och qirindisidan tayorlangan dsp maxsulotini ortasida xec qanaqa farqi bolmaydi vazn jixatidan.

Qamishdan tayorlangan dsp maxsulotining bozorda yog`och qirindisidankora xoridori kop boladi chunki, qamishdan tayorlangan dspning mustaxkamligi va namlikka chidamliligi jihatidan ajralib turadi.

Ayni kunlarda DSP mahsulotlari qo`shni Afg`oniston va Tojikiston Respublikalariga ham eksport qilinmoqda. Ishlaganing sari, yangi g`oya va tashabbuslar yaratilaveradi. Zamonning shiddatkorligi bilan hamnafas kompaniyamiz 1 yildan so`ng DSP mahsulotini silliqlash va laminatsiyalash loyahasini amalga oshirdi. Endilikda tayyor LDSPdan (laminatsiyalangan DSP) istalgan turdagi mebel mahsulotini ham ishlab chiqarish mumkin. Yaqin kunlarda "Surxon sanoat qurilish" kompaniyasi tomonidan yana bir ishlab chiqarish korxonasi ishga tushadi. Bu- mahalliy LDSP mahsulotidan konveyer usulida mebel ishlab chiqarish loyihasi. Loyiha 2019-yilda to`liq ishga tushishi ko`zda tutilgan.

Natijada mebel ishlab chiqarishning 90% qismini mahalliyashtirishga erishiladi. Quvonarlisi, bu yaratuvchanliklarning barchasi, bizning vohada, Surxon vohasida amalga oshirilmoqda. Bir so`z bilan aytganda, yovvoyi qamishdan, zamonaviy, qulay mebellar yaralmoqda. O`z o`rnida ona tabiatga jiddiy zarar yetishining oldi ham olindi.

Surxondaryo viloyatida ham qamishdan DSP ishlab chiqarish bo`yicha yirik loyiha amalga oshirilmoqda. Muzrobod tumanida "Surxon KSP-Grand" MChJ tomonidan yillik quvvati 150 ming kub metr DSP ishlab chiqarish yo`lga qo`yiladi. Loyiha qiymati 9,1 mln dollar bo`lib, bu yerda 200 ta doimiy va 2000 ga yaqin mavsumiy ish o`rinlari yaratiladi. Hozirda bu yerda uskunalarni o`rnatish va qurilish-montaj ishlari davom etyapti.

DSP, MDF - sotish, ishlab chiqarish Toshkentda turkumidagi barcha kompaniyalarni jamlagan malumotlar bazasi doimiy ravishda yangi ma`lumotlar bilan, hamda mavjud

ma'lumotlardagi o'zgarishlar bilan yangilanib va to'ldirilib boriladi. Yellowpages.uz mutaxassislari bunday ma'lumotlar aniq ekanligini ta'minlash maqsadida barcha kelib tushgan ma'lumotlarni albatta tekshirishadi. Shunday qilib, biz ushbu bo'limda keltirilgan ro'yhatdagi Toshkentdada joylashgan DSP, MDF - sotish, ishlab chiqarish bo'limi ma'lumotlarini aniq va dolzarbligini ta'minlaymiz. Shu jumladan, ma'lumotlar bazaga tastitlangandan so'ng kiritiladi.

DSP, MDF - sotish, ishlab chiqarish Toshkentda mintaqasi bo'limini shakillanishida katalog foydalanuvchilari yaqindan yordam berishadi. Shuning uchun agarda siz noaniq bo'lgan, xato yoki yetishmayotgan ma'lumotlarni ko'rib qolsangiz, sizdan bu haqda info@yellowpages.uz electron pochta yozuvi orqali ma'lum qilishingizni so'raymiz. Xatingizni tezkor ravishda ko'rib chiqishimiz uchun xat mavzusida «saytdagi xato» deb yozib, xat ichida esa muammoni ta'riflab berish kerak. Nima bo'lganda ham, ushbu bo'limdagi ma'lumotlarni shaqillanishiga qo'shgan hissangiz uchun sizdan bag'oyatda minnatdor bo'lamiz.

DSP, MDF - sotish, ishlab chiqarish Toshkentda so'rov bo'limini yaratishda shu sohada ish yuritayotgan tadbirkorlarni qo'shadigan muhim hissasi ham kam bo'lmaydi. Yellowpages.uz sizga kerakli bo'limga o'zingiz haqingizda reklama ma'lumotini foydali ravishda joylashtirishingizni taklif etadi. Shu qatorda aytish joiz-ki, siz shu zahotiy o'zingizni auditoriyangizni qo'lga kiritasiz, bunga faqat anketa to'ldirish kerak bo'ladi. Mutaxassislaringizni takliflaringizni ko'rib chiqishga va hamkorlik uchun albatta ikki tomonga ham foyda keltiradigan optimal sharoit yaratishga doimo tayyordirlar. Biz DSP, MDF - sotish, ishlab chiqarish Toshkentda mintaqasi turkumida joylashtirilgan kompaniyangizni ko'rish bo'yicha eng yuqori reytingni egallashingiz uchun qo'limizdan kelgan barchasini qilamiz.

DSP — drevesnostrujehnaya plita, ya'ni yog'och-paraxa plitalar ishlab chiqarish Jizzax viloyatidagi "Jizzax qurilish ziynati" korxonasida hamda Surxondaryo viloyatidagi "Termiz-ta'minot" korxonasida yiliga 10 ming metr kub hajmda, Toshkent viloyatidagi Seowon Kiup korxonasida esa yiliga— 30 ming metr kub hajmda ishlab chiqariladi.

2017 yil oxirida ishga tushirilishi rejalashtirilgan ushbu loyihalarning umumiy qiymati 7,3 mln dollarni tashkil qiladi. Sarmoyalar kompaniya xususiy mablag'lari, chet ellik sarmoyadaorlar mablag'lari hisobiga amalga oshiriladi. Yangi korxonalar hisobdan 145 ishchi o'rni yaratiladi.

Korxonalariga kerak bo'ldigan xom-ashyoni uzuluksiz yetkazib berish tizimini tashkil qilish Qishloq va suv xo'jaligi vazirligi, O'zbekiston fermerlar Kengashi hamda Jizzax, Surxondaryo va Toshkent viloyati hokimiyatlari zimmasiga yuklangan.

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Ajiniyoz nomidagi Nukus davlat pedagogika instituti «Maktabgacha ta'lim» fakulteti
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Tayanch so'zlar: gadjet, bolalar tili, bolaning rivojlanishi, xotirasi, nutqini rivojlantirish.

Ключевые слова: гаджет, детская речь, развитие ребенка, память, речевое развитие.

Key words: gadget, children's language, child development, memory, speech development.

Bugungi kunda dunyoni gadjetlarsiz tasavvur qilib bo'lmaydi, ular bizning haqiqiy yordamchimiz. Bolalar kattalardan qolishmaydi va juda erta yoshda tsivilizatsiya afzalliklaridan bahramand bo'lishni o'rganadilar. Ba'zi ota-onalar bolaning atrofidagi dunyodan ko'ra ekranga ko'proq qiziqish bildirishidan jiddiy xavotirda.

Ingliz tilidagi "gadget" atamasi "qurilma, moslama" degan ma'noni anglatadi, "gadget" so'zining kelib chiqishi. Gadgetga qaramlikning xususiyatlari maktabgacha yoshdagi bolalarning fikrlari va mulohazalari mavzusidir. [4]

Zamonaviy statistik ma'lumotlar shuni ko'rsatadiki, har bir maktab o'quvchisi o'n yoshgacha o'z gadgetiga ega bo'ladi va 4 yoshida bolalarning 25 foizi o'z plansheti yoki telefoniga ega. Bolalar deyarli kattalar kabi qo'llarida elektron qurilmalar bilan ko'p vaqt o'tkazadilar.

Ijobiy tomonlari:

✚ Axborotga kirish: Gadgetlar bolalar uchun cheksiz bilim olamini ochib beradi. Internet yordamida ular tarix, fan, san'at yoki hatto dasturlash bo'ladimi, hamma narsani o'rganishlari mumkin.

✚ Ko'nikmalarni rivojlantirish: Ko'pgina o'yinlar va ilovalar mantiq, e'tibor, xotira, nozik vosita qobiliyatlari va boshqa muhim ko'nikmalarni rivojlantiradi.

✚ Muloqot: Gadgetlar bolalarga uzoqda yashaydigan do'stlari va qarindoshlari bilan muloqot qilish imkonini beradi.

✚ Ijodkorlik: Bolalar gadgetlar yordamida rasm chizish, musiqa yozish, videolar yaratish, o'z o'yinlarini yaratish va boshqa ko'p narsalarni qilishlari mumkin.

Salbiy tomonlari:

✚ Jismoniy faollikning kamayishi: Gadgetlarga ko'p vaqt sarflaydigan bolalar kamroq harakat qiladi, bu esa sog'liq muammolariga olib keladi.

✚ Giyohvandlik: Gadgetlardan haddan tashqari foydalanish giyohvandlikka olib kelishi mumkin, bunda bola diqqatini boshqa hech narsaga qarata olmaydi.

✚ Kutish bilan bog'liq muammolar: gadgetlar ekranidagi ko'k chiroq sizning uyqu tartibingizni buzishi mumkin.

✚ Agressiv xatti-harakatlar: Ba'zi o'yinlar va videolarda zo'ravonlik mazmuni bo'lishi mumkin, bu esa bolalarda tajovuzkor xatti-harakatlarga olib kelishi mumkin.

✚ Ijtimoiylashuvning pasayishi: virtual olamdagi muloqot tengdoshlar bilan jonli muloqotni almashtirmaydi.

Agar bolalikda gadgetga qaramlik va salbiy ta'sir allaqachon mavjud bo'lsa, u holda bolaning rivojlanishiga to'sqinlik qiladi, chunki bolalik tajribasi keyingi rivojlanishga kuchli ta'sir

qiladi. Bundan tashqari, beixtiyor bolalar ko'pincha "Nima ko'rsangiz, o'sha olasiz" tamoyilini qo'llashadi. Bu bolalar ko'rayotgan narsa ota-onalar va oilalar tomonidan yo'naltirilgan va har tomonlama yo'l-yo'riq bo'lmasa, bolaning rivojlanishi salbiy tomonga o'zgarishi haqida saboq bo'lishi mantiqiy. Erta yoshda bu harakat intellektini, fikrlash intellektini, hissiy intellektini, til va muloqotni rivojlantirish bosqichidir, erta bolalik millatning kelajak boyligi ekanligini ko'rsatadi, bu rivojlanishning har bir bosqichida e'tiborga olinishi kerak [1].

To'g'ri tarkib va kontekst bilan raqamli qurilmalar yordam berishi mumkin kam ta'minlangan oilalar farzandlarining rivojlanishidagi tafovutni bartaraf etish. O'qish AQSHning Stenford universiteti 18 oyligida bolalar kam ta'minlanganlardan bo'lishini ko'rsatdi badavlat oilalar allaqachon farovonlikdan bir necha oy orqada til bilimlari bo'yicha tengdoshlari. Planshet va smartfon kabi qurilmalar kam ta'minlangan oilalarga ijobiy ta'sir ko'rsatishi mumkin, chunki kabi oilalardagi bolalar rivojlanish resurslaridan kamroq foydalanish imkoniyatiga ega musiqa darslari, qo'shimcha mashg'ulotlar yoki shunchaki qo'shimcha ijtimoiy soatlar aloqa - va shuning uchun raqamli media bilan ko'proq vaqt o'tkazish [2].

Olimlar kompyuterda ko'p vaqt o'tkazadigan bolalar to'g'ri yozish va gapira olmasligini isbotlagan tadqiqotlar o'tkazdilar. Zamonaviy texnologiyalar maktab o'quvchilari o'rtasida savodsizlikning ko'payishiga olib keladi - disgrafiya (odam to'g'ri yoza olmaydi) va disleksiya (odam to'g'ri gapira olmaydi va yozmaydi) [3].

Shu bilan birga, normal rivojlanayotgan bolalarda nutqning rivojlanishi ularning kattalar bilan og'zaki muloqotini talab qiladi. Til paydo bo'lishidan oldin kommunikativ asosni yaratish til rivojlanishini rag'batlantirish uchun juda muhimdir [5]. Shuni ham ta'kidlash kerakki, ota-onalar bilan muloqot qilish xususiyatlarining bolalar nutqining rivojlanishiga ta'siri, ehtimol, bir tomonlama emas: bolada nutq rivojlanishidagi nuqsonlar uning onasining ko'z o'ngidagi imidjiga ta'sir qiladi va bu, o'z navbatida, bola-ota-ona munosabatlarida buzilishlarni keltirib chiqaradi [6].

Jim kompyuter o'yinchoqlari motivatsiyani yanada pasaytiradi. Agar televizor qandaydir tarzda nutqni rag'batlantirsa (televizordagi rasmlar doimo hissiy yuklangan nutq bilan birga bo'lsa), u holda aqliy faoliyatning yuqori va murakkab darajasiga o'tish jiddiy harakatlarni talab qiladi.

Bola ekranga qarab qancha ko'p vaqt sarflasa, u shunchalik kam muloqot qilishni o'rganadi, muloqot qilish, skanerlash va hissiy holatlarni almashish tajribasini to'playdi.

Zamonaviy bolalar, ko'pincha, yaqin kattalar bilan muloqot qilishda juda kam nutq ishlatadilar. Ko'pincha ular javobni talab qilmaydigan, ularning munosabatiga javob bermaydigan va o'zi hech qanday tarzda ta'sir qila olmaydigan televizion dasturlarni o'zlashtiradi. Charchagan va jim bo'lgan ota-onalar ekran bilan almashtiriladi.

Ammo ekrandan kelayotgan nutq biroz mazmunli begona tovushlar to'plami bo'lib qoladi, u "o'zimizniki" bo'lib qolmaydi. Shuning uchun, bolalar jim turishni yoki o'zlarini baqirish yoki imo-ishoralalar bilan ifodalashni afzal ko'radilar.

Xulosa qilib aytadigan bo'lsak, velosiped haydash, rollarda uchish, skeytbord, futbol, voleybol yoki boshqa ochiq o'yinlarni yoqtiradigan do'stlar haqida gapirishimiz kerak. Farzandlaringizga o'rnak bo'ling. Har bir bo'sh daqiqada telefoningizni qo'lingizga olmang.

Kattalar tushunishlari kerakki, gadgetlardan malakali va mo'tadil foydalanish haqiqatan ham bolaning rivojlanishiga hissa qo'shadi va unga zamon bilan hamnafas bo'lishga yordam beradi.

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РЕЗЮМЕ. Zamonaviy gadjetlarning bolalarga ta'siri dolzarb va munozarali mavzudir. Ushbu maqola ushbu ta'sirlarning ijobiy va salbiy tomonlarini o'rganadi, shu jumladan ma'lumotlarga kirish, ko'nikmalarni rivojlantirish, muloqot va ijodkorlik, shuningdek, harakatchanlik, giyohvandlik, uyqu muammolari, tajovuzkor xatti-harakatlar va ijtimoiylashuvning pasayishi. Maqolada, shuningdek, ota-onalarga ekran vaqtini cheklash, kontentni kuzatish va farzandlari uchun muqobil faoliyatni taklif qilish bo'yicha tavsiyalar berilgan.

РЕЗЮМЕ. Влияние современных гаджетов на детей является актуальной и неоднозначной темой. Эта статья исследует как положительные, так и отрицательные стороны этого влияния, включая доступ к информации, развитие навыков, общение и творчество, а также снижение двигательной активности, зависимость, проблемы со сном, агрессивное поведение и снижение социализации. Статья также предоставляет родителям рекомендации по ограничению времени использования гаджетов, контролю за контентом и предложению альтернативных занятий своим детям.

SUMMARY. The impact of modern gadgets on children is a hot and controversial topic. This article examines the pros and cons of these effects, including reduced access to information, skill development, communication, and creativity, as well as decreased mobility, addiction, sleep problems, aggressive behavior, and socialization. The article also recommends parents limit screen time, monitor content and offer alternative activities for their children.

REDUCTION OF SIGNS OF FERTILITY IN SOILS AND SOIL PROTECTION

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Annotation: the degradation of the Earth is considered one of the most pressing environmental problems in the world, and the world's population suffers from one aspect or another of degradation. A number of measures are being taken by the government of Uzbekistan on the reasons for the emergence of degradation processes in the lands and measures to prevent them. In this article, analyzes were carried out in the regions of the "Babur massif" and "Ibrahim mouminov" "massif of the Shofirkon District of the Bukhara region, and a number of cases of degradation were identified in these regions, and data on the Prevention of the causes of degradation and factors of occurrence are presented in this article.

Keywords: soil fertility, degradation, groundwater, drought, climate, temperature, erosion.

Introduction: Combating land degradation in the country and mitigating its negative consequences, preventing desertification and drought in the regions, preserving biodiversity, maintaining and increasing soil fertility, restoring degraded lands, advanced scientific developments in this direction and on the basis of wide use of innovations, in order to achieve sustainable development of regions, measures are being developed to create an effective system of land protection and combating degradation, and effective work is being carried out to improve productivity indicators. On August 15, 2023, it was adopted by the Legislative Chamber on soil protection and increasing its productivity.

According to the Food and Agriculture Organization of the United Nations, if the degradation processes on the earth continue in this direction, by 2050, soil degradation may make up 90% of agricultural land. Currently, the annual damage due to degradation in the world is about 490 billion dollars. In many areas, 2.6 billion people are suffering from soil degradation. As a result of degradation, approximately 73% of pastures and 47% of drylands have been degraded. [2,3].

Information on the agrochemical properties of the soils of the "Ibrahim Mominov" massif.

(Table 2)

Cross line	Depth, cm	Gumus %	P ₂ O ₅ mg/kg	K ₂ Omg/kg
1	0-32	0,6	10,3	127,6
2	32-68	0,4	8,6	102,0
3	68-95	0,4	6,4	95,3
4	95-137	0,3	5,0	88,0

As the layer goes to the bottom, the amount of mobile phosphorus also decreases, and fluctuated between 8.6 mg/kg and 5.0 mg/kg.

The analysis of indicators on the amount of exchangeable potassium shows that it belonged to the low supply group with 127 mg/kg in the surface 0-32 cm layer of the soil, this indicator was

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102 in the 32-68 cm layer. was .8 mg/kg, and as the layer went to the bottom, the amount of exchangeable potassium decreased, and it belonged to the very poor group, and the indicators were 95.3 and 88.0 mg/kg . According to the degree of salinity, the area we studied is weakly saline. According to him, according to the level of alkalinity, which changes the parameters of the soil environment, it was 0.038% in the upper driving layer of the soil 0-30 cm, this indicator is 0.069% in Cl⁻ anion, 0.069% in SO₄ anion. in this layer, according to the amount of cations, the amount of Ca²⁺ is 0.018%, and the amount of Mg²⁺ is 0.010%. The combined share of Na⁺ cation and K⁺ cation was 0.020% when calculated based on the generally accepted method. The total amount of water-soluble salts, that is, the amount of dry residue in this layer, is 0.178%. (Data is presented in Table 1).

Information on the agrochemical properties of the soils of the "Ibrahim Mominov" massif, Shofirkon district, Bukhara region.

(Table 1)

Cross line	Depth cm	Alkalinity	CL	SO ₄	Ca	Mg	Ani on	Catio n	Dry residu e	Sum of salts
		General HCO ₃ m.e	Milli gr. ekvival	Milli gr. ekvival	Milli gr. ekvival	Milli gr. Ekviv al				
	0-32	0.62	0,49	1,44	0,90	0,79	2,55	1,69	0.178	0.153
	32-68	0.56	0,39	1,19	0,75	0,64	2,14	1,39	0.142	0.128
	68-95	0.52	0,49	1,19	0,80	0,79	2,20	1,59	0.148	0.130
	95-137	0.50	0,39	1,19	0,75	0,79	2,08	1,54	0.142	0.123

The amount of salinity changes slightly towards the lower layers of the soil, which is not significant. For example, in the subsoil layer of 32-68 cm, the total amount of alkali was 0.5 mg/eq, while Cl⁻;SO₄ anions were 0.39; 1.19 mg/eq. These indicators are relatively higher than cations, i.e. Ca²⁺;Mg²⁺ and K⁺;Na⁺ cations, 0.75; 0.64; is 0.75 mg/eq, the ratio of anions and cations is 2.14 mg/eq. The sum of anions and cations in the 65-95 cm layer of the soil was 2.20 mg/eq, in the 95-137 cm layer these values were 0.142% of the dry residue, while anions and cations were an equality is formed according to That is, it is observed that it is from 2.08 mg/eq. It is observed that the salinity level is X-C in all soil layers [5,6].

There are the following signs of soil deterioration in the agricultural system: soil salinization, soil dehumification, desertification, irrigation disruption, irrational land use, humus depletion.

Soil protection and resource-saving technologies in agriculture

- no plowing or direct sowing (working <15cm/25%)
- Plant residue or mulch (covering the soil with plant residue >100% min30%)
- Crop variety or rotation (>3 types of crops)

What are the other benefits of soil-protecting and resource-saving technologies in agriculture?

Infiltration increases, evaporation decreases, water flow rate decreases, planting is carried out in short periods, and the temperature is low in the soil with plant residues.

Degradation of soils has a negative effect on the agrochemical parameters that can be assimilated by plants. We can see this in the decrease in the amount of mobile phosphorus and exchangeable potassium in the soil. One of the main factors determining the fertility of the soil is the amount of humus. For example, if the amount of humus is 0.6% in the surface layer of the soil, that is, in the 0-32 cm layer, it decreases due to the decrease in the amount of organic matter in the lower layers of the soil, which is 32-68% of the soil; 68-95; 0.4 in accordance with the sequence of layers in layers of 95-137 cm; 0.4; It is 0.3 percent.

In the process of land degradation, carbon and nitrogen oxides are released from the soil into the atmosphere. This makes it one of the most important factors of climate change. As a result of scientific research, scientists found out that we are losing almost 24 billion tons of fertile soil per year. 3.2 billion people worldwide suffer from land degradation. Therefore, this chosen topic is relevant.[4]

Material and methods. Researches were carried out in the conditions of meadow alluvial soils in the "Babur" and "Ibrahim Mominov" massifs of Shafirkon district, Bukhara region.

It should be noted that soil sections and soil samples were taken from genetic horizons. The amount of water-soluble salts from the obtained soil samples was determined based on water absorption analysis, and the agrochemical parameters of the soil were determined based on generally accepted methods. Mathematical analysis of the results was also carried out.

Results: Soil salinization is one of the important degradation processes. If we look at the results of the experiment, the soils of Shafirkon district of Bukhara region are considered to be more or less saline. According to salinity levels, the area we studied is weakly saline. According to him, according to the level of alkalinity, which changes the indicators of the soil environment, it was 0.038% in the upper driving layer of 0-30 centimeters of the soil, this indicator was 0.069% in Cl^- anion, 0.069% in SO_4 anion. in this layer, the amount of Ca^{2+} was 0.018%, and the amount of Mg^{2+} was 0.010%. The combined share of Na^+ cation and K^+ cation was 0.020% when calculated based on the generally accepted method. The total amount of water-soluble salts, that is, the amount of dry residue in this layer was 0.178% (Table 1).

Degradation of soils has a negative effect on the agrochemical parameters that can be assimilated by plants. We can see this in the decrease in the amount of mobile phosphorus and exchangeable potassium in the soil. Humus content, one of the main factors determining soil fertility, is observed to decrease sharply in degraded soils. For example, if the amount of humus is 0.6% in the surface layer of the soil, that is, in the 0-32 cm layer, it decreases due to the decrease in the amount of organic matter in the lower layers of the soil, which is 32-68% of the soil; 68-95; 0.4 in accordance with the sequence of layers in 95-137cm layers; 0.4; It was 0.3 percent.

One of the main agrochemical indicators of the soil is 10.3 mg/kg in the surface 0-32 cm layer of the soil, which is in the very low supply group in terms of the amount of mobile phosphorus (Table 2).

Conclusions and recommendations. Scientific analyzes show that in the last 30-40 years, with the reduction of the duration of irrigation at some points of the massifs, salinity increased and the amount of humus decreased in these areas. It can be seen that the formation of agro-irrigation horizon and its thickening as a result of irrigation has a very effective effect on the humus stock. Also, humus reserves in irrigated meadow alluvial soils are higher than those in newly developed and newly irrigated meadow alluvial soils. Apart from the agricultural area, there are also salt marshes, barrens, and barren sands, and their phytoremedial condition should be improved.

Seasonal use of pastures is necessary for efficient use of farm pastures. In order to improve the productivity of pastures, it is recommended to artificially plant black saxophone to strengthen the sands. As a result of wind erosion, many shrubs and semi-shrubs are dying due to exposure of their roots. Pastures are the main source of food and means for raising and breeding livestock. Therefore, it is necessary to protect the existing pastures, prevent their decline, increase the productivity of pasture plants, and in general, establish a rational and efficient use of pastures.

To do this, to organize the use of livestock in some pastures in order to prevent overgrazing; Careful use of existing wells, repair of damaged ones, opening of new water sources in remote areas (drilling of wells and wells) in order to improve water supply of pastures. It is necessary to carry out work on the restoration and development of the world of plants in the soils of the degraded area of 11.8 thousand hectares identified as a result of the study.

Also, in order to fundamentally improve land reclamation and to wash off the salt of the soil, it is necessary to increase the depth of the collectors, ditches and drains on farms and between farms to a depth of 2.5-3.0 m, and ensure their drainage. These works can be carried out using complex agrotechnical and reclamation measures. As a result, the area of saline soils on farm land is reduced, their productivity increases, the yield of agricultural crops increases, and soil fertility improves.

The analysis shows that with the shortening of the irrigation period for 30-40 years, an increase in salinity and a decrease in the amount of humus were observed in some points of the massifs in these regions. From this we can know that the formation of agro-irrigation horizon and its thickening as a result of irrigation has a very effective effect on humus reserves. Consequently, humus reserves are higher in irrigated grassland alluvial soils than in newly developed and newly irrigated grassland alluvial soils. In addition to agricultural land, there are also salt marshes, dunes, and sand dunes that need to be improved in their phytoremedial condition. Seasonal use of pastures is necessary for effective use of pasture lands of the farm. In order to increase the productivity of pastures, it is recommended to artificially plant black saxovole in order to strengthen sand dunes. As a result of wind erosion, many shrubs and semi-shrubs dry out from the root effect. Pastures are the main source of food and a means for raising and breeding livestock. Therefore, it is necessary to preserve the existing pastures, prevent degradation, increase the productivity of pasture plants, and establish rational and efficient use of pastures in general [4]. For this purpose, in order to prevent overgrazing of livestock, crop rotation is organized in separate pastures (in the method of crop rotation). Careful use of existing wells, repair of damaged ones, opening of new water sources in remote areas (drilling of wells and boreholes) to improve pasture water supply. It is necessary to carry out work on the restoration of flora in 11.8 thousand hectares of degraded areas identified as a result of research [5]. According to monitoring studies, cattle should not graze on degraded fields, given that the weather is dry only once every 10-3 years, because grazing on these degraded fields leads to the proliferation of plants that are harmful to livestock and poisonous. and this is the main one. a factor that leads to the crisis of pastures [6]. In order to improve land reclamation and soil salinity, it is necessary to increase the depth of intra-farm and inter-farm collectors, ditches and drains to 2.5-3.0 m and ensure their good drainage. These works can be carried out using complex agrotechnical and reclamation measures. As a result, the areas of saline soil in agricultural fields will decrease, and the productivity and yield from agriculture will increase.

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УДК 621.313.333

**СПОСОБ ИЗМЕРЕНИЯ МАГНИТНОГО ПОЛЯ РАССЕЯНИЯ ЛОБОВОЙ ЧАСТИ
ОБМОТКИ СТАТОРА ТЯГОВЫХ АСИНХРОННЫХ ЭЛЕКТРОДВИГАТЕЛЕЙ**

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В статье рассматриваются вопросы повышения энергоэффективности магистральных локомотивов с асинхронными тяговыми электродвигателями за счет определения характеристик тягового привода с использованием устройства для измерения магнитного поля рассеяния лобовой части обмотки статора. В статье рассматриваются вопросы повышения энергоэффективности электроподвижных составов с асинхронными тяговыми электродвигателями с помощью улучшения электромагнитных параметров. Улучшение добывается за счет усовершенствованного способа измерения магнитного поля рассеяния. Железнодорожный транспорт неотъемлемая часть грузо-пассажирских перевозок нашей Республики. Для увеличения мощности электровозов вместо электродвигателей постоянного тока широко применяются асинхронные тяговые электродвигатели. За счет отсутствия щётко-коллекторного механизма в асинхронных электродвигателях (АТЭД) при меньших габаритах достигаются большие мощности. В Республике Узбекистан около 80 % всех эксплуатируемых электровозов оснащены асинхронными тяговыми электродвигателями. Повышение энергетических показателей подвижного состава является одной из актуальных проблем железнодорожного транспорта. Одним из способов достижения поставленных задач является определение характеристик тягового привода. К точности определения параметров и характеристик асинхронных тяговых электродвигателей на современном этапе развития электромашиностроения предъявляются достаточно высокие требования. Параметры эквивалентных схем замещения этих электрических машин являются исходными данными при использовании алгоритмов расчета переходных процессов электромашинных систем. На характер протекания переходных процессов машин в большей степени оказывают влияния магнитного поля рассеяния обмоток. Объектом исследования является АТЭД, в частности магнитное поле рассеяния лобовой части обмотки статора. Одним из известных методов моделирования магнитного поля рассеяния лобовой части обмотки статора и ротора синхронной машины являются работы Новожилова А.Н. Моделирование магнитного поля лобового рассеяния обмоток синхронных машин в эксплуатационных режимах работы осуществляется разделением процесса на два этапа. На первом этапе моделируется магнитное поле одного витка секции статора и катушки обмотки ротора с током $I = 1$ А. В расчетах считают секцию статора симметричной. Затем по известному распределению магнитного поля одного витка, месту расположения секций в сердечнике статора методом

суперпозиции моделируется магнитное поле от лобовой части фазы статора. На втором этапе по известным зависимостям индукции $B_{ylv}(X)$ и $B_{zlv}(X)$ определяется магнитное поле от лобовой части фазы статора синхронной машины. Недостатком этого метода является сложность и неточность, поскольку результаты расчета индукции магнитного поля по этому методу не удовлетворяют граничным условиям из-за несимметричности токов.

В данной работе решается задача упрощения измерительного проводника и повышение точности измерения магнитного поля рассеяния лобовой части обмотки статора тягового асинхронного электродвигателя электроподвижного состава. Поставленная задача решается тем, что в данном устройстве для экспериментального исследования электромагнитного поля рассеяния в зоне лобовых частей обмотки статора, включающие обмотку, изготовленный из медного проводника и питаемым переменным напряжением частотой 50 Гц, а также измерителя магнитного поля рассеяния, закрепленные в статоре, измеритель (измерительный проводник) магнитного поля рассеяния лобовой части обмотки статора, установленный против лобовой части обмотки статора в виде дуги с длиной, равной полюсному делению и радиусом, равным радиусу расположения головок лобовых частей обмотки статора. При этом, измерительный проводник для измерения магнитного поля рассеяния лобовой части обмотки статора, установлен в подшипниковом щите против лобовой части обмотки статора. Преимуществом данного метода измерения магнитного поля рассеяния лобовой части обмотки статора является упрощенная схема и высокая точность измерения.

На рисунке 1 представлена электрическая схема устройства для измерения магнитного поля рассеяния лобовой части обмотки статора АТЭД электроподвижного состава.

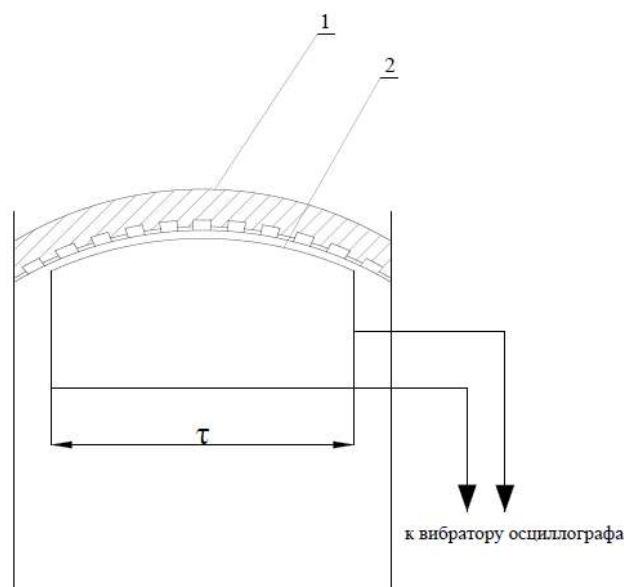


Рисунок 1. Электрическая схема метода для измерения магнитного поля рассеяния лобовой части обмотки статора АТЭД

Согласно рисунку 1, представлена лобовая часть обмотки статора 1, напротив лобовой части обмотки статора 1 расположен измерительный проводник 2, установленный в подшипниковом щите 3 в виде дуги с длиной, равной полюсному делению и радиусом, равном радиусу расположения лобовых частей обмотки статора. Для измерения магнитного

поля рассеяния лобовой части обмотки статора, вводные концы измерительного проводника 2 подключаются к вибратору осциллографа.

На рисунке 2 – показаны крепление и расположение измерительного проводника в двух проекциях;

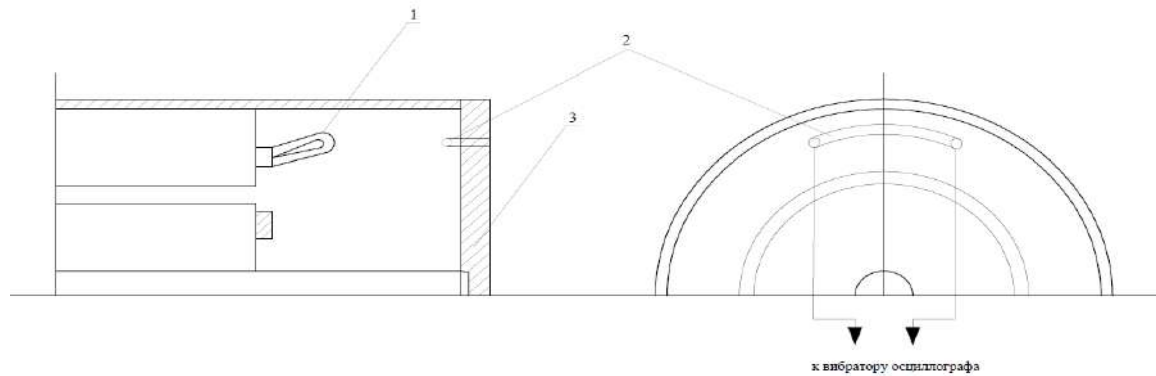


Рисунок 2. Крепление и расположение измерительного проводника в обмотке статора в двух проекциях

На рисунке 3 -показано изменение магнитного поля рассеяния лобовой части обмотки статора тягового асинхронного электродвигателя электроподвижного состава.

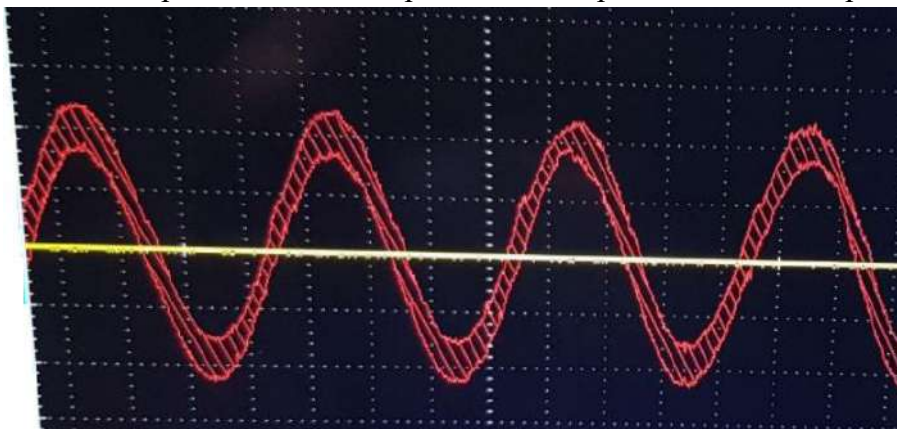


Рисунок 3. Магнитное поле рассеяния лобовой части обмотки статора АТЭД

Устройство работает следующим образом: при подключении трехфазного питания к зажимам обмотки статора, в лобовой части обмотки статора возникает магнитное поле рассеяния лобовой части обмотки статора. При этом магнитное поле рассеяния лобовой части обмотки статора индуцирует в измерительном проводнике ЭДС, в случае необходимости осциллографирования магнитного поля рассеяния лобовой части обмотки статора, выводные концы измерительного проводника подключаются к вибратору осциллографа.

ВЫВОДЫ

Предлагаемый метод и устройство для измерения магнитного поля рассеяния лобовой части обмотки статора АТЭД электроподвижного состава, позволяет значительно упростить измерение магнитного поля рассеяния лобовой части обмотки статора, точность измерений и повышает энергоэффективность за счет конструктивных мероприятий, выполнение которых обеспечит снижение потерь в торцевых зонах. Также данный метод можно использовать в проектных институтах для измерения потерь в торцевых частях проектируемых моделей для дальнейших исследований.

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Annotatsiya: Tadqiqotchilar tomonidan sanoat uchun ahamiyati kam bo'lgan sholi poyasidan qimmatli monosaxaridlar ajratib olish texnologiyasi keltirilgan.

Kalit so'zlar: Trifloroksis kislotasi, eritma, gidroliz, arabinoza, ksiloza, glyukoza, mannoza, galaktoza, tabiiy polimer, sholi poyasi, dimetilsulfoksid karbamid.

Kirish. Sholi poyasidan turli miqdordagi birikmalarni ajratib olish hisobiga sanoatda uning o'rnini oshirish mumkin. Ion suyuqligi yordamida qamish, payraha va kanaf hamda boshqa o'simliklar poyasidan birikmalarni ajratib olish imkoniyati mavjudligi aniqlangan [1]. Sholi poyasi tarkibidagi sellyulozaning erish jarayoni molekular vodorod bog'larini buzilishi bilan boradi. Lignin sellyulozali xom ashyosiga IS (ion suyuqligi) sharoitida ishlov berish ilmiy jihatdan asoslangan bo'lib, sanoat miqyosida qo'llash istiqbolli ahamiyatga ega [2]. Buni amalga oshirish uchun IS sifatida dimetilsulfoksid karbamid qo'llanildi. Dimetil sulfoksid muhim bioparhalovchi erituvchi bo'lib boshqa vakillariga qaraganda zararli tomoni kamroq. Kuchli erituvchi sifatida sellyulozani fraksiyalarga ajratishda yuqori samara berishi isbotlangan [3].

Tadqiqot materiallari va uslubi. Sholi poyasi Surxondaryo viloyatining sholi etishtiradigan dalalaridan olindi. Ion suyuqligi sifatida dimetilsulfoksid karbamid ishlatildi. Ultratovush bilan ishlov berish haroratlar intervali 80-140°C bo'lganida va 5 dan 20 daqiqagacha ish chastotasi 45 kGs va quvvati 10, 30 va 50 Vt bo'lgan ultratovushli dispergator UZDN-2T yordamida amalga oshirilgan.

Sholi poyasi ion suyuqligida 5, 10, 15 daqiqa davomida 80, 110, 140°C haroratda 10, 30, 50 Vt ultratovushli nurlanishida uch xil sharoitda ishlov berildi. Hosil qilingan tabiiy polimerlar trifloroksis kislotasi yordamida gidroliz qilindi [4].

Tahlil va natijalar. Olingan natijalarga qaraganda, ultratovushdan foydalanish mahsulot unumining ortishiga yordam beradi, hamda ishlov berish muddatini qisqartiradi. Sholi poyasini 100 °C da 15 daqiqa davomida 10 Vt quvvatda ultratovush bilan ishlov berilganida mahsulot chiqishi 52,6% ga erishildi, oddiy sharoitda 60 daqiqa davomida ishlov berilganida 43,1% ni tashkil qildi.

Ultratovush quvvatning 50 Vt ga oshirilsa bilan mahsulot unimi 63,1% gacha ko'tariladi. Ultratovush quvvatini 50 vt ga ortishi 15 daqiqa ichida gemitsellyuloza 6 % ga, lignin 10 % ga oshishi isbotlandi. Ultratovush bilan ishlov berishda lignin va gemitsellyuloza o'rtasidagi o'zaro bog'larlarining samarali uzilishiga bog'liq bo'ladi. Oddiy sharoitda ya'ni ultratovushsiz sholi poyasiga ishlov berish 7 soat ko'proq vaqt talab qilinadi. Demak ion suyuqligida sholi poyasini eritish uchun ultratovushdan foydalanish vaqtni 5-6 soatgacha tejash imkoniyatini beradi. Sholi poyasiga oddiy sharoitda 100°C da 1 soat davomida ishlov berishsa, 5,9 % atrofida lignin fraksiyaga ajraladi, agarda 10 Vt quvvatga ega ultratovushdan foydalanilsa 15 daqiqada 10% gacha oshadi.

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Lignin va gemitsellyulozalardan ajratish natijasida termik ishlov berishdan keyin hamda vodorod bog‘lari to‘rining mustahkamligini zaiflashuvi hisobiga TS fraksiyasidagi gidrolizlanadigan polisaxaridlarning ulushi ortadi. Natijada, polisaxaridlarning miqdorini kamayishiga qaramasdan, fraksiyaning kislotali gidrolizidan keyin monosaxaridlarning chiqishi ko‘payadi (1-jadval).

1-jadval. TS fraksiyalarining gidrolizatlarida monosaxaridlarning miqdori

Sharoitlar, °C/s	Tarkibi, % mass.					Jami, % mass.
	Ara	Xyl	Man	Gal	Glc	
100/1	4,60	26,80	0,03	0,55	13,00	44,98
120/1	6,00	24,60	0,03	1,05	18,00	49,68
140/1	4,80	24,30	0,20	1,52	19,80	50,62
150/1	5,70	23,03	0,01	1,55	25,20	55,49
140/2	6,70	25,60	0,35	2,43	28,80	63,88

Monosaxaridlarning chiqishini oshishi sellulozaning gidrolizi hisobiga olingan bo‘lib, bu 100 °C (1s) da gidrolizatdagi glyukoza ulushini 28,9 % dan boshlab oshirishga va 150 °C (1s) da 45,4 % gacha ortishini ta‘minlaydi.

Kislotali gidrolizda sellulozaning reaksiyaga kirishish qobiliyatini o‘shishi uni lignin va gemitsellyulozadan tozalash natijasi va termik ishlov berishda kristallsimon sellulozani amorf ko‘rinishiga o‘tishi bilan bog‘liq bo‘lishi mumkin.

120 °C dan yuqori haroratlarda ajratilgan TS fraksiyalari tarkibida gemitsellyulozalarning miqdorini kamayishi fraksiya gidrolizatlarining tarkibini tahlil qilish ma‘lumotlari bilan tasdiqlanadi. Tadqiq qilinayotgan haroratlar intervalida arabinoza va ksiloza ulushlari monosaxaridlarning umumiy miqdoridan 69,8 dan 51,8 % gacha kamayadi. TS fraksiyasi uchun gidrolizning eng katta chuqurligini 140 °C (2 s) da olinishi lignin miqdorining kamligi va selluloza tuzilishidagi qo‘shimcha yumshoqligi sabab bo‘lishi mumkin. Fraksiyadagi polisaxaridlarning miqdori 82,1 % (37 % a.s.m.) ni tashkil etib, kislota bilan gidrolizlanadiganlar ulushiga 78 % to‘g‘ri keladi. Olingan gidrolizatda glyukozaning miqdori ksilozaga nisbatan yuqori bo‘ladi.

Gemitsellyuloza texnik sellulozaga qaraganda triflor sirkali kislota bilan osonlikcha gidrolizga beriladi. 2-jadvalda keltirilgan natijalardan ko‘rinib turibdiki, GS fraksiyalarini gidrolizlashda olingan monosaxaridlarning umumiy chiqishi 73 dan 81 % ga qadar o‘zgarib, ammo shu paytning o‘zida TS fraksiyalarining gidrolizatlarida monosaxaridlarning miqdori birlik fraksiyaning 64 % dan ko‘pini tashkil qilmaydi.

2-jadval. GS fraksiyalarining gidrolizatlarida monosaxaridlarning tarkibi

Sharoitlar, °C/s	Tarkib, % mass.					Jami, % mass.
	Ara	Xyl	Man	Gal	Glc	
100/1	6,01	66,00	0,11	1,60	4,60	78,32
120/1	5,92	64,21	0,15	1,28	6,01	77,57
140/1	6,70	56,50	0,12	2,29	7,70	73,31
150/1	7,20	53,80	0,24	2,81	11,70	75,75
140/2	6,52	66,30	0,23	2,61	5,50	81,16

Monosaxaridlarning yetakchi komponentlaridan biri ksiloza hisoblanib, bu gemitsellyuloza fraksiyalari tarkibidagi ksilanning ko'p miqdorda ekanligini taxmin qilishga imkon beradi. Ishlov berish haroratlarini o'sishida ksilozaning miqdorini kamayishi furan hosilalarining hosil bo'lishi bilan kechadigan ikkilamchi o'zgarishlar va kimyoviy jarayonlarning qator boshqa ingibitorlari sabab bo'lishi mumkin.

Arabinozaning miqdori harorat va ishlov berish davomiyligiga bog'liq emas va 5,9 dan 7,2 % gacha oraliqda bo'ladi. Shunga o'xshash miqdor glyukozada uchraydi. Juda ham kam miqdorda galaktoza va mannoza ham aniqlangan. GS fraksiyalarini gidrolizlashda monosaxaridlarlarning maksimal darajada chiqishi sholi poyaga dimetilsulfoksid muhitida 140 °C da 2 soat davomida ishlov berilganidan keyin olingan va fraksiyaga nisbatan 81,2 % ni tashkil etgan.

Trifloroksis kislota eritmasi bilan gidrolizlanishi mumkin bo'lgan tabiiy polimerlarning ulushi texnik selluloza (TS) fraksiyasi tarkibidagi massaning taxminan 64% ni tashkil qiladi. Gidrolizning monosaxaridlari tarkibida glyukoza, ksiloza va arabinozaning nisbatan yuqori miqdori qayd etilgan, fraksiyada gemisellyuloza (GS)lar mavjudligidan dalolat beradi [5]. Ksiloza va arabinoza GS fraksiyasida ikkinchisi asosiy monosaxaridlardir, chunki gidrolizat fraksiyasidagi glyukoza miqdori 5% dan oshmaydi. GS fraksiyasi tarkibida massaning 80% dan ko'prog'ini trifloroksis kislota eritmasi bilan gidrolizlanib arabinoza, ksiloza, glyukoza, mannoza va galaktoza hosil qiladigan tabiiy polimerlar tashkil qiladi.

3-jadval - 100°C (15 min, 50 Vt) ultratovushli issiqlik bilan ishlov berishdan so'ng ajratilgan polisaxarid fraksiyalarining gidrolizatlari monosaxaridlarining tarkibi.

Fraksiya	Fraksiya rentabelligi %.	Monosaxaridlar, % og'irlik.				
		Arabinoza	Ksiloza	Mannoza	Galaktoza	Glyukoza
Fraksiya TS	63.6	5,90	27,30	0,44	2,09	24,10
Fraksiya GS	20.7	7,10	67,80	0,19	1,65	4,80

Jadvalda berilgan ma'lumotlardan ko'rinib turibdiki sholi poyasidan olingan polisaxaridlardan TS fraksiyasi 63,6% ni, GS fraksiyasi esa 20,7% ni tashkil qilgan. Polisaxaridlarning monosaxaridlarga parchalanish foizidan ko'rish mumkinki monosaxaridlarning yetakchi komponentlaridan biri ksiloza hisoblanib (27,30 va 67,80 %), bu gemitsellyuloza fraksiyalari tarkibidagi ksilanning ko'p miqdorda ekanligini taxmin qilishga imkon beradi.

Arabinozaning miqdori harorat va ishlov berish davomiyligiga bog'liq emas va 5,9 dan 7,2 % gacha oraliqda bo'ladi. Shunga o'xshash miqdor glyukozada uchraydi. Juda ham kam miqdorda galaktoza va mannoza ham aniqlangan.

Xulosa. Tadqiqot natijasida ultratovush quvvati 50 Vt da 15 daqiqa davomida 100°C da ishlov berilganda texnik selluloza, gemisellyuloza va lignindan 71,2% gacha tozalangandi. Shu bilan birga fraksiyaning unumdorligi 47,5% ni tashkil etdi. Bunda shu narsa ma'lum bo'ldiki, dastlabki sholi poyasi tarkibidagi selluloza miqdori ham 47,5% atrofni tashkil qilgan bo'lsa sholi poyasi tarkibidagi birikmalar ion suyuqligi yordamida ultratovush bilan ishlov berilganda 90% dan yuqori darajada mahsulot ajratib olingan.

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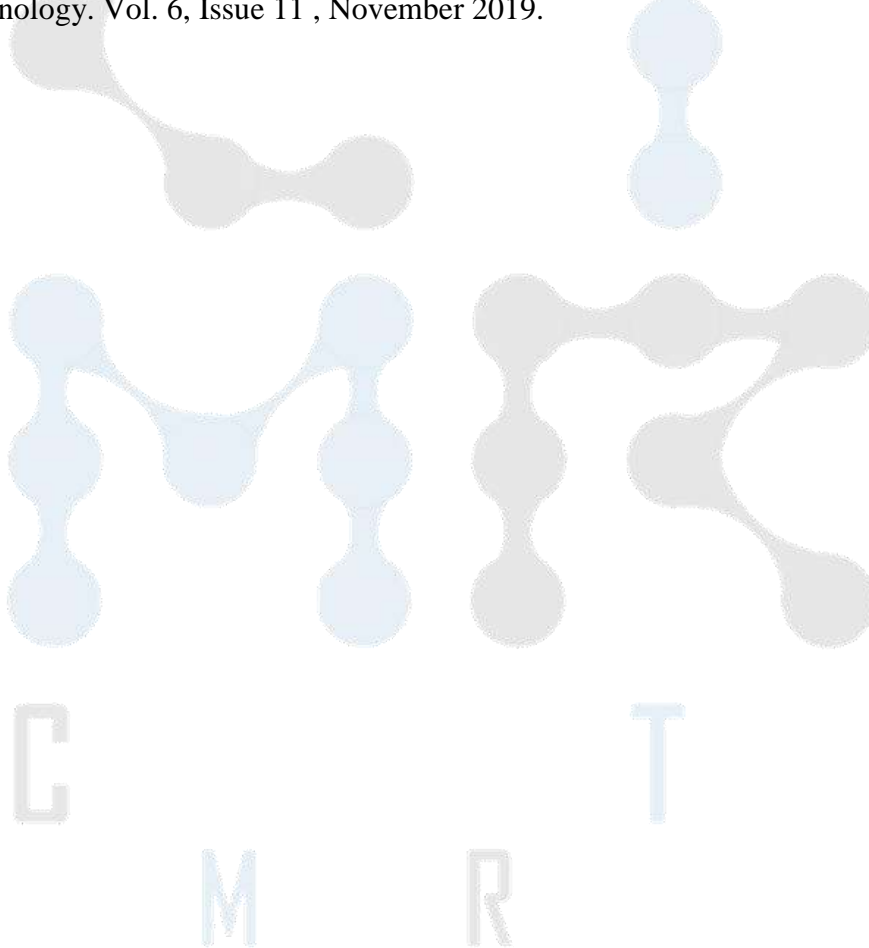
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THE RISE OF ACCOUNTING AUTOMATION: TRANSFORMING FINANCIAL
MANAGEMENT

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ABSTRACT:

This article explores the rise of accounting automation and its transformative impact on financial management practices. It discusses the benefits, challenges, and implications of automation technologies such as artificial intelligence (AI), robotic process automation (RPA), and machine learning in streamlining financial processes. Through a comprehensive analysis, the article examines the key drivers behind the adoption of accounting automation and provides insights into its future trajectory.

Keywords: Accounting automation, artificial intelligence, robotic process automation, machine learning, financial management, efficiency, accuracy, challenges, implications.

АННОТАЦИЯ.

В этой статье исследуется рост автоматизации бухгалтерского учета и ее преобразующее влияние на практику финансового управления. В нем обсуждаются преимущества, проблемы и последствия технологий автоматизации, таких как искусственный интеллект (ИИ), роботизированная автоматизация процессов (RPA) и машинное обучение, для оптимизации финансовых процессов. Посредством всестороннего анализа в статье рассматриваются ключевые факторы, способствующие внедрению автоматизации бухгалтерского учета, и дается представление о ее будущей траектории.

Ключевые слова: автоматизация бухгалтерского учета, искусственный интеллект, роботизированная автоматизация процессов, машинное обучение, финансовый менеджмент, эффективность, точность, проблемы, последствия.

INTRODUCTION.

In the ever-evolving landscape of finance, technological advancements have paved the way for significant transformations, and accounting is no exception. Accounting automation, fueled by innovations in artificial intelligence (AI), machine learning, and robotic process automation (RPA), is revolutionizing traditional financial management practices. This article explores the burgeoning trend of accounting automation, its benefits, challenges, and implications for the future of finance.

The Advent of Accounting Automation

Accounting automation encompasses a range of technologies and tools designed to streamline and optimize financial processes, from data entry and reconciliation to reporting and analysis. Tasks that were once manual and time-consuming, such as bookkeeping, invoice processing, and financial statement preparation, can now be automated with remarkable efficiency and accuracy.

Methods:

This article employs a literature review methodology to examine the rise of accounting automation and its impact on financial management. It draws on scholarly articles, reports, case studies, and industry publications to analyze the benefits, challenges, and implications of

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automation technologies in the finance domain. Additionally, insights are derived from discussions with experts and practitioners in the field of accounting and finance.

Results and analyses.

1. **Increased Efficiency:** Accounting automation leads to significant improvements in efficiency by automating repetitive tasks and streamlining financial processes.
2. **Enhanced Accuracy:** Automation technologies improve the accuracy and reliability of financial data, reducing the risk of human error and enhancing financial reporting.
3. **Cost Savings:** Automation results in cost savings for organizations by reducing labor costs associated with manual processes and improving resource allocation.
4. **Faster Reporting:** Automation enables real-time processing and analysis of financial data, leading to faster and more agile decision-making.
5. **Scalability:** Automation allows finance functions to scale operations efficiently, accommodating growth and changes in business requirements.

Benefits of Accounting Automation

1. **Increased Efficiency:** Automation eliminates the need for manual data entry and repetitive tasks, enabling finance teams to focus on higher-value activities such as strategic analysis and decision-making.
2. **Enhanced Accuracy:** By reducing the risk of human error, automation improves the accuracy and reliability of financial data, leading to more precise financial reporting and compliance.
3. **Cost Savings:** Automation reduces labor costs associated with manual processes and can lead to significant savings for organizations in terms of time and resources.
4. **Faster Reporting:** With automation, financial data can be processed and analyzed in real-time, allowing for faster and more agile decision-making.
5. **Scalability:** Automation allows finance functions to scale operations more efficiently, accommodating growth and changes in business requirements without increasing administrative overhead.

Table 1: Benefits of Accounting Automation

Benefits	Description
Increased Efficiency	Streamlines financial processes by automating repetitive tasks, allowing finance teams to focus on higher-value activities.
Enhanced Accuracy	Improves the accuracy and reliability of financial data, reducing the risk of human error and enhancing financial reporting.
Cost Savings	Reduces labor costs associated with manual processes, leading to significant savings in time and resources.
Faster Reporting	Enables real-time processing and analysis of financial data, facilitating faster and more agile decision-making.
Scalability	Allows finance functions to scale operations efficiently, accommodating growth and changes in business requirements without increasing administrative overhead.

Key Technologies Driving Automation

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1. Artificial Intelligence (AI): AI-powered software can analyze large volumes of financial data, identify patterns, and make predictions, enabling more advanced financial analysis and forecasting.

2. Robotic Process Automation (RPA): RPA automates repetitive tasks by mimicking human actions, such as data entry and reconciliation, across multiple systems and applications.

3. Machine Learning: Machine learning algorithms can learn from data patterns and make predictions or decisions without explicit programming, enabling adaptive and intelligent automation in finance.

4. Cloud Computing: Cloud-based accounting software provides scalability, flexibility, and accessibility, allowing finance teams to collaborate and access financial data from anywhere, anytime.

Challenges and Considerations

While accounting automation offers numerous benefits, organizations must also consider the following challenges:

1. Data Security: As financial data becomes increasingly digitized and automated, ensuring data security and compliance with regulations such as GDPR and CCPA becomes paramount.

2. Integration Complexity: Integrating automation technologies with existing systems and processes can be complex and require careful planning and implementation.

3. Skills Gap: Accounting automation requires specialized skills in technology and data analysis, highlighting the need for upskilling and reskilling finance professionals.

4. Ethical Considerations: Automation raises ethical questions around job displacement, privacy, and accountability, necessitating thoughtful ethical frameworks and guidelines.

Discussion:

The rise of accounting automation represents a fundamental shift in financial management practices, offering unprecedented opportunities to improve efficiency, accuracy, and agility. However, organizations must navigate challenges such as data security, integration complexity, and skills gaps to realize the full potential of automation technologies. By embracing automation and addressing associated challenges, organizations can unlock new levels of productivity and innovation in finance, driving greater value and competitiveness in the digital age.

Future Outlook

The adoption of accounting automation is poised to accelerate in the coming years as organizations seek to stay competitive in a rapidly changing business environment. However, successful implementation requires a strategic approach, investment in technology and talent, and a commitment to ongoing innovation and adaptation.

In conclusion, accounting automation represents a paradigm shift in financial management, offering unprecedented opportunities to improve efficiency, accuracy, and agility. By embracing automation technologies and addressing associated challenges, organizations can unlock new levels of productivity and insights, driving greater value and innovation in finance.

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UNDERSTANDING THE INFLUENCE OF THE TAX SYSTEM ON BUSINESS
ACTIVITY

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ABSTRACT:

The tax system exerts a profound influence on business activity, shaping investment decisions, entrepreneurship, and competitiveness in the global marketplace. This article examines the multifaceted impact of taxation on business activity, exploring how tax policies affect economic growth, innovation, and strategic decision-making. Through a comprehensive analysis of tax incentives, compliance costs, and international tax considerations, this study sheds light on the intricate relationship between the tax system and business dynamics.

Keywords: Tax system, business activity, taxation, investment, entrepreneurship, competitiveness, economic growth, tax incentives, compliance costs, international tax.

АННОТАЦИЯ.

Налоговая система оказывает глубокое влияние на деловую активность, формируя инвестиционные решения, предпринимательство и конкурентоспособность на мировом рынке. В этой статье рассматривается многогранное влияние налогообложения на деловую активность, исследуется, как налоговая политика влияет на экономический рост, инновации и принятие стратегических решений. Благодаря всестороннему анализу налоговых льгот, затрат на соблюдение требований и аспектов международного налогообложения это исследование проливает свет на сложную взаимосвязь между налоговой системой и динамикой бизнеса.

Ключевые слова: Налоговая система, предпринимательская деятельность, налогообложение, инвестиции, предпринимательство, конкурентоспособность, экономический рост, налоговые льготы, издержки соблюдения, международный налог.

INTRODUCTION:

Taxes are not just financial obligations; they are powerful tools that shape economic behavior and business activity. The tax system adopted by a country influences decisions made by businesses regarding investment, employment, pricing, and innovation. In this article, we delve into the multifaceted influence of the tax system on business activity, exploring how tax policies impact economic growth, entrepreneurship, and competitiveness.

Methods.

Taxation and Investment:

One of the primary ways in which the tax system influences business activity is through its impact on investment decisions. Tax policies such as investment tax credits, accelerated depreciation, and tax incentives for research and development (R&D) can incentivize businesses to invest in capital equipment, technology, and innovation. These incentives not only stimulate economic growth but also enhance productivity and competitiveness in the global market.

Conversely, high corporate tax rates and punitive tax regimes can deter investment, leading businesses to postpone or relocate investment projects to jurisdictions with more favorable tax

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environments. This phenomenon, known as tax competition, underscores the importance of maintaining competitive tax rates to attract foreign direct investment (FDI) and foster domestic investment.

Taxation and Entrepreneurship:

Entrepreneurship plays a vital role in driving innovation, job creation, and economic dynamism. The tax system can either encourage or hinder entrepreneurial activity depending on the incentives and disincentives it provides. Lower income tax rates, capital gains tax relief, and tax exemptions for small businesses can incentivize individuals to start new ventures and take risks.

Moreover, tax policies that facilitate access to capital, such as tax credits for angel investors and venture capital, can fuel entrepreneurial activity and support the growth of startups and SMEs. On the other hand, complex tax regulations, high compliance costs, and burdensome tax burdens can deter aspiring entrepreneurs and stifle innovation.

Taxation and Competitiveness:

In an increasingly globalized economy, businesses operate in a competitive landscape where tax considerations play a significant role in location decisions and strategic planning. Countries with favorable tax regimes, including low corporate tax rates, territorial taxation, and tax incentives for international business activities, attract multinational corporations (MNCs) seeking to minimize tax liabilities and maximize profits.

Furthermore, tax policies that promote a level playing field and prevent tax evasion and avoidance contribute to a fair and competitive business environment. Measures such as transfer pricing regulations, anti-tax avoidance directives, and international tax treaties enhance transparency and reduce tax-related risks for businesses operating across borders.

Results:

- 1. Tax Incentives and Investment:** Tax policies such as investment tax credits and accelerated depreciation incentivize businesses to invest in capital equipment, technology, and innovation, stimulating economic growth and productivity.
- 2. Entrepreneurship and Taxation:** Lower income tax rates, capital gains tax relief, and tax exemptions for small businesses encourage entrepreneurship and innovation, while complex tax regulations and compliance costs can hinder entrepreneurial activity.
- 3. Competitiveness and Tax Considerations:** Countries with favorable tax regimes attract multinational corporations through low corporate tax rates, territorial taxation, and tax incentives for international business activities. Measures to prevent tax evasion and avoidance contribute to a fair and competitive business environment.

Tax Policy	Impact on Business Activity
Investment Tax Credits	Stimulate investment in capital equipment and technology.
Accelerated Depreciation	Encourage businesses to upgrade and modernize their assets.
Lower Income Tax Rates	Incentivize entrepreneurship and risk-taking.
Capital Gains Tax Relief	Facilitate access to capital for startups and SMEs.
Territorial Taxation	Attract multinational corporations seeking to minimize taxes.

Transfer Pricing Regulations	Enhance transparency and reduce tax-related risks for businesses.
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Discussion.

Statistics:

1. The Tax Foundation reports that the United States has the highest corporate income tax rate among OECD countries at 25.8%.
2. According to the World Bank, compliance with tax regulations takes an average of 237 hours per year for businesses globally.
3. The Global Entrepreneurship Monitor (GEM) found that tax rates and administrative burdens are among the top constraints for entrepreneurs in starting a business.

Conclusion:

The influence of the tax system on business activity cannot be overstated. Tax policies shape investment decisions, incentivize entrepreneurship, and impact the competitiveness of businesses in the global market. Governments must strike a balance between raising revenue for public services and fostering economic growth through tax policies that encourage investment, innovation, and entrepreneurship. By understanding the complex interplay between taxation and business activity, policymakers can design tax systems that promote sustainable development, prosperity, and shared prosperity for all stakeholders.

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ВОЗДЕЙСТВИЯ УЛЬТРАФИОЛЕТОВЫХ ИЗЛУЧЕНИЙ НА КОЖУ

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Аннотация. В данной статье анализируются *литературные* данные о влиянии ультрафиолета на кожу человека: от позитивного до негативного. В настоящее время врачи многих специальностей считают, что чрезмерное ультрафиолетовое облучение (УФО) оказывает скорее вредное, чем полезное воздействие на различные ткани и органы.

Что касается дозированного ультрафиолетового облучения, безусловным является его позитивное воздействие на организм в целом, которое заключается в антидепрессивном действии, нормализации обмена витамина Д и метаболизма кальция, формировании эстетического вида здоровой кожи.

Дерматовенерологов и косметологов, прежде всего, интересуют следующие вопросы, такие как: механизм их воздействия на структурные образования кожи и влияние ультрафиолетовых лучей на фотостарение.

Фотостарение кожи обусловлено негативным влиянием ультрафиолетового излучения на кожу. Процесс фотостарения характеризуется клиническими, гистологическими и биохимическими признаками, имеющими отличия от хронологического старения областей кожного покрова, закрытых от воздействия ультрафиолетовых лучей. Кожа человека является единственным органом, подверженным фотостарению, ассоциированному с повреждением ультрафиолетовыми лучами (УФ) ее структур.

Главную роль в этом процессе играют ультрафиолетовые лучи спектра А (UVA), которые могут проникать глубоко в кожу, вплоть до сетчатого слоя дермы.

УФА (UVA-излучение) оказывает прямое воздействие на ДНК за счет активных форм кислорода, стимулируя перекисное окисление липидов, активацию факторов транскрипции и генерации разрывов ДНК.

Ключевые слова: УФА-излучение, ультрафиолет, фотостарение, структурные образования кожи.

Annotation. This article analyzes literary data on the effect of ultraviolet light on human skin: from positive to negative. Currently, doctors of many specialties believe that excessive ultraviolet radiation (UFO) has more harmful than useful effects on various tissues and organs.

As for dosed ultraviolet radiation, its positive effect on the body as a whole is unconditional, which consists in antidepressant action, normalization of vitamin

D metabolism and calcium metabolism, formation of an aesthetic appearance of healthy skin?

Dermatovenerologists and cosmetologists are primarily interested in the following issues, such as: the mechanism of their effect on structural skin formations and the effect of ultraviolet rays on photoaging.

Skin photoaging is caused by the negative effect of ultraviolet radiation on the skin. The process of photoaging is characterized by clinical, histological and biochemical signs that differ from the chronological aging of the skin areas closed from the influence of ultraviolet rays. Human skin is the only organ subject to photoaging associated with damage to its structures by ultraviolet rays (UV).

The main role in this process is played by ultraviolet rays of the A spectrum (UVA), which can penetrate deep into the skin, up to the reticular layer of the dermis.

UVA (UVA radiation) has a direct effect on DNA through reactive oxygen species, stimulating lipid peroxidation, activation of transcription factors, and DNA break generation.

Key words: UVA radiation, ultraviolet light, photoaging, structural skin formations.

Цель работы – изучить роль ультрафиолетового излучения в преждевременном постарении кожи с учетом основных характеристик ультрафиолетовых лучей с различной длиной волны; рассмотреть механизмы их воздействия на структуры кожи, в основном фотостарение.

Объект и методы исследования. Проведен литературный обзор материалов отечественных и зарубежных исследователей с использованием поисковых систем PubMed, eLIBRARY за период 2020-2024 гг. **Объект исследования.** Процесс влияния ультрафиолетового излучения на организм человека. **Методы исследования.** Наблюдения, статистический, анкетирование, социальный опрос, анализ, работа с медицинской литературой и источниками Интернета, интервью со специалистами.

Результаты исследования. По данным ВОЗ ежегодно примерно от двух до трех миллионов человек имеют немеланомные раковые заболевания кожи, около 130 000 человек заболевают злокачественной меланомой и от двенадцати до пятнадцати миллионов человек теряют зрения из-за развития катаракты, из которых 20% связаны с влиянием УФ лучей.

Выделяют три вида УФИ: УФ-А с длиной волны от 400 до 315 нм, обладает незначительным биологическим действием. При инсоляции лучами диапазона А с сопровождающим действием некоторых химических веществ, становится вредным для здоровья человека. УФ-В - длина волны от 315 до 280 нм - это наиболее опасное излучение, так как обладает большим канцерогенным действием, чем лучи диапазона А. Данный спектр может вызвать раковое заболевание и привести к образованию морщин, что является признаком преждевременного старения кожи. УФ-С - длина волны от 280 до 200 нм - самые коротковолновые лучи, но не менее опасные, действует на белки, жиры и обладает бактерицидным действием. Лучи с меньшей длиной волны отличаются большей биологической активностью, потому что биополимерные молекулы содержат кольцевые

группы, содержащие углерод и азот, которые интенсивно поглощают излучение с длиной волны 260-280 нм [4,5].

Эпидермальные клетки - **меланоциты** - выполняют важную роль, защищая кожу от действия ультрафиолетовых лучей, и являются составляющими, поддерживающие барьерно-защитные свойства кожи. Изменение защитных клеток вызывает одно из самых быстротекущих новообразований - меланому, вследствие которой происходит 80% смертей, приходящихся на группу злокачественных заболеваний кожи.

В результате воздействия УФИ меланоциты помимо защитной функции ингибируют в клетках опасные для них свободнорадикальные реакции, обусловленные взаимодействием с прооксидантными ионами металлов, цитотоксическими фармакологическими веществами, свободнорадикальными продуктами перекисного окисления липидов [3].

Меланоциты - специализированные клетки, которые способны производить пигмент меланин и определять пигментацию (цвет кожи) и возможность загара. Имеют нейрональное происхождение, начинают развиваться из нервного гребня [2]. Данные клетки представляют форму многогранника, имеющего длинные отростки-дендриты. Меланоциты могут локализоваться в соединительной ткани помимо эпителиальной, а также в головном и спинном мозге, радужной оболочке глаза, внутреннем ухе и мозговом веществе надпочечников.

Меланины - высокомолекулярные пигменты, которые имеют несистематическую структуру и сложный химический состав. В зависимости от химического строения могут подразделяться на несколько вариантов [1].

Меланины - группа органических гидроароматических соединений (пигментов) микробного, растительного и животного происхождения. К меланинам относятся такие пигменты, как черный и темно-коричневый, светло-коричневый и красно-желтый.

Содержание меланина играет важную роль, так как при его изменении в органах и тканях может привести к таким патологиям, как болезнь Паркинсона, витилиго, альбинизм и др. [3].

Защитная функция меланинов заключается в поглощении ультрафиолетовых лучей, предотвращая повреждение тканей глубоких слоев кожи [1]. Распространение меланина в клетках кожи указывает на то, что максимальная защита соответствует зоне наибольшей пигментации, прямо пропорциональная зависимость наблюдается за счет высокой концентрации меланина в крупных одиночных гранулах-меланосомах, а с уменьшением диаметра гранул-меланосом соответственно снижается защита. Меланин функционирует, как ловушка активных продуктов облучения, он замедляет перекисное окисление липидов. В результате свободнорадикальные продукты, образующиеся при окислении липидов, инактивируются на меланиновой матрице и не выходят в окружающее пространство. Еще одним механизмом ингибирующего влияния меланосом на перекисное окисление липидов является связывание меланином солей тяжелых металлов, которые обладают прооксидантным эффектом, и фармакологических препаратов. Данная функция является одной из разновидности механизмов антиоксидантного действия меланосом.

Ультрафиолет является естественным стимулятором меланоцитов. В итоге под его влиянием на кожу происходит быстрое усиление роста дендритов, выработка меланина, что ведет к его накоплению в клетке, в дальнейшем происходит передача кератиноцитам,

которые защищают от вредного воздействия УФ. В результате действия ультрафиолета происходит активация меланогенеза, которая связана с уничтожением тирозиназы, ингибированной глутатионом и пептидазами. Разрушение глутатиона и пептидаз осуществляется лизосомальными ферментами, которые выходят из поврежденных ультрафиолетом соответствующих органелл.

Впоследствии очередной стимуляции меланоцитов ультрафиолетом возникает гиперпигментация кожи, которая зависит от нескольких факторов:

- от увеличения числа функционирующих меланоцитов и пролиферации этих клеток;
- от удлинения отростков клеток и повышения степени их ветвления;
- от активации процесса формирования меланосом, что выражается в увеличении числа меланосом различной стадии зрелости;
- от ускорения синтеза меланина в меланосомах;
- от увеличения размеров меланосомных комплексов;
- возможно, от замедления процесса деградации меланосом кератиноцитами.

Реакция кожи на ультрафиолет и световое облучение представляет воспалительный процесс [5,6,7,8,9]. Происходит окисление SH-групп в SS-группы с высвобождением меди, которая активирует тирозиназу.

Воспаление, создаваемое воздействием света, учитывается как подготовительная фаза меланогенеза. При этом меланоциты мигрируют в глубокие слои эпидермиса, меланосомы приобретают высокую электронную плотность и образуют гигантские меланосомные комплексы, локализующиеся над верхним полюсом ядер. Под воздействием биологически активных веществ, возникающих в результате воспаления, происходит возрастание митотической активности базальных клеток эпидермиса, скорости их дифференцировки и смещения в верхние слои. В конечном итоге увеличивается толщина эпидермиса, особенно рогового слоя, что является защитной реакцией кожи на действие света. Следовательно, защитная реакция кожи по отношению к ультрафиолетовому облучению не ограничивается только активацией меланоцитов, которые играют в ней ключевую роль, данное взаимодействие основано на достаточно сложных межклеточных взаимодействиях в эпидермисе и дерме и включении воспаления как неспецифической защитной реакции.

При выполнении исследовательской работы с нами был собран и изучен материал по изучаемой проблеме, проведены собственные исследования (анкетирование, опрос, интервью, социальный опрос). Изучены общие свойства ультрафиолетового излучения, его положительное и отрицательное влияние, информированность населения о воздействии ультрафиолета на организм. На основании вышеизложенного, можно сделать вывод, что ультрафиолетовое излучение может пагубно влиять на организм человека и вызывать раковые заболевания кожи.

Выводы. Таким образом, современные представления о фотостарении кожи обуславливают важность применения фотопротекторных средств с защитой от UVA- и UVB-лучей. Ключевой момент – возможность обновить естественный запас гиалуроновой кислоты в клетках кожи гаммой Элюаж, что позволит обеспечивать восстановление структуры стареющей кожи. Преждевременное фотостарение кожи требует пристального внимания и дальнейшего изучения со стороны дерматологов, косметологов, работников санэпидслужб, экологических подразделений и специалистов медиков различного профиля.

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**ПАТОМОРФОЛОГИЧЕСКИЕ ОСОБЕННОСТИ МАТОЧНЫХ КРОВОТЕЧЕНИЙ
ПРИ АДЕНОМИОЗЕ МАТКИ**

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Аномальное маточное кровотечение (АУВ) является одним из наиболее распространенных состояний, наблюдаемых в рутинной акушерской и гинекологической практике, затрагивая около 10–30% женщин репродуктивного возраста старше 35 лет. Сообщается, что более 50% пациентов с аномальной маточной кровотоечений не обращается за медицинской помощью, и с этим аномальное маточное кровотечение вызывает снижению качество жизни и продуктивности и влияет на перинатальную исход беременных женщин с анемией в анамнезе из-за аномальных маточных кровотечений.

Ключевые слова: аномальное маточное кровотечение, классическая терминология, менометроррагия, нарушение менструального цикла.

**BACHADON ADENOMIOZIDA BACHADONDAN QON KETISHINING
PATOMORFOLOGIK HUSUSIYATLARI**

Bachadondan anomal qon ketishi akusherlik va ginekologik amaliyotda muntazam ravishda kuzatiladigan, eng keng tarqalgan holatlardan biri bo'lib, 10 yoshdan oshgan reproduktiv yoshdagi ayollarning 30-35%ida kuzatilishi mumkin. Ma'lum bo'lishicha, bachadondan anomal qon ketishi bilan og'riqan bemorlarning 50% dan ortig'i tibbiy yordamga murojaat qilmaydi, shuning uchun ham bachadondan anomal qon ketishi hayot sifatiga va ish unumining pasayishiga olib keladi hamda bachadondan anomal qon ketishi tufayli anamnezida kamqonligi bo'lgan homilador ayollarning perinatal natijalariga salbiy ta'sir qiladi.

Kalit so'zlar: bachadondan anomal qon ketishi; klassik terminologiya, menometrorragiya, hayz ciklining buzilishi

**PATHOMORPHOLOGICAL FEATURES OF UTERINE BLEEDING IN UTERINE
ADENOMYOSIS**

Anomalous uterine bleeding is one of the most common conditions regularly observed in obstetrics and gynecology practice, and can be observed in 30–35% of women of reproductive age over 10 years old. It is known that more than 50% of patients with abnormal uterine bleeding do not seek medical help, therefore, abnormal uterine bleeding leads to a decrease in quality of life and work productivity, and a history of anemia due to abnormal uterine bleeding negatively affects the perinatal outcomes of pregnant women.

Keywords: abnormal uterine bleeding, classical terminology, meno-metrorrhagia, menstrual cycle disorder.

Актуальность. Аденомиоз является распространенным гинекологическим заболеванием, преимущественно встречающимся у женщин в пременопаузе. Аденомиоз может вызывать аномальные маточные кровотечения и дисменорею и связан с 28% снижением клинической частоты наступления беременности, а также более чем

двукратным повышением риска выкидыша у женщин, проходящих ЭКО с аутологичными ооцитами [4,8].

Аденомиоз обычно возникает при аномальном маточном кровотечении и связан с субфертильностью и более высокой частотой выкидышей. Недавние данные показали аномальную васкуляризацию эндометрия у пациенток с аденомиозом, что указывает на роль ангиогенеза в патофизиологии аномальной маточном кровотечение и субфертильности при аденомиозе. Ангиогенез является процессом выращивания новых капиллярных кровеносных сосудов из уже существующих, который протекает как в физиологических, так и в патологических процессах [1,5,8,11].

Роль ангиогенеза при эндометриозе хорошо известно и было признано потенциальными мишенями лечения [3]. Аденомиоз тесно связан с эндометриозом и может быть обнаружен у одной трети пациенток с эндометриозом. Как эндометриоз, так и аденомиоз являются инвазионными заболеваниями, при которых клетки эндометрия приобрели инвазивных свойств, которые требуют ангиогенеза для установления в эктопическом участке [2,6,7, 11].

Большинство патологоанатомов и клиницистов отмечают, что аденомиоз развивается, когда нарушается нормальное соединение между базальным эндометрием и миометрием. Это нарушение может способствовать инвазии в миометрий желез эндометрия, что приводит к эктопическим внутримышечным железам, которые индуцируют гипертрофию в соседних гладкомышечных клетках миометрия. Что вызывает первоначальное нарушение этого соединения и весь патологический процесс, лежащий в основе аденомиоза, неясно [4,7]. Во время беременности вторгшиеся трофобласты нарушают эндометриально-миометриальное соединение. В отличие от эндометриоза, частота аденомиоза была выше у рожавших женщин по сравнению с нуллипарами. Аналогичным образом, женщины с одним или несколькими самопроизвольным абортam в анамнезе также подвергались повышенному риску. Это может быть объяснено более высоким риском разрыва соединения эндометрия и миометрия, вызванным беременностью. Соединение эндометрия и миометрия также может быть нарушено повторяющимися эпизодами менструального цикла и связанными с ними сокращениями миометрия. На самом деле, риск выше у женщин, сообщающих об обильных менструациях. Эта точка зрения перекликается с участием повреждения и восстановления тканей как механизма аденомиоза [5].

Ibrahim et al., (2017) отмечает, что потенциальная роль ангиогенеза в патофизиологии аденомиоза и связанных с ним симптомов сложна. Предполагается, что этот процесс запускается повреждением и восстановлением тканей, вызывая реактивную эндометриально-миометриальных поражений в ответ на гипоксические и гормональные стимулы. Основной патогенез основан на теории, согласно которой клетки эндометрия вторгаются в миометрий в участках соединительной зоны, которые ослаблены либо генетической предрасположенностью, либо аутоотравматизацией матки и индуцированной гипоксией. Согласно этой теории, гипер- и несинхронизированная перистальтика матки, следующая за физиологическими процессами, такими как менструация или транспорт сперматозоидов, вызывает хроническое повреждение соединительной зоны, где эндометрий находится рядом с миометрием [9,10]. При проникновении эндометрия в эти нарушения в соединительной зоне образуются эктопические очаги эндометрия, которые

вызывают местное воспаление и гипоксию. Дополнительную роль может играть воздействие эстрогенов яичников, а также местная выработка эстрогена из-за локальной активности эстрогенсульфатазы и ароматазы в аденомиотической ткани. Эти события напрямую связаны с усилением ангиогенеза в этих тканях, поскольку они приводят к выработке VEGF, что вызывает ангиогенез[4,7,11].

Целью наших исследований являются изучить основные причины и взаимосвязь между патоморфологическими изменениями эндометрия матки при аденомиозе с маточной кровотечений,

Материалы и методы. В ретроспективном исследовании были получены данные у небеременных женщин в возрасте 18-55 лет, перенесших гистерэктомию, миомэктомию или полипэктомию по поводу аномальной маточной кровотечений в Хорезмской областном Перинатальном центре и городском родильном доме города Ургенча Хорезмской области в течение 2015-2023 годах.

В нашем исследовании было изучено материалы, полученные из 240 пациентов, впервые обратившихся за лечением, из которых у 110(45,8%) случая был диагностирован аномальная маточная кровотечения. Среди них у 46(41,9%) были аномальные менструальные циклы и у 64(58,1%) были аномальные менструальные кровотечения. В исследовании PALM имел самый высокий процент AUB-L, а COEIN - самый высокий процент AUB-O. Анализ соответствия показал, что COEIN был тесно связан с аномальными менструальными циклами, а PALM — с аномальными менструальными кровотечениями.

Обсуждение полученных материалов. В детальное обследование было включено 240 случая. За период исследования среди 240 пациентов, впервые обратившихся за лечением, из которых у 110(45,8%) случая был диагностирован аномальное маточное кровотечения. Среди них у 46(41,9%) пациентов были аномальные менструальные циклы и у 64(58,1%) были аномальные менструальные кровотечения. Термин «гиперменорея» охватывал 15 различных сочетаний патологий: «меноррагия»-9, «метроррагия»-14, «менометроррагия»-18. Из 12 пациенток с полипами у 5 (5,4%) было два полипа, а у 1 (1,1%) - три. Из 46 больных аденомиозом у 31 (89,7%) был диффузный аденомиоз и у 15 (8,2%) - аденомиома. Из 39 пациенток с миомой матки у 18 (34,9%) была субмукозная миома и у 21 (65,1%) - другие типы миомы.

Гистопатологические результаты всех образцов биопсии эндометрия были изучены после того, как они были классифицированы по возрастным и паритетным группам. Чувствительность, специфичность, положительная прогностическая ценность были рассчитаны для оценки диагностической точности. Большинство пациентов были в возрастной группе от 18 до 55 лет, при этом нормальные циклические результаты были наиболее распространёнными гистопатологическими находками. Злокачественные поражения наблюдались у 35 пациентов, большинство из которых были старше 50 лет. У 13,3% (14 из 110) пациенток не удалось обнаружить внутриутробное нарушение, которое было обнаружено при гистерэктомии. Общая точность в определении наличия нормальных и патологических признаков у наших пациентов составляло 78,5%, чувствительность-73,8%, специфичность -76,8%, положительная прогностическая ценность -74,2%. Нормальные циклические изменения составляют наибольшую долю гистопатологических находок. Тем не менее, гиперплазия и злокачественные новообразования являются важными причинами кровотечений в перименопаузе и постменопаузе.

Вывод. Маточное anomальное кровотечение это является сложным процессом, и известно, что оно проявляется преимущественно как следствие патологических состояний, наблюдающихся в матке по различным причинам. По данным морфологической исследований слизистой оболочки матки определено, что anomальная маточная кровотечения развивается при гиперменореях, меноррагиях, метроррагиях, менометроррагиях. Среди пациентов с anomальной маточной кровотечениями было выявлено и полипы, диффузный аденомиоз и аденомиома.

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Annotation. Education is the process of imparting to others the positive skills of the lessons and intellectual potential of every person during his life. Education is the ability to obey the moral norms accepted in society and refrain from actions that provoke the hatred of others.

Keywords: education, school, a concentric basis, method, human qualities, independence, knowledge.

The first feature of education is that it is a multifaceted process, in which school, family, children and youth organizations, neighborhood, general public, cinema, theater, television, literature and art participate.

Another feature of education is that it lasts for a long time. In a different approach to education, it begins at birth, continues through the school years, and continues throughout life.

Another feature of education that distinguishes it from education is that it is implemented holistically and on a concentric basis. Different aspects of education are inextricably linked. In the elementary, middle and high school, the same thing is expected, for example, friendship, harmony, patriotism and education of others.

Another feature of education is that this process has a two-way feature, in which the child also takes an active part.

The abundance of contradictions in education is another feature. These contradictions are manifested in the struggle between the qualities that initially appear in children according to their own concepts and the qualities that are being developed by the educator, and between the demands placed on students and the opportunities to fulfill them.

What is the role of education in the development of society?

The role of the educational process in the development of society is ultimately incomparable. The thinker scientist Abu Nasir Farabi believes that the main task of education is to educate a mature person who can respond to the needs of society and serve this society.

It is necessary to educate a person who occupies an important place in the development of society, to encourage him to acquire knowledge, to work, and to gradually turn this behavior into a skill. A person's observation cultivates the ability and develops the mind. Mind preserves consciousness. Consciousness becomes a

material and spiritual source. In this way, a person gradually improves and reaches perfection. However, for this, long-lasting responsibility, honorable work, diligence, and will are required from educators and educators. In this case, the teacher should take into account the young characteristics of the children.

In the formation of spiritual and human qualities, the environment and attitude in the family, surroundings, and society play an important role. Due to the fact that children are imitative, the mind, spirituality, knowledge, and education of the mother are of great importance in raising them.

The effectiveness of targeted education depends on the method used by the teacher. The method, that is, the method, depending on the nature of transmitting and receiving information:

1. Method of expression through words.
2. Demonstration method.
3. Practice sample method.
4. It is divided into incentive and punishment methods.

These methods are divided into the following groups.

The first group - verbal transmission, advice, receiving information by hearing, story, lecture, conversation and other methods.

The second group - films, fine arts, fine arts and other methods of visual education.

The third group is to give educational aspects through practical labor actions, to set an example, to show the work of others as an example.

The fourth group - approval of well-done work in front of comrades, gratitude, economic and moral stimulation.

Punishment is a confession of the child's wrongdoing.

Let's look at the concepts related to the educational process, our national spirituality, and ideology:

Beruni emphasizes that knowledge, art, and practice play a major role in a person's maturation, while genealogy, social environment, and life rules are also of great importance. In his opinion, the most important factors of human maturity are knowledge, enlightenment and high morality. The signs of morality are goodness, correctness, justice, humility, generosity, nobility, friendship and cooperation, hard work, purity, striving for beauty.

Justice is the solution of life issues in compliance with moral and legal norms. Aspects related to the concept of justice are very comprehensive, and concepts such as a just person and a just society are among such aspects. The concept of fairness means to act, act, and operate according to the principle of justice. President I.A. Karimov's answers to the questions of the reporter of "Turkiston" newspaper on the

topic "We are building our future with our own hands" (February 13, 1999) became a program for us.

In order to choose the right path in a delicate situation where the fate of the motherland and nation will be decided, one must first know history well and know the bitterness of life.

Justice should be the criterion of the society we are building.

Now, it is necessary to abandon the mood of denial or approval of the old society and move to the mood of creativity.

Realizing our identity and not forgetting our spiritual roots at a time when the fate of the nation, state, and society is being decided.

It is necessary to enrich people's thinking, to fill it with new meaning and content.

In the process of building a legal democratic state of our country, special attention is paid to researching the pages of our past that have not yet been studied, returning the names of our state and political figures to our people, and restoring our legal values. "Independence for us is, first of all, to take our destiny into our hands, to realize our identity, to restore national values and traditions, to maintain peace and stability in this respectable land."

From this point of view, the formation of the concepts of social justice among young people is important within the framework of the topic of social justice.

It is known that "justice" as a comprehensive concept covers all aspects of social relations. "Justice, as a category of morality and law, is a necessary measure that controls moral-legal relations and evaluates people's activities," writes F. Nizomov.

The degree of progress is determined by the observance of the norms of social justice in any society. If we look at the history, we can witness that different approaches to creating the law of justice have been followed in different societies.

With the honor of independence, a thorough study of the scientific heritage of many of our ancestors and the ideas about justice put forward by them remains the need of the hour. Especially in the Republic of Uzbekistan, there is a need for competitive personnel with in-depth legal knowledge, advanced socio-cultural level, practical skills. Therefore, it is necessary to create a foundation for the development of the concepts of social justice among young people. It is necessary for personnel who will become specialists in the future, and today's participants of continuous education, who can correctly assess the problems of the rule of law, have deep legal knowledge, and understand the internal laws of the spheres of social life. Based on the requirements of the present time, young people should pay special attention to

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issues such as reforms in the social sphere, moral and legal relations in a developing legal democratic state.

In the formation of these concepts, the continuous education system is considered to be the main link in a person's entry into social relations. Adhering to the norms of justice in life is a social-ethical, spiritual-spiritual process.

The views of the scientists who conducted scientific research on the problems of legal education and their application to the educational process: A. Saidov, B. Karimov, I. Ergashev, A. Begmatov are valuable.

It is known that the things that a person can achieve in society - property, income, social status, power, rights - depend on the justice in interpersonal relations. People pay great attention to the problems of justice in areas such as material benefits and types of services, social (reputation, respect), political benefits (political freedoms, individual rights), health care, and the social condition of people. While promoting the idea of a just king, the thinker Shahabeddin Am'aki teaches the ruler to observe the standards of justice. Regarding the existing social groups, classes, and classes in the society, he emphasizes the need to distribute material and spiritual benefits "chun khurshed meboyat zist", i.e., equally like the sun, treating everyone as one and distributing them on the basis of justice. In his hymns, Alloma said that it is necessary to pay special attention to scholars, intellectuals, farmers, artisans, and to appreciate their work for the stability and development of society, and he strives to achieve this in his work.

"The thinker Amaqi Bukhari put forward the idea that justice is the infinite grace of God, everyone should enjoy it. In this regard, he gives special importance to the mashvarat (council) and draws attention to the importance of its role in the fair management of society." This shows that the power of the state depends not only on economic opportunities, a strong army, mirshab and judges, but also on the implementation of the principle of justice and its practical activities.

In the process of education, the main task of teachers and educators is to pay attention to the fact that their task is important in the completion of education. This shows that the power of the state depends not only on economic opportunities, a strong army, mirshab and judges, but also on the implementation of the principle of justice and its practical activities.

education, continuous improvement of students' knowledge and skills, formation of thinking, scientific outlook and ideological concepts in them.

Ideology is a powerful tool that changes the human psyche, thinking and worldview. His ideas will be effective if they become an expression of people's trust, faith, aspirations and interests. That is why it is necessary to carry out propaganda

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and campaigning in the field of ideology, taking into account the level of students' understanding, intelligence and thinking through educational ways and methods.

The rule of education aimed at a certain goal. The main goal of education is to form a morally and intellectually well-rounded person. Educational work is a continuous process aiming at a certain goal. The rule that education is aimed at a certain goal helps to see the development prospects of a group of children.

The principle of humanism and democracy in education. The teacher's level of knowledge and spirituality is one of the leading factors that moves the society and leads to development. It is very important to use the Holy Qur'an and Hadith to educate young people in the spirit of human virtues. In education, it is necessary to recognize the human personality as a high social value, to respect the uniqueness and uniqueness of each child and teenager, to take into account his social rights and freedom. Democratization of education means putting education above administrative needs and interests, changing the nature of pedagogical relations based on mutual trust and cooperation between educators and students. The teacher should look at the student not as an object of education, but as a subject like himself. Democratization and humanization of educational activity involves rethinking its essence and content. It ensures the development of a person and the realization of his identity.

The rule of priority of national and universal values in education. It is very important to acquaint students with the values and rich culture of our Motherland, to improve their skills and to form their requirements for acquiring cultural and religious knowledge, and to form aesthetic concepts. It is impossible to understand the national identity and the feeling of national pride without deep knowledge of the centuries-old values of our people and the rich and cultural heritage. The cultural assets created by him serve as an important tool in the education of young people. Through the works of great thinkers, students will have a broad idea of the rules of good morals, happiness, honesty, purity, love and respect for parents. Humanity includes the best moral qualities of a person, such qualities as friendship, loyalty to parents, hard work, and piety. Therefore, the best qualities of a person have been passed down from generation to generation.

The rule of consistency, systematicity, harmony and continuity of educational effects in education. Consistency is very important in educational work. If the teacher first demands something from the children, and then forgets about this demand, this situation has a bad effect on education. A teacher must be trustworthy and true to his word. Consistency in the educational impact on students and setting the same requirements is one of the most important conditions for success. Education

is a long process in which parents, teachers, and the public participate. Therefore, it is necessary to observe consistency and continuity in their work. This rule envisages the joint work of all the links that implement education (family, school, student community, extracurricular educational institutions, the general public). Because the system should cover not only young people, but all layers of the population.

The child wants to study, get education, grow up and take an active part in the life of the society. The pedagogue should know how to educate him, in what conditions of relations, in what pedagogical process, and at the same time he should not forget that the child is an active participant in changing himself.

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THE IMPORTANCE OF SPORTS MARKETING ACTIVITIES IN THE TRAINING OF
MODERN EXECUTIVE PERSONNEL

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Abstract: this article highlights the importance of sports marketing in the preparation of modern leaders for sports institutions specializing in sports education today in competitive conditions, as well as the scientific and practical aspects of the introduction of sports marketing activities in leadership activities. The issues of wide involvement of young people in sports in the regions for sports education institutions are discussed in detail. Scientific and practical recommendations on the development of sports marketing have been developed in the training of modern executive personnel.

Keywords: physical education and sports institutions, sports education, sports marketing, sports, trends in the international sports market, sports development.

INTRODUCTION

The implementation of such tasks as "bringing the share of the population involved in sports to 36%, building sports venues in at least 5,000 neighborhoods so that they can engage in physical education and mass sports" was highlighted, based on the stated goal of the Uzbekistan-2030 strategy on "reforms in youth Public Policy and sports directions".

Indeed, based on the goals and objectives set out in the strategy, the involvement of young people in sports and the involvement of residents and young people in sports and increasing their level of coverage imposes on the leaders of sports education institutions with great responsibility.

In the context of a fierce competitive environment, it is difficult for management leaders in the field of physical education and sports in our country to achieve profit without introducing marketing and management in their activities while taking a strategic step while forming their worldview. Today, in the stable and priority development of sports education institutions, it is important that every modern leader, as a result of his study of sports marketing, solves the urgent tasks that await his solution in the field.

We dwell on what work is being carried out in our country on the development of sports marketing and what are the problems that await their solution in this regard, and what measures should be taken for the development of the field in the future.

In a competitive environment, sports organizations that have set their strategic goals will require a certain level of effective labor to have a position in the world market and ensure high results in international sports.

The fact that the theoretical, methodological and practical aspects of the introduction of sports marketing in the provision of sports services, taking into account the large-scale reforms in the field of sports as one of the main factors in the sustainable development of sports marketing, are not studied as an independent object of research, determines the relevance of the topic of the article.

As a research problem, as a driving support in the development of sports business in the context of a competitive environment, it is precisely the improvement of the methodological and scientific basis for the introduction of sports marketing.

A number of tasks have been set to solve this research problem:

- research the methodological foundations of the introduction of sports marketing in the introduction of sports business;
- study the criteria for the effective use of sports marketing in the development of sports business in the context of a competitive environment;
- assessment of the state of study of sports marketing in the activities of modern leaders and analysis of the state of its further increase in the chances of obtaining science.

Literature review

The development of sports marketing and the organization of the production of sports goods in accordance with the requirements of international quality standards, the training of qualified sports personnel is one of the pressing issues waiting for their solution in the field. Initially, it is advisable to find answers to questions such as what "sports marketing" is and what should be distinguished from other areas.

Looking at the research carried out on the development of sports marketing, a special issue of the Journal of Business Research, held in San Diego, California in 2018 as part of "issues related to sports marketing and sponsorship", discussed issues of further development of sports marketing research and support for sponsorship in sports, and put forward ideas aimed at uniting world scientists in this regard [2].

Michal Varmus (2015), a foreign scientist, also noted in his research that small sports clubs operate mainly in the training of amateur players or talented sports children, often within the requirements of spectators and visitors, but it is important that their main problem is to find sports sponsors as a result of the development of sports marketing. In his views, he particularly touched on the issues of the widespread introduction of sports marketing in the development of Sports Club Activities, the formation of sports marketing communiqués using innovative approaches in this regard and the adoption of strategic decisions [3].

Research scientists are directly involved in the development of sports business in the country's economy by introducing yutuk cadre training in universities, and leadership in this regard, improving physical education and sports programs and revising programs. The issues of development of sports business and further improvement of sports marketing activities and the establishment of sports campuses in this regard are highlighted [4].

Sports marketing is of particular importance for any sports goods manufacturer or sports service provider. In this respect, the development of sports marketing and, as a result, the imposition of a positive impact on the domestic market of the country, as well as the existence of what is "sports marketing" itself and what distinguishes it from other areas, were raised precisely as the main issue of research.

Research related to the development of sports marketing has included Australian Deakin University Professors Vanessa Ratten and Hamish Ratten (2011) who have stated their views on the subject: "sports marketing" is one of the effective marketing tools through which companies generate income using consumers' passion for sports. It is worth noting that even in our country, the issue of sports sponsors is always relevant, and as a result, sports clubs always feel the need

for financial support, but this is also due to marketing activities that are not properly established in the club [5].

Research methodology

In the world, many international sports organizations at the international level work towards the implementation of various marketing projects in various sports, and as a result of this, they contribute to the enrichment of the country's economy, in addition to increasing their budget. In the development of sports business in competitive conditions, the sports sector is also considered as a profitable sector as an important sector of the economy.

Analysis and results

Sports marketing is one of the significant areas of international sports projects and is important in the development of sports business. Many sports teams establish partnerships with international sponsors worldwide through international sports marketing organizations (Brandwave, Chime sports marketing, Fenway sports management).

Scientists who have conducted research on the development of sports marketing directly argue that "sports marketing" is a huge opportunity for international corporations and organizations to advertise their products and services. These may be prominent in the process of purchasing a sports field name, sponsoring individual sports athletes, or providing sportswear as well as equipment.

Today, one of the main and most important tasks of every sports organization operating in the field of sports marketing is to correctly select its mission, mark a specific target or identify its competitor in a competitive market, and explore its internal and external capabilities. Sports firms entering the sports business are required to correctly select a specific optimal market, and it is also advisable for sports marketers to choose segments ranging from constant analysis of their customer needs and potential in a specific market segment to consumer.

Currently, in conditions of fierce competition, the desires and desires of consumers are changing dramatically. In order for sports firms to operate effectively in the sports business, it is required to be able to correctly define sports marketing strategies and to organize production and service according to the wishes of consumers, and to be able to enter competition taking into account any market structure. Business entities that carry out sports business directly achieve income by providing quality sports services along with the production of sports goods, as well as by attracting fans to the sports field. The role of sports marketers is of great importance in this.

In the context of fierce competition, along with the production of sports goods, it is one of the important tasks to find solutions to the issues of providing quality sports services to the world market and focusing on sports advertising. As we know, sports events held in any country or international economy attract representatives of many industries around them, in particular: athletes, sports valantists, as well as promoters, sponsors, agencies, media and representatives of other professions.

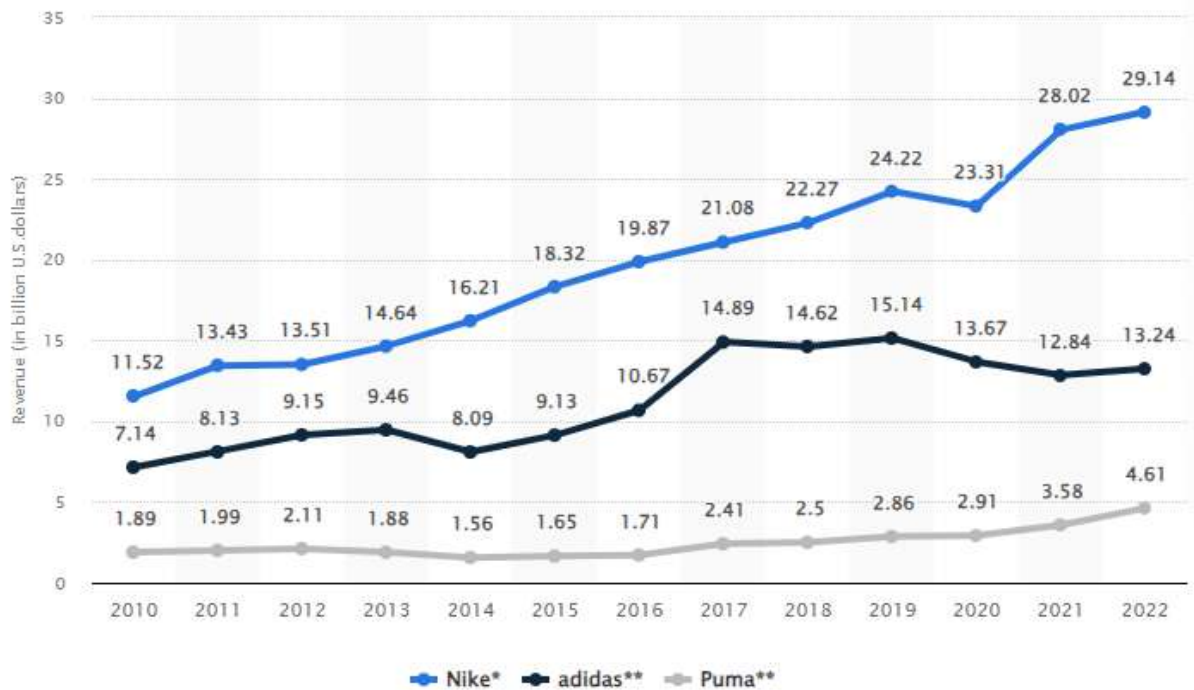


Figure 1. Revenue from the Nike, Adidas and Puma shoe segment from 2010 to 2022 (in us \$ billion)⁹

Nike, Adidas, and Puma are listed as having global revenues from their shoe segments from 2010 to 2022. Adidas' revenue from footwear was over US \$ 13 billion in 2022.

Nike is the market leader in the world sneaker industry, earning just over US \$ 29 billion in 2022. This figure is larger than the total income of his two closest rivals, Adidas and Puma's shoes.

In 2022, more than seven billion dollars of Nike shoe revenue was generated in Europe, the Middle East and the African region, and another four billion US dollars came from emerging markets in Asia Pacific and Latin America.

Looking at the leading sports brands, it is estimated that the market for sports inventory in the world sports market will be about US \$ 150 billion in 2023, and the world sportswear market—about US \$ 200 billion. This is evidenced by the presence of a growth trend in both areas.

In particular, the most famous sports brands in the sports market are Nike, Adidas, Reebok and Puma. The Nike sports brand is estimated at nearly US \$ 40 billion and generated approximately US \$ 35 billion in revenue for fiscal year 2021, the bulk of which fell on sportswear. The Adidas Group produced approximately US \$ 20 billion in products in 2020, and sneakers make up the bulk of this.

⁹ <https://www.statista.com/statistics/278834/revenue-nike-adidas-puma-footwear-segment/>

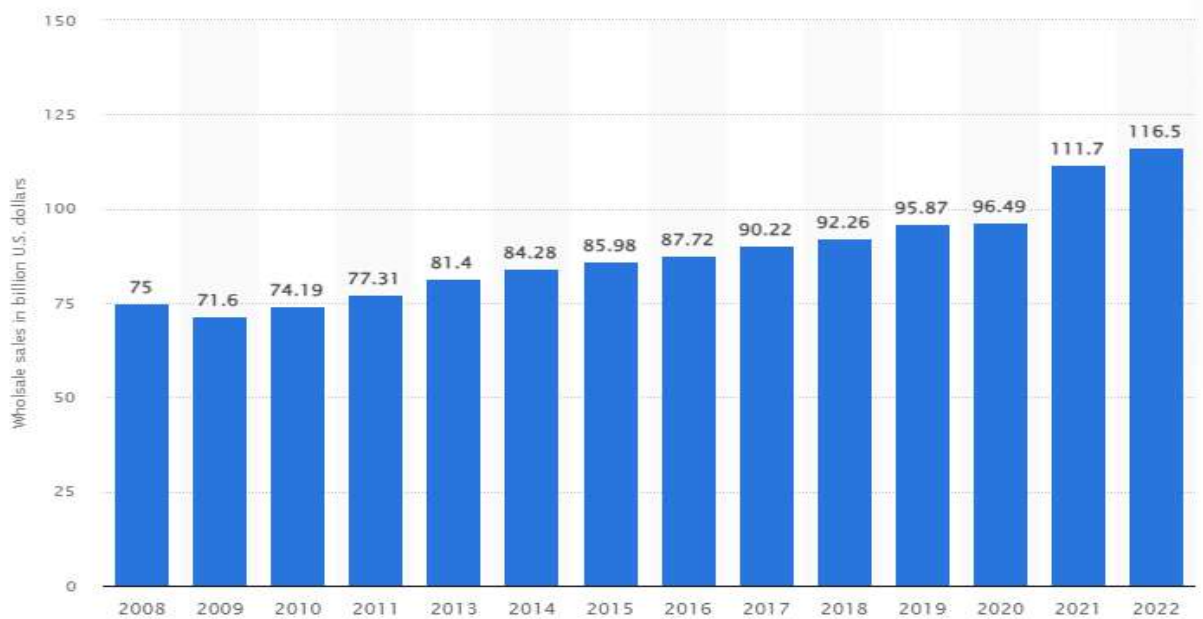


Figure 2. Manufacturers (wholesale) of sports products in the United States from 2008 to 2022 (in billion US dollars)¹⁰

Figure 2 shows the (wholesale) sales of manufacturers of sports equipment, fitness equipment, sportswear, sports shoes and sports licensed products in the United States from 2008 to 2022. Wholesale sales in 2022 were approximately US \$ 116.5 billion, a record for the sports industry.

In the US, in 2022, the wholesale trade in sports goods reached its peak today and grew by US \$ 20 billion compared to two years ago. The largest branch of the U.S. sporting goods industry is sportswear, which has generated wholesale sales of approximately US \$ 42 billion in the U.S. This figure does not include sneakers, which generated US \$ 20 billion in manufacturer sales that year.

Consistent measures are being implemented in our country to popularize sports, to create the necessary conditions and infrastructure for promoting a healthy lifestyle among the population, especially young people, to ensure the worthy participation of the country in international sports fields.

Specific proposals to eliminate existing problems in the field of sports are presented, which today require cooperation with the National Olympic Committee of Uzbekistan, sports federations to create an effective system of selection, training and skill of promising athletes to ensure successful participation in the Olympic, Paralympic and Asian Games, World, Asian Championships and other international competitions and tournaments, the formation of

In our republic, it is required to encourage and support the development of professional, mass sports, including sports games and winter sports, to widely introduce modern innovative technologies into the sports training process, to study foreign experience in this regard, to increase the level and quality of national championships in all sports, to organize international and regional competitions, to encourage systematic measures against unhealthy sports competition.

CONCLUSION

¹⁰ <https://www.statista.com/statistics/240946/sports-products-industry-wholesale-sales-in-the-us/>

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In place of the conclusion, sports marketing is one of the most effective tools of the sports business in the global sports market in achieving a certain goal, leading to an increase in the source of income by the fact that each sports product or service finds its consumer and increases sports fans and spectators.

Focusing on training sports marketers in the field of sports marketing; hosting prestigious high-profile sports competitions as well as creating the necessary conditions and infrastructure for this; promoting the promotion of national products in international sports competitions.

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SOCIO-POLITICAL SITUATION IN INDIA AT THE END OF THE 19TH CENTURY - THE BEGINNING OF THE 20TH CENTURY

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ABSTRACT

Late 19th - early 20th century. The socio-political situation in India was dire. The economic situation was extremely difficult, the standard of living of the population was lower than that of other countries. At that time, India mainly specialized in agriculture, and the majority of the population lived in villages and engaged in farming. Due to the lack of systematic work in agriculture, the lifestyle of the farmers working on the land was miserable. The industry was also served by the British government. There are some differences in India during this period literacy and only upper class people could read and write. These factors also created certain problems for the development of India. But the enlightenment that started in India led to the country's independence.

Keywords: India, England, national minority, social status, politics, economy, agriculture, caste, tax system, administration.

INTRODUCTION

In the 19th and early 20th centuries, the British colonial empire of India (legally the Indian Empire), which included the present-day Republic of India, the Islamic Republic of Pakistan, and the People's Republic of Bangladesh, was spread over an area of more than 4.2 million square kilometers with a population of 283 million people. (for comparison: the area of Great Britain was 240 thousand square kilometers, the population was 38 million people).

India was a backward country in the early 20th century. He came to this time with a heavy burden of enormous socio-economic problems: the poverty of a large part of the population, prolonged famine and mass epidemics, and even a large part of the population was reduced (1891-1901 and 1911-1921).), the average life expectancy was very short, 23 years. This was mainly the result of his colonial policy. In India, the rural population is the majority (about 90%). Urban residents were mostly concentrated in small towns (5,000-50,000).

LITERATURE ANALYSIS AND METHODOLOGY

In the process of research, the objectivity of scientific knowledge, the processes in India in the 19th and 20th centuries were revealed objectively. Logic, the socio-political situation in India was studied in terms of logical consistency. Systematics, the relationship between Great Britain and India was systematically analyzed.

The economic life of the country was mainly determined by traditions, the division of society into castes and religions. A semi-subsistence economy prevailed in the village, and semi-feudal relations were formed.

RESULTS

Indian agriculture at that time was characterized by the Indians themselves as a completely stagnant economy. Agriculture had three main systems of land ownership and taxation by the British. The first is a permanent tax (permanent zamindar) (Bengal, Bihar, Orissa, the northern part of the Madras region), according to which large landowners (zamindars) from the Brahmin

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and merchant castes received the right to land. They had to pay a land tax, which was levied continuously at the end of the 18th century, during which the rent reached 90 percent. The second - in the second half of the 19th century, temporary zamindari was introduced (United Provinces, Central Provinces, Punjab). Accordingly, the land tax was revised every 20-40 years, and the rights of large landowners began to be given to smaller landowners. If the land in the village belongs to many owners, then as a community they have assumed not only individual, but also collective responsibility for paying taxes. A third system - rayatwari - was introduced in the provinces of Madras and Bombay from the 1850s. He gave ownership rights to small landowners - raiyatams ("protected tenants"). However, many of them did not work on the land themselves, but rented it out.

Most of the villagers did not have their own farms. These were mainly the lower castes and tribes who were socially and economically subordinated to their masters, but in fact laborers or enslaved workers, together with their families, numbered more than 50 million in 1901. Almost all landless laborers, tenants, and many small landowners were indebted to usurers. Remnants of feudal relations in the villages - arbitrary rent collection, free labor of tenants, clearing of waste land and pastures, collection of fees for the use of water from lakes, as well as the performance of lower caste duties. compulsory works continued.

The system of land ownership introduced by the British included the collection of large amounts of taxes, as well as the promotion of agricultural products for export. In fact, the aim was to maintain a constant "perpetual" tax (to ease the pressure on the zamindar landowner), while the British government constantly increased the rent for the land. At the beginning of the twentieth century, taxes accounted for only 4 percent of the gross income of rural producers. Twenty landowners were not interested in capitalist agriculture. They preferred traditional forms of land use. Land leasing and usury were more reliable and profitable for them than capitalist production. As a result, the layer of middlemen who live off the labor of the peasants who work the land began to expand.

At the beginning of the twentieth century, the Indian new owners were still very weak and small. Many of its groups depended on British capital or government orders. The landlords were made up of several denominations or caste groups - Parsis, Marwari (Jains), Gujarat bania (Hindus), Muslim Bohras and Khojas. They often operated outside their ethnic-confessional territories. They dominated British commercial and banking capital in industry, including the two main centers of India - Bombay (Mumbai) and Calcutta (Kolkata). At the beginning of the 20th century, along with the creation of modern forms of economic organization - commercial firms, auction companies, banks, and then factories and plantations, the ownership classes began to grow in number.

About 4.5 million people are employed in industrial production, mainly in small enterprises. About 1 million of them were factory workers. Their work was hard, mostly manual labor for 12 or more hours a day, low wages, and dependence on contractors (employers). Caste and labor conflict prevented their union. Most of them came from villages and lived in poverty without family in the city. After several years of hard work, they would return to the village. Boys will go instead of them. This cycle is repeated from generation to generation.

By that time, 6% of India's literacy rate was 18 million people. About 500,000 of them were educated in English [7]. The modern middle class that emerged at the beginning of the twentieth century was made up of local merchants, government officials (trade and office and bank

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employees), British companies, employees of municipal institutions, school and college teachers, medical workers, lawyers, judges (all, as a rule, in low positions). In India, workers were traditionally divided into those engaged in mental labor and those engaged in manual labor, which was reflected in the caste system of employees. Most of the intellectual workers were members of the upper caste, most of whom were educated in English. After the rebellion of 1857-1859, the British began recruiting English-educated Indians into civil service so that they would not support the rebels. A network of educational institutions teaching in English has begun to be created in India. In 1858, three universities were opened at once - in Calcutta, Bombay and Madras. The emergence of national press and professional-business associations corresponds to this period.

The administrative system of the Indian Empire was a sovereign state - it consisted of the government, army, state apparatus, and financial institutions. However, the administration of the British government was carried out by the Minister of Indian and Burmese Affairs from London. Also, a Governor-General of India was appointed, who had almost unlimited power and had the title of Viceroy as the representative of the King of Great Britain. The officer corps is almost entirely composed of Englishmen who have passed the Indian Civil Service (HDX) examination. By the beginning of the 20th century, the number of Indians in the USSR was very small. The governors of the viceregal provinces were appointed by the government, and the governorates also had legislative advisory councils.

The Indian Empire consisted of provinces headed by governors and lieutenant governors (Bengal, Bombay, Madras, Bihar Orissa, United Provinces, Central Provinces, Punjab) as well as provinces headed by commissioners (North), West Frontier Province (NWFP), Baluchistan and Assam) entered. The center and south of the country, as well as the north, were occupied by 562 principalities (about half of the entire Indian territory with 25% of the total population of the Indian Empire). The largest of them were: Hyderabad, Mysore, Travancore, Cochin, Bhopal, Gwalior, Indore, Jammu and Kashmir. The royals had separate vassal treaties with the British government, but their affairs were handled by representatives of the political department under the governor-general, with special representatives in charge of one or more small principalities.

DISCUSSION

The real basis of British colonialism was economic exploitation and racial discrimination. The development of socio-economic events in India can be judged by the dominance of foreign minorities and the indifference of the economic interests of the majority of Indians. In addition, at the beginning of the 20th century, the country was affected by famine. Tens of millions of people suffered from it. In addition, at the same time, an epidemic of cholera began, from which more than six million people died. The sad condition of the Indian people was confirmed not only by Indians, but also by many foreign researchers. American historian Will Durant said, "The appalling poverty of India is the policy of a foreign government, which cannot be justified ... There is ample evidence that British rule in India was a disaster and a crime." This is completely different from Muslim rule (the Baburis), wrote Durant. The Muslim invaders came to stay and their descendants called India their home. They spent what they received as taxes to develop handicrafts, agriculture and other fields in India, enriching literature and art. "If England had followed the same path, India would be a prosperous country today. But its current looting is totally intolerable. Britain destroys one of the greatest and gentlest nations every year."

CONCLUSION

The history of India in the first half of the 19th century was primarily associated with the national liberation struggle of the Indian people against the British colonial rule. As a result of this struggle, the country gained independence in 1947. The Indian National Congress (INC) played a decisive role in this struggle along with other political forces. Many enlightened intellectuals took part in the country's liberation, tried to show the country's development and succeeded.

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RECOMMENDATIONS FOR SOLVING PROBLEMS IN THE ORGANIZATION OF
INDEPENDENT EDUCATIONAL ACTIVITIES OF FUTURE TEACHERS

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Abstract: The organization of independent educational activities stands as a pivotal aspect in shaping the competencies and professional development of future teachers. However, numerous challenges often impede the seamless execution of such activities. This article presents a comprehensive set of recommendations aimed at addressing these challenges and enhancing the organization of independent educational activities for future teachers. Drawing upon a thorough review of literature, educational guidelines, empirical studies, and insights from experienced educators, the recommendations encompass various aspects including clear learning objectives, structured guidance, diverse learning resources, collaborative learning opportunities, feedback and assessment mechanisms, technology integration, reflection and metacognition, and teacher support. By implementing these recommendations, educational institutions can foster a conducive learning environment that empowers future teachers to navigate the complexities of independent educational activities effectively, ultimately preparing them for the demands of modern teaching practice.

Keywords: Independent educational activities, future teachers, recommendations, organization, challenges, competencies, professional development.

1. INTRODUCTION

The organization of independent educational activities plays a pivotal role in the development of future teachers' competencies and skills. However, this process often presents challenges that need to be addressed effectively to ensure optimal learning outcomes. This article aims to provide recommendations for overcoming these challenges and enhancing the organization of independent educational activities for future teachers.

2. Material and Methods

Conducting a comprehensive review of literature and educational practices related to the organization of independent educational activities is essential for formulating practical recommendations that are informed by research and best practices. A thorough literature review involves identifying and analyzing scholarly articles, books, dissertations, and other academic sources relevant to the topic of independent educational activities. This process helps to establish a foundation of knowledge and understanding regarding existing theories, models, frameworks, and practices in the field.

Scholars and researchers often publish empirical studies, theoretical frameworks, and conceptual models related to independent learning, teacher education, instructional design, and educational technology. By reviewing this literature, educators gain insights into effective strategies, challenges, and innovations in organizing independent educational activities [1].

The literature review also helps educators identify gaps, inconsistencies, and areas for further investigation or improvement. By critically evaluating existing research and synthesizing findings from multiple sources, educators can develop a nuanced understanding of the complexities and nuances of organizing independent educational activities.

Educational guidelines, standards, and frameworks issued by educational authorities, professional organizations, and accreditation bodies provide valuable insights into best practices and standards of practice in teacher education and professional development. These guidelines often outline recommended approaches, principles, and strategies for organizing independent educational activities. Educators analyze educational guidelines to understand the expectations, requirements, and benchmarks for organizing independent educational activities effectively. By aligning recommendations with established standards and benchmarks, educators ensure that their practices are evidence-based and compliant with professional norms and expectations.

Empirical studies offer valuable insights into the effectiveness, impact, and outcomes of different approaches to organizing independent educational activities. Researchers use various research methodologies, including quantitative surveys, qualitative interviews, case studies, and action research, to investigate factors influencing students' engagement, learning outcomes, and satisfaction with independent learning experiences. Educators analyze empirical studies to identify trends, patterns, and evidence-based practices that contribute to successful independent learning. By synthesizing findings from multiple studies, educators gain a comprehensive understanding of the factors that influence the design, implementation, and evaluation of independent educational activities [2].

Consulting with experienced educators and experts in the field provides valuable insights, perspectives, and practical wisdom regarding the organization of independent educational activities. Experienced educators can offer firsthand knowledge, expertise, and advice based on their professional experiences and insights.

Through consultations, educators have the opportunity to discuss challenges, brainstorm solutions, and gather practical recommendations for improving the organization of independent educational activities. Expert input helps to validate findings from the literature and research and provides a real-world perspective on the implementation of recommendations in educational settings. Additionally, consultations foster collaboration, networking, and knowledge sharing among educators, creating opportunities for professional development, peer support, and collective problem-solving [3-8].

3. Results

Based on the review of literature and consultations, several key recommendations emerge for improving the organization of independent educational activities for future teachers:

Certainly, clear learning objectives serve as the cornerstone for effective independent educational activities. Here's an expanded explanation of why and how they are crucial:

Clear learning objectives are essential for guiding students' independent educational activities effectively. They provide a roadmap that outlines what students are expected to achieve by engaging in these activities. Without clearly defined objectives, students may lack direction and struggle to understand the purpose and relevance of their independent learning tasks.

Here are some key aspects of clear learning objectives:

Direction and Focus: Clear learning objectives provide students with a clear sense of direction and focus. They outline the specific knowledge, skills, and competencies that students

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are expected to acquire or demonstrate through their independent educational activities. This clarity helps students understand what is expected of them and how their efforts contribute to their overall learning goals.

Alignment with Curriculum and Learning Outcomes: Learning objectives should be aligned with the broader curriculum and learning outcomes of the course or program. They should reflect the core concepts, skills, and competencies that students are expected to develop as part of their educational journey. By aligning objectives with curriculum standards and learning outcomes, educators ensure coherence and relevance in students' independent learning experiences.

Measurability and Assessability: Clear learning objectives are measurable and assessable, allowing educators to evaluate students' progress and attainment of learning goals effectively. Objectives should be framed in such a way that they can be observed, assessed, and evaluated through various means, including assessments, assignments, projects, and demonstrations. Measurable objectives provide a basis for meaningful feedback and assessment, informing students of their strengths and areas for improvement.

Motivation and Engagement: When students understand the purpose and relevance of their learning activities, they are more likely to be motivated and engaged in the learning process. Clear learning objectives communicate the value of independent educational activities and help students see how these activities contribute to their personal and professional growth. This intrinsic motivation enhances students' commitment to their learning goals and promotes active participation in independent learning tasks.

Differentiation and Personalization: Clear learning objectives allow for differentiation and personalization of independent educational activities to meet the diverse needs and interests of students. Educators can tailor objectives to accommodate varying levels of prior knowledge, learning styles, and abilities, ensuring that all students have meaningful learning experiences. Personalized objectives empower students to take ownership of their learning journey and pursue areas of interest or challenge at their own pace.

In summary, clear learning objectives are vital for providing direction, focus, and purpose to students' independent educational activities. By articulating specific goals and expectations, educators facilitate meaningful learning experiences that empower students to achieve their full potential and succeed in their academic and professional endeavors.

Structured guidance is a crucial component of supporting students in their independent learning tasks. It involves providing students with clear frameworks, resources, and support systems to navigate the complexities of planning, executing, and reflecting on their learning experiences. Here's an expanded explanation of why structured guidance is important and how it can be effectively implemented:

Clarity and Direction: Structured guidance helps students understand what is expected of them and how to approach their independent learning tasks effectively. By providing clear instructions, guidelines, and expectations, educators eliminate ambiguity and empower students to proceed with confidence.

Skill Development: Through structured guidance, students develop essential skills such as time management, organization, goal setting, and self-regulation. Educators can offer strategies, templates, and tools to assist students in breaking down complex tasks into manageable steps and prioritizing their learning activities effectively.

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Resource Accessibility: Structured guidance ensures that students have access to the necessary resources and support systems to facilitate their independent learning journey. This may include textbooks, online articles, multimedia materials, research databases, academic support services, and peer collaboration opportunities. By curating and providing relevant resources, educators empower students to explore diverse perspectives and deepen their understanding of course content.

Feedback and Monitoring: Structured guidance facilitates ongoing feedback and monitoring of students' progress throughout their independent learning tasks. Educators can establish checkpoints, milestones, and deadlines to track students' achievements and provide timely feedback on their performance. This iterative feedback loop helps students stay on track, address challenges, and refine their learning strategies as needed.

Reflection and Metacognition: Structured guidance encourages students to engage in reflective practices and metacognitive strategies to enhance their learning outcomes. Educators can incorporate reflection prompts, journaling exercises, and self-assessment activities into the guidance framework to promote deeper understanding and critical thinking. By encouraging students to reflect on their learning process, educators foster a sense of ownership and accountability for their academic growth.

Flexibility and Adaptability: While providing structured guidance, educators should also allow for flexibility and adaptability to accommodate students' individual needs and preferences. Different students may require varying levels of support and autonomy in their independent learning tasks. Educators can offer personalized guidance and differentiated support to ensure that all students receive the assistance they need to succeed.

Empowerment and Independence: Ultimately, structured guidance aims to empower students to become independent and self-directed learners. By equipping students with the necessary skills, resources, and support systems, educators foster autonomy and confidence in their ability to take ownership of their learning journey. This sense of empowerment prepares students to navigate complex challenges, pursue lifelong learning, and thrive in diverse academic and professional contexts.

In summary, structured guidance is essential for supporting students in planning, executing, and reflecting on their independent learning tasks. By providing clarity, resources, feedback, and empowerment, educators create a supportive learning environment that nurtures students' growth, resilience, and success.

Diverse learning resources are crucial for accommodating the diverse needs, preferences, and learning styles of students in their independent learning activities. By offering a wide range of resources, educators ensure that students have access to materials that resonate with their interests, cognitive abilities, and learning modalities. Here's an expanded explanation of why diverse learning resources are important and how they can be effectively utilized:

1. Catering to Different Learning Preferences and Styles:

- People learn in different ways, and diverse learning resources cater to various learning preferences and styles. For example, auditory learners may prefer listening to podcasts or lectures, while visual learners may benefit from reading textbooks or viewing infographics.

- By offering a variety of resources, educators can accommodate different learning modalities, including auditory, visual, kinesthetic, and tactile learning styles. This ensures that all

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students have access to materials that align with their individual learning preferences and enhance their comprehension and retention of course content.

2. Encouraging Engagement and Motivation:

- Diverse learning resources can spark students' interest and motivation by presenting information in engaging and interactive formats. For instance, multimedia materials such as videos, animations, and interactive simulations can captivate students' attention and stimulate their curiosity.

- By incorporating engaging resources, educators create a dynamic learning environment that motivates students to explore, inquire, and actively engage with course content. This intrinsic motivation enhances students' willingness to invest time and effort in their independent learning tasks, leading to deeper understanding and higher levels of achievement.

3. Promoting Critical Thinking and Inquiry:

- Different types of learning resources offer diverse perspectives, interpretations, and sources of information, encouraging students to think critically and engage in inquiry-based learning. For example, academic journals provide scholarly research and empirical evidence, while online forums and discussion boards facilitate peer interaction and debate.

- By exposing students to a variety of viewpoints and sources, educators promote critical thinking skills, information literacy, and the ability to evaluate and synthesize information effectively. Students learn to question assumptions, analyze evidence, and construct well-reasoned arguments, preparing them to become informed and discerning learners and professionals.

4. Fostering Accessibility and Inclusivity:

- Diverse learning resources promote accessibility and inclusivity by catering to the diverse needs and backgrounds of students. For instance, students with disabilities may benefit from alternative formats such as audio descriptions, text-to-speech functionality, or screen-reader compatible materials.

- Educators can enhance the accessibility of learning resources by providing options for customization, adaptation, and accommodation based on students' individual needs and preferences. By embracing universal design principles, educators ensure that all students have equitable access to learning materials and opportunities for academic success.

5. Facilitating Lifelong Learning Skills:

- Exposure to diverse learning resources cultivates lifelong learning skills such as information literacy, self-directed learning, and adaptability. Students learn to navigate a variety of sources, formats, and technologies, preparing them to thrive in a rapidly changing and information-rich society.

- By fostering a culture of exploration, curiosity, and intellectual curiosity, educators instill a passion for learning that extends beyond the classroom and into students' personal and professional lives. Students develop the skills and habits of mind necessary to continue learning independently and adapting to new challenges and opportunities throughout their lives.

In summary, diverse learning resources play a critical role in supporting students' independent learning activities by catering to different learning preferences and styles, promoting engagement and motivation, fostering critical thinking and inquiry, enhancing accessibility and inclusivity, and facilitating lifelong learning skills. By offering a rich array of resources, educators empower students to take ownership of their learning journey and achieve their academic and professional goals.

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Collaborative learning opportunities are integral to the organization of independent educational activities as they promote engagement, critical thinking, and social interaction among students. By fostering collaborative learning experiences, educators create an environment where students can learn from one another, share ideas, and develop important interpersonal skills. Here's an expanded explanation of why collaborative learning opportunities are important and how they can be effectively implemented:

Promoting Active Engagement: Collaborative learning opportunities encourage active engagement among students, as they are actively involved in discussing, sharing, and synthesizing ideas with their peers. Unlike passive learning activities, such as listening to lectures or reading textbooks, collaborative tasks require students to actively participate and contribute to group discussions and activities. By actively engaging in collaborative learning experiences, students take ownership of their learning process and develop a deeper understanding of course content. They learn to articulate their thoughts, ask questions, and critically evaluate their own and others' ideas, leading to enhanced comprehension and retention of information.

Enhancing Critical Thinking and Problem-Solving Skills: Collaborative learning opportunities provide students with opportunities to engage in critical thinking and problem-solving tasks in a social context. By working collaboratively on complex problems or projects, students learn to analyze information, evaluate evidence, and generate creative solutions. Through collaborative problem-solving tasks, students develop essential 21st-century skills such as communication, teamwork, leadership, and conflict resolution. They learn to listen actively, communicate effectively, and negotiate differences of opinion, preparing them for success in academic, professional, and personal contexts.

Facilitating Peer Learning and Support: Collaborative learning opportunities facilitate peer learning and support by creating a supportive learning community where students can learn from one another and provide assistance when needed. Peer discussions, group projects, and collaborative activities encourage students to share their knowledge, expertise, and perspectives with their peers. Peer learning allows students to benefit from diverse viewpoints, experiences, and expertise, enriching their learning experience and promoting a deeper understanding of course content. Additionally, peer support fosters a sense of camaraderie and belonging among students, reducing feelings of isolation and enhancing their overall academic experience.

Promoting Social Interaction and Communication Skills: Collaborative learning opportunities promote social interaction and communication skills by providing students with opportunities to engage in meaningful dialogue and exchange ideas with their peers. Through group discussions, debates, and collaborative projects, students learn to express their thoughts clearly, listen attentively to others, and respond thoughtfully to different perspectives. Effective communication and collaboration are essential skills in today's interconnected world, and collaborative learning experiences provide students with valuable opportunities to develop and refine these skills. By working collaboratively with their peers, students learn to communicate effectively, build consensus, and work towards common goals, preparing them for success in diverse personal, academic, and professional contexts.

Fostering a Sense of Community and Belonging: Collaborative learning opportunities foster a sense of community and belonging among students by creating a supportive and inclusive learning environment where all students feel valued and respected. Through collaborative activities, students develop interpersonal relationships, build trust, and establish connections with

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their peers. A sense of community and belonging is essential for student success and well-being, as it promotes feelings of acceptance, support, and connectedness. Collaborative learning experiences allow students to forge meaningful relationships with their peers, enhancing their overall academic experience and contributing to their personal and social development. Collaborative learning opportunities are essential for promoting active engagement, enhancing critical thinking and problem-solving skills, facilitating peer learning and support, promoting social interaction and communication skills, and fostering a sense of community and belonging among students. By incorporating collaborative learning experiences into their instructional practices, educators create a dynamic and interactive learning environment that empowers students to succeed academically, professionally, and personally.

Feedback and assessment are crucial components of the organization of independent educational activities as they facilitate ongoing monitoring, support, and guidance for students' learning progress. Here's an expanded explanation of why feedback and assessment are important and how they can be effectively implemented:

Monitoring Progress and Learning Outcomes:

- Feedback and assessment mechanisms allow educators to monitor students' progress and learning outcomes throughout their independent educational activities. By regularly assessing students' performance and understanding, educators gain insights into their strengths, weaknesses, and areas for improvement.

- Monitoring progress enables educators to identify students who may be struggling or falling behind and provide targeted support and intervention to help them stay on track. Additionally, tracking learning outcomes allows educators to evaluate the effectiveness of their instructional strategies and make adjustments as needed to optimize learning outcomes.

Providing Timely and Constructive Feedback:

- Timely and constructive feedback is essential for supporting students' learning and development. By providing feedback in a timely manner, educators help students understand their progress, identify areas for improvement, and make necessary adjustments to their learning strategies.

- Constructive feedback focuses on specific strengths and weaknesses, offers actionable suggestions for improvement, and encourages students to reflect on their learning process. Effective feedback promotes a growth mindset and empowers students to take ownership of their learning journey, fostering resilience, and self-efficacy.

Guiding Ongoing Development and Learning Pathways:

- Feedback and assessment guide students' ongoing development and learning pathways by providing direction and support for their learning journey. Through formative assessments and feedback mechanisms, educators help students set goals, track their progress, and navigate their individual learning pathways.

- By providing targeted feedback and support, educators empower students to take ownership of their learning, make informed decisions, and pursue areas of interest or challenge. Feedback and assessment serve as a roadmap for students' ongoing development, guiding them towards achieving their learning goals and objectives.

Promoting Reflection and Metacognition:

- Feedback and assessment promote reflection and metacognition by encouraging students to critically evaluate their own learning progress and understanding. Through self-assessment

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activities and reflective exercises, students learn to identify their strengths and weaknesses, set realistic goals, and monitor their own learning strategies.

- Reflection and metacognition foster deeper understanding and higher-order thinking skills, as students learn to think critically about their learning process, identify effective learning strategies, and make adjustments based on feedback. By promoting reflection and metacognition, feedback and assessment empower students to become self-directed learners capable of lifelong learning and growth.

Ensuring Equity and Fairness:

- Feedback and assessment ensure equity and fairness by providing all students with opportunities to demonstrate their learning and receive personalized feedback and support. Educators should use a variety of assessment methods and tools to accommodate diverse learning styles, preferences, and abilities.

- Additionally, educators should be mindful of bias and ensure that assessment practices are fair, transparent, and inclusive. By valuing diversity and promoting equity in feedback and assessment, educators create a supportive and inclusive learning environment where all students can thrive and succeed.

Feedback and assessment are essential components of the organization of independent educational activities as they enable educators to monitor progress, provide timely feedback, guide ongoing development, promote reflection and metacognition, and ensure equity and fairness. By implementing effective feedback and assessment mechanisms, educators empower students to take ownership of their learning journey, achieve their learning goals, and succeed academically, professionally, and personally.

Technology integration refers to the strategic use of digital tools and resources to enhance the effectiveness and efficiency of independent learning experiences. In today's digital age, technology offers vast opportunities for students to access, interact with, and create educational content in diverse formats. Here's how technology can be integrated to enhance independent learning experiences:

Online Learning Platforms: Online learning platforms provide students with access to a wide range of educational resources, including lectures, tutorials, quizzes, and interactive activities. Platforms such as Moodle, Canvas, and Blackboard facilitate communication, collaboration, and content delivery, allowing students to engage in self-paced learning and access materials anytime, anywhere.

Educational Apps: Educational apps offer interactive and engaging learning experiences tailored to specific subjects, topics, and learning objectives. Whether it's language learning apps like Duolingo, math practice apps like Khan Academy, or science simulations like PhET Interactive Simulations, educational apps provide students with opportunities to reinforce concepts, practice skills, and explore content in a personalized and engaging manner.

Multimedia Resources: Multimedia resources, including videos, podcasts, animations, and infographics, enrich students' learning experiences by presenting information in diverse and engaging formats. Platforms like YouTube, TED-Ed, and Khan Academy offer a wealth of multimedia content that appeals to different learning styles and preferences, making complex concepts more accessible and understandable.

Reflection and Metacognition: Reflection and metacognition are essential cognitive processes that promote deep learning, self-awareness, and self-regulation. By engaging in

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reflective practices and metacognitive strategies, students can deepen their understanding, identify learning gaps, and set goals for improvement. Here's how educators can encourage reflection and metacognition:

Journaling and Writing Reflections: Encourage students to keep reflective journals or write regular reflections on their learning experiences, challenges, and insights. Writing allows students to articulate their thoughts, clarify their understanding, and identify areas for further exploration or clarification.

Peer Discussions and Feedback: Facilitate peer discussions and feedback sessions where students can share their ideas, perspectives, and learning experiences with their peers. Peer interactions provide opportunities for students to gain new insights, receive constructive feedback, and challenge their assumptions, fostering critical thinking and metacognitive awareness.

Metacognitive Strategies: Teach students metacognitive strategies such as goal setting, self-monitoring, self-questioning, and self-reflection. Encourage students to set specific, measurable, achievable, relevant, and time-bound (SMART) goals for their learning, and regularly assess their progress towards these goals.

Teacher Support: Teacher support plays a critical role in facilitating students' independent learning journeys by providing guidance, mentorship, and personalized assistance. Here's how educators can support students effectively:

Regular Meetings and Consultations: Schedule regular one-on-one or small group meetings with students to discuss their progress, address their concerns, and provide personalized guidance and support. These meetings provide opportunities for educators to assess students' needs, clarify expectations, and offer tailored advice and resources.

Personalized Guidance: Offer personalized guidance and mentorship to students based on their individual learning styles, preferences, and goals. Take the time to get to know each student's strengths, weaknesses, interests, and aspirations, and tailor your support accordingly.

Feedback and Encouragement: Provide constructive feedback, encouragement, and praise to students to recognize their achievements, reinforce positive behaviors, and motivate them to persist in their independent learning endeavors. Positive reinforcement boosts students' confidence, self-esteem, and intrinsic motivation, fostering a positive learning environment.

Technology integration enhances independent learning experiences by providing access to diverse educational resources and tools. Reflection and metacognition promote deep learning and self-awareness, while teacher support ensures that students receive personalized guidance, mentorship, and encouragement throughout their learning journey. By leveraging these strategies, educators can empower students to become self-directed learners capable of achieving their academic and professional goals.

4. Discussion

The recommendations outlined above address common challenges encountered in the organization of independent educational activities for future teachers. By implementing these strategies, educational institutions can create a more conducive learning environment that empowers students to take ownership of their learning process, develop critical thinking skills, and become lifelong learners. Moreover, these recommendations align with contemporary educational theories and pedagogical approaches that emphasize active learning, learner autonomy, and collaborative inquiry.

5. Conclusion

In conclusion, the effective organization of independent educational activities is essential for the professional development and competency-building of future teachers. By following the recommendations outlined in this article, educational institutions can overcome challenges and create enriching learning experiences that prepare students for the complexities of modern teaching practice. By fostering a culture of independent inquiry, collaboration, and reflection, we can empower future teachers to thrive in diverse educational contexts and make meaningful contributions to the field of education.

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ОСОБЕННОСТИ СТОМАТОЛОГИЧЕСКОГО СТАТУСА У СТУДЕНТОВ
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Аннотация. Проведено комплексное обследование стоматологического здоровья студентческой молодежи г.Самарканда -574 студента ВУЗов Самарканда (Самаркандского Медицинского Института (СамМУ) и Самаркандского Государственного Университета (СамГУ)) среди которых студентов I курса - 193 человека, II курса -175 человек, студентов III курса, соответственно, – 206. Выявлено распространённость кариеса зубов среди студентов ВУЗов г. Самарканда составляет $91,87 \pm 1,30\%$, а интенсивность кариозного процесса составила $5,31 \pm 0,14$ зуба при $8,34 \pm 0,26$ поверхности, выявлены признаки заболеваний тканей пародонта с интенсивностью $3,88 \pm 0,06$ сегмента, у $53,05 \pm 2,37\%$ студентов зафиксировали зубочелюстные аномалии и деформации,

Ключевые слова: студенты, заболевания пародонта, зубо-челюстные аномалии, кариес и некариозные поражения.

Abstract. A comprehensive examination of the dental health of student youth in Samarkand was carried out - 574 students of Samarkand universities (Samarkand Medical Institute (SamMU) and Samarkand State University (SamSU) among which were 1st year students - 193 people, 2nd year students - 175 people, 3rd year students, respectively, – 206. The prevalence of dental caries among university students in Samarkand was revealed to be $91.87 \pm 1.30\%$, and the intensity of the carious process was 5.31 ± 0.14 teeth with 8.34 ± 0.26 surfaces, identified signs of periodontal tissue diseases with an intensity of 3.88 ± 0.06 segments, Dentofacial anomalies and deformations were recorded in $53.05 \pm 2.37\%$ of students,

Key words: students, periodontal diseases, dentofacial anomalies, caries and non-carious lesions.

Актуальность. Общеизвестно, что стоматологический аспект играет важную роль в здоровье человека. Он напрямую влияет на соматическое состояние, оказывает значимое влияние на эстетику человека и отражает медицинскую культуру индивидуума [10,14]. Сохранение здоровья полости рта и зубов в молодости предопределяет их состояние на протяжении всей жизни человека [7, 13]. Результаты изучения здоровья студентов, свидетельствуют о том, что наиболее тревожна ситуация среди студентов младших курсов [1,2,4]. От 12% до 27% поступивших в ВУЗы имеют ярко выраженные отклонения в состоянии здоровья [2], что позволяет предположить, что проблема низкого уровня здоровья учащейся молодежи начинается еще в период обучения в школе и усиливается ростом социальной, психологической и учебной нагрузки в вузе [11,15]. К наиболее значимым факторам, влияющим на жизнь студентов в период получения профессионального образования, относят: адаптацию к условиям и режиму обучения,

новые природно-климатические факторы; изменение качества питания в связи с отъездом из дома; социально-психологическую напряженность; различные поведенческие характеристики юношей и девушек; социально-гигиенические, этнические и культурные факторы; уровень медицинской активности, гигиенической информированности и установок на здоровый образ жизни [6,9,5]. В ряде случаев наличие этих факторов приводит не только к обострению ранее протекающих заболеваний, но и к возникновению новых [9,11,12].

Целью нашего исследования явилось изучить стоматологическое здоровье студентов ВУЗов Самарканда и оценить влияние на него организационных, медицинских и социальных факторов риска.

Материал и методы исследования.

Для выполнения поставленных задач нами было обследовано 574 студента ВУЗов Самарканда (Самаркандского Медицинского Института (СамМУ) и Самаркандского Государственного Университета (СамГУ)) среди которых студентов I курса - 193 человека, II курса - 175 человек, студентов III курса, соответственно, – 206. Средний возраст составил $21,4 \pm 1,2$ года.

Распространенность всех выявленных заболеваний выражалась в проценте лиц, страдающих этими заболеваниями.

Осмотр слизистой оболочки и мягких тканей полости рта включал определение состояния кожного покрова и красной каймы губ (болезни губ и СОПР - K13); характер их смыкания; слизистой губ, щек и преддверия полости рта; уздечек губ и языка, тяжелой слизистой; десневого края; слизистой оболочки языка (болезни языка - K14), дна полости рта, твердого и мягкого неба.

Заболеваемость кариесом оценивалась по уровню его распространенности и интенсивности. Показатель распространенности кариеса выражался в проценте лиц, имеющих это заболевание. Показатель интенсивности поражения кариесом (индекс КПУ) рассматривался как интегрированное значение всех вариантов поражения зубов - число зубов, пораженных кариесом, его осложнениями, запломбированных и удаленных.

Регистрацию полученных данных осуществляли в разработанной «Карте для оценки стоматологического статуса».

Для оценки состояния тканей пародонта применялись следующие индексы: индекс кровоточивости десны (Muehleman - Cowell), десневой индекс GI, а также индекс CPI отражающий нуждаемость в лечении заболеваний пародонта.

Состояние гигиены полости рта (как основного фактора риска стоматологических заболеваний) оценивали по упрощенной шкале ОНI-S [20], Для оценки наличия флюороза зубов использовалась международная классификация Dean Н.Т. [18]. В соответствии с ней выделялись следующие формы флюороза:

Для определения нуждаемости в ортодонтическом лечении использовали **Dental Aesthetic Index (DAI)** – стоматологический эстетический индекс. Он позволял оценить положение зубов и состояние прикуса в сагиттальном, вертикальном и трансверзальном направлениях.

Для выявления потребности в восстановительной терапии зубов нами применялся **индекс разрушения окклюзионной поверхности зубов – ИРОПЗ** Миликевича В.Ю. [11]. Вся площадь окклюзионной поверхности зуба принималась за единицу. Для определения

индекса разрушения площадь поверхности полости или пломбы вычиталась из единицы, то есть всей площади окклюзионной поверхности.

Результаты исследования.

Внеротовое обследование, проведенное у 574 студентов (430 юношей и 144 девушки), обучавшихся в Высших учебных заведениях г. Самарканда (Самаркандский медицинский институт (СамМУ) и Самаркандский государственный университет (СамГУ)), показало отсутствие выраженной патологии. При выявлении жалоб, внешнем осмотре и пальпации височно-нижнечелюстного сустава установлено, что у 132 ($22,80 \pm 1,99\%$) студентов имелась патология в артикуляционной функции ВНЧС (рис. 1). Она выражалась в наличии боли, щелканья и хруста в суставах, ограниченности открывания рта, зигзагообразном смещении нижней челюсти влево или вправо, асинхронном движении головок ВНЧС. Распространенность патологии в артикуляционной функции височно-нижнечелюстного сустава у студентов СамМУ была незначительно выше ($24,22 \pm 2,87\%$), чем у студентов СамГУ ($21,36 \pm 2,76\%$, $p > 0,05$).

Состояние слизистой оболочки и мягких тканей полости рта

Распространенность различных видов патологии слизистой оболочки и мягких тканей полости рта у студентов Самарканда составила $30,66 \pm 2,19\%$ (176 студентов) (рис. 1). Наиболее часто встречали воспалительные изменения десневого края – у 107 ($18,64 \pm 1,85\%$), на втором месте – изменения поверхности языка (десквамативный глоссит или «географический» язык) – у 61 ($10,63 \pm 1,45\%$), поражение красной каймы губ (метеорологический хейлит) диагностировали у 38 ($6,62 \pm 1,18\%$) студентов.

Обследование СОПР выявило единичные случаи ХРАС (4 человек -0,7%). Выраженной патологии в расположении и прикреплении уздечек губ, языка и тяжей слизистой у обследуемых мы не обнаружили.

При сравнении результатов обследования, нами установлено, что распространенность заболеваний слизистой оболочки и мягких тканей полости рта у студентов СамМУ была в 2,1 раза меньше, чем у учащихся СамГУ (соответственно 19,73% и 41,82%, $p < 0,05$). Воспалительные изменения десневого края встречали у студентов СамМУ реже в 3,4 раза, чем у студентов СамГУ (8,52% и 29,09%, соответственно), изменения со стороны дорзальной поверхности языка регистрировали в 2,3 раза реже (6,28% и 14,55%, соответственно, $p < 0,05$) (рис. 1).

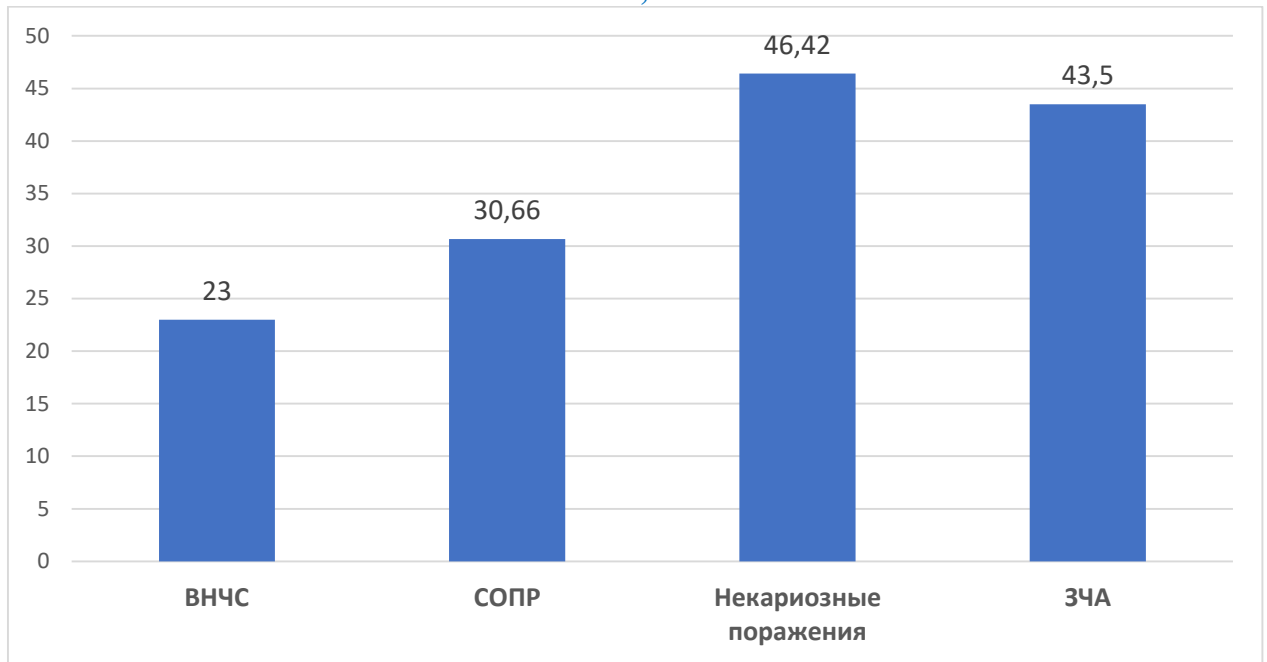


Рис. 1. Распространенность некоторых стоматологических заболеваний у студентов ВУЗов г. Самарканда в %.

Распространенность и интенсивность кариеса зубов

У каждого студента в среднем оказались поражены кариесом чуть более 5 зубов ($5,31 \pm 0,14$), показатель кариозного поражения поверхностей КПУ(п) составил $8,34 \pm 0,26$ поверхности (таб. 2, рис. 2).

Таблица 2

Интенсивность кариеса зубов и поверхностей у студентов СамМУ и СамГУ ($M \pm m$)

Показатели		Интенсивность поражения		
		СамМУ	СамГУ	
Структура поражения зубов	индекса	КПУ(з)	$5,49 \pm 0,20$	$5,12 \pm 0,18$
		К(з)	$1,11 \pm 0,08$	$1,56 \pm 0,09^*$
		П(з)	$4,26 \pm 0,17$	$3,43 \pm 0,16^*$
		У(з)	$0,12 \pm 0,01$	$0,13 \pm 0,02$
Структура поражения зубов	индекса поверхностей	КПУ(п)	$8,32 \pm 0,37$	$8,37 \pm 0,37$
		К(п)	$1,63 \pm 0,13$	$2,65 \pm 0,18^*$
		П(п)	$6,09 \pm 0,27$	$5,09 \pm 0,25^*$
		У(п)	$0,61 \pm 0,07$	$0,64 \pm 0,08$

Примечание: * - различия между показателями достоверны ($p < 0,05$).

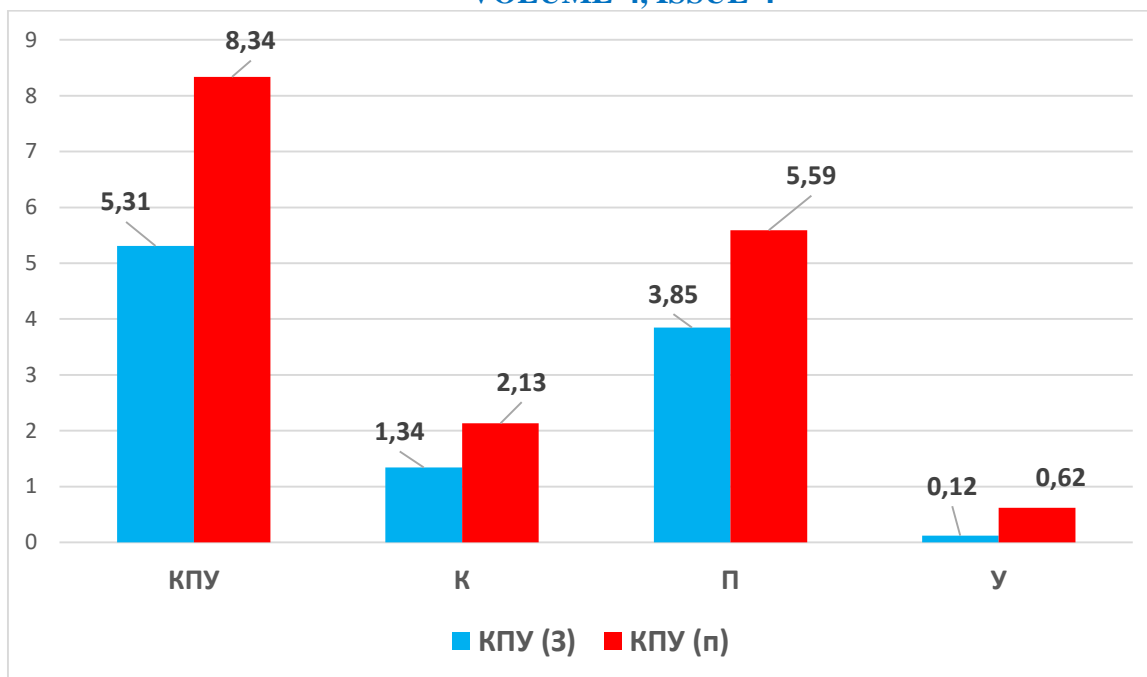


Рис. 2. Интенсивность кариеса зубов и поверхностей у студентов ВУЗов Самарканда

Анализ структуры индекса КПУ(з) выявил высокий удельный вес «пломбированных зубов» (72,5%), доля «кариозных зубов» составила 25,24%, на «удаленные зубы» приходилось - 2,26 %.

В подавляющем большинстве случаев (75,73±2,04% от всех пораженных зубов) кариозный процесс, встречался в группе моляров (таблица 3).

Таблица 3

Распространенность кариеса по группам зубов у студентов СамМУ и СамГУ (M±m, %)

Распространенность кариеса	ВУЗ	
	СамМУ (n=289)	СамГУ (n=285)
Моляров	73,96 ±2,94	77,71 ±2,81
Моляров верхней челюсти	31,84±3,12	30,46 ±3,10
Моляров нижней челюсти	42,12 ±3,31	47,25 ±3,37
Премоляров	14,61 ±2,37	10,92 ±2,10
Премоляров верхней челюсти	11,18 ±2,12	7,28 ±1,75
Премоляров нижней челюсти	3,43 ±1,22	3,64 ±1,26
Резцов и клыков	11,43 ±2,13	11,37 ±2,14
Резцов и клыков верхней челюсти	10,29 ±2,03	10,75 ±2,09
Резцов и клыков нижней челюсти	1,14 ±0,71	0,62 ±0,53

Уровень стоматологической помощи студентам ВУЗов Самарканда составил 74,82±2,06%, что соответствует удовлетворительному значению.

Для определения потребности в различных видах восстановительной терапии нами применялся индекс ИРОПЗ Миликевича В.Ю. В зависимости от степени разрушения все зубы, подлежащие лечению, были разделены на три группы. У 43% зубов отмечался ИРОПЗ, равный 0,2-0,5, что указывало на умеренное их разрушение и возможность

восстановления дефектов зубов посредством пломб и реставраций. У 35% зубов отмечался ИРОПЗ, равный 0,6-0,7, что свидетельствовало о более серьезном их разрушении, невозможности восстановления путем пломбирования, и о потребности в изготовлении для них коронок. У 22% зубов отмечался ИРОПЗ, равный 0,8-0,9, что свидетельствовало об их значительном разрушении и являлось показанием для восстановления зубов с помощью литых вкладок или штифтово-культевых конструкций с последующим покрытием их коронками. Встречаемость каждой группы индексов ИРОПЗ включал примерно равное количество студентов обоих ВУЗов, для девушек было характерен ИРОПЗ $0,36 \pm 0,07$, а для юношей $0,43 \pm 0,08$.

Некариозные поражения твердых тканей зубов встречались у $56,44 \pm 2,36\%$ обследованных студентов, те или иные степени флюороза зубов наблюдали в $30,93 \pm 2,20\%$, доля пятнистости и гипоплазии эмали составила $16,93 \pm 1,78\%$, признаки патологической стираемости выявлены в $3,61 \pm 0,89\%$, а клиновидные дефекты - в $4,97 \pm 1,03\%$ (таб. 4).

Таблица 4

Распространенность некариозных поражений зубов у студентов ВУЗов г. Самарканда ($M \pm m$, %)

Некариозные поражения зубов		Распространенность
Флюороз зубов		$30,93 \pm 2,20$
Формы флюороза зубов	Сомнительная	$32,12 \pm 3,99$
	Очень слабая	$20,44 \pm 3,45$
	Слабая	$29,20 \pm 3,88$
	Умеренная	$16,07 \pm 3,14$
	Тяжелая	$2,19 \pm 1,25$
Пятнистость и гипоплазия эмали		$16,93 \pm 1,78$
Патологическая стираемость		$3,61 \pm 0,89$
Клиновидные дефекты		$4,97 \pm 1,03$

У 364 (63,41%) обследованных студентов выявлен гингивит, клинически у 306 (84,07%) студентов он характеризовался как катаральный, у 59 (16,21%) студентов – гипертрофический. По данным индекса гингивита (GI) в 55,77% (203 человек) случаев имело место легкое воспаление десны (незначительная гиперемия и отечность), в 40,11% (146 студентов) – умеренное воспаление (более выраженные гиперемия и отечность, кровоточивость при зондировании), в 4,12% (12 человек) – выраженное воспаление (интенсивные гиперемия и отек, спонтанная кровоточивость).

Для определения степени воспаления десен использовался индекс кровоточивости Muchlemann, который показал наличие кровоточивости у 310 (54%) обследуемых, причем кровоточивость при малейшем зондировании десны, а также при приеме пищи отмечалась у 104 (18,12%) студентов.

Оценка результатов исследования состояния тканей пародонта у студентов ВУЗов г. Самарканда показала их высокую распространённость ($97,49 \pm 0,78\%$) и интенсивность ($3,88 \pm 0,06$) среди учащейся молодежи (таб. 5).

Распространенность признаков заболеваний пародонта среди студентов СамГУ составила - $99,55 \pm 0,45\%$, при средней интенсивности поражения - четыре сегмента на обследованного ($4,10 \pm 0,08$), что на 5% и на 12%, соответственно, выше, чем у обучающихся

в СамМУ ($p < 0,05$). Чаще всего встречается зубной камень среди студентов-медиков, его распространенность составила $78,65 \pm 3,07\%$ случаев. Зубной камень был диагностирован почти в 2 секстантах. Среди признаков поражения тканей пародонта у студентов СамГУ так же часто наблюдали зубной камень ($65,45 \pm 3,21\%$), при его интенсивности – $1,55 \pm 0,08$ сегмента, однако встречался этот признак поражения достоверно реже, чем у студентов-медиков.

Средний индекс гигиены у молодежи СамМУ составил $1,92 \pm 0,07$, что соответствует удовлетворительному уровню гигиены полости рта. Средняя величина индекса гигиены у студентов СамГУ ($2,05 \pm 0,05$) существенно не отличалась от аналогичного показателя обучающихся в СамМУ. Однако, имелись достоверные различия в величине индекса налета ($1,51 \pm 0,03$ и $1,25 \pm 0,03$, соответственно) и индекса камня ($0,54 \pm 0,03$ и $0,67 \pm 0,04$, соответственно) (таб. 6).

Таблица 5

Распространенность и интенсивность поражения тканей пародонта у студентов ВУЗов г. Самарканда ($M \pm m$)

Показатели		СамМУ	СамГУ
Распространенность (%)	средняя	$94,94 \pm 1,64$	$99,55 \pm 0,45^*$
	кровооточивости	$15,17 \pm 2,69$	$28,64 \pm 3,05^*$
	камня	$78,65 \pm 3,07$	$65,45 \pm 3,21^*$
	кармана	$1,12 \pm 0,79$	$5,45 \pm 1,53^*$
Интенсивность (секстанты)	средняя	$3,61 \pm 0,10$	$4,10 \pm 0,08^*$
	кровооточивости	$1,63 \pm 0,09$	$2,50 \pm 0,08^*$
	камня	$1,97 \pm 0,10$	$1,55 \pm 0,08^*$
	кармана	$0,01 \pm 0,00$	$0,05 \pm 0,01^*$

Примечание: * - различия между признаками в группах достоверны ($p < 0,05$).

Таблица 6

Состояние гигиены полости рта у студентов ВУЗов Самарканда ($M \pm m$)

Показатели		Величины		
		Среднее	СамМУ	СамГУ
Индекс гигиены	средний	$2,00 \pm 0,04$	$1,92 \pm 0,07$	$2,05 \pm 0,05$
	налета	$1,40 \pm 0,02$	$1,25 \pm 0,03$	$1,51 \pm 0,03^*$
	камня	$0,60 \pm 0,02$	$0,67 \pm 0,04$	$0,54 \pm 0,03^*$
Уровень гигиены полости рта (%)	хороший	$22,79 \pm 2,17$	$29,41 \pm 3,68$	$18,18 \pm 2,60^*$
	удовлетворительный	$64,34 \pm 2,48$	$58,82 \pm 3,98$	$68,18 \pm 3,14$
	плохой	$12,87 \pm 1,73$	$11,76 \pm 2,60$	$13,64 \pm 2,31$

Примечание: * - различия между показателями в группах достоверны ($p < 0,05$).

Распространенность нарушений в зубочелюстной системе

Нарушения в зубочелюстной системе встречали у каждого второго студента ВУЗов Самарканда ($53,05 \pm 2,37\%$) (таб. 3.9). Патологию прикуса мы регистрировали в $16,48 \pm 1,76\%$ случаев среди всех обследованных студентов. Среди студентов, имеющих патологию прикуса, наиболее часто встречали прогнатическое соотношение челюстей - $64,38 \pm 5,60\%$; распространенность глубокого прикуса составила $17,81 \pm 1,82\%$; одинаково часто

(6,85±2,96%) наблюдали открытый и перекрестный прикусы; в единичных случаях регистрировали прогению (4,11±2,32%). Аномалии зубных рядов имели место у 75,40±2,05% студентов (рис. 7). Реже всего обнаруживали аномалии отдельных зубов (8,13±1,39%).

Таблица 7

Частота встречаемости различных видов аномалий зубочелюстной системы у студентов ВУЗов г. Самарканда (M±m)

Нозология		Распространенность
Нарушения в зубочелюстной системе		53,05 ±2,37
Аномалии прикуса		16,48 ±1,76
Виды аномалии	Прогнатия	64,38 ±5,60
	Прогения	4,11 ±2,32
	Перекрестный прикус	6,85 ±2,96
	Глубокий прикус	17,81 ±1,82
	Открытый прикус	6,85 ±2,96
Аномалии зубных рядов		75,40 ±2,05
Аномалии отдельных зубов		8,13 ±1,39

Как показали наши исследования, у 193 (33,62±2,25%) студентов значение эстетического индекса **DAI** оказалось менее 25, что свидетельствует о том, что нарушений прикуса нет или они весьма незначительны. В этих случаях лечение не требуется или потребность в нем небольшая. Значения DAI, равные 26-30, выявлены у 92 (16,03±1,21%) молодых людей, что указывает на явное нарушение прикуса, им рекомендуется консультация ортодонта и лечение по показаниям. У 63 (10,98±1,35%) значение индекса DAI равно 31-35, что говорит о наличии выраженных нарушений прикуса и необходимости их ортодонтического лечения. У 28 (4,88±0,19%) юношей и девушек значения эстетического индекса превысили 36, что отражает очень тяжелые нарушения прикуса и безусловную потребность в лечении.

Выводы:

1. Распространенность кариеса зубов среди студентов ВУЗов г. Самарканда составляет 91,87±1,30%, а интенсивность кариозного процесса составила 5,31±0,14 зуба при 8,34±0,26 поверхности. Некариозные поражения твердых тканей зубов констатированы у 56,44±2,36% на фоне удовлетворительного уровня стоматологической помощи студентам.

2. У 97,49±0,78% студентов ВУЗов г. Самарканда выявлены признаки заболеваний тканей пародонта с интенсивностью 3,88 ± 0,06 сегмента, у 30,70±2,19% констатировали патологию слизистой оболочки и мягких тканей полости рта. Гигиена полости рта у студентов ВУЗов г. Самарканда находится на удовлетворительном уровне, а хороший уровень гигиены у студентов-медиков зафиксирован в 1,6 раза чаще, чем среди студентов СамГУ.

3. У 53,05±2,37% студентов зафиксировали зубочелюстные аномалии и деформации, а артикуляционные дисфункции височно-нижнечелюстного сустава выявлены у 22,80±1,99% учащихся.

4. Имеется прямая зависимость распространенности и интенсивности основных стоматологических заболеваний и такими факторами риска как плохая гигиена полости рта, табакокурение, употребление алкоголя.

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**КУЛЬТУРНЫЕ ПРАКТИКИ КАК ИННОВАЦИОННОЕ НАПРАВЛЕНИЕ В
ЭСТЕТИЧЕСКОМ ВОСПИТАНИИ ДОШКОЛЬНИКОВ**

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АННОТАЦИЯ

В статье раскрываются виды культурных практик и педагогические пути их практической реализации в дошкольных образовательных учреждениях.

Ключевые слова: модернизация, культурно-творческий подход, культурные практики, виды деятельности, дошкольники, возможности, реализация.

В настоящее время процесс модернизация дошкольного образования в Узбекистане в соответствии с Законом Республики Узбекистан № ЗРУ-595 "О дошкольном образовании и воспитании" от 16.12.2019, Указами и Постановлениями Президента Республики Узбекистан "О мерах по дальнейшему стимулированию и развитию системы дошкольного образования" N ПП-3651 от 05.04.2018 г. **опирается на качественно** новые требования к содержательной, методико-организационной и стороне деятельности педагогического состава дошкольных образовательных учреждений республики [1,2].

Достижение эффективности эстетического воспитания возможно путем всестороннего развития детей на основе культурно-творческого подхода через такую организацию творческой деятельности детей, в которой объединяются несколько его аспектов. Например, интеллектуальное (счёт, первоначальные представления об окружающем мире, загадки), социальное (общение со сверстниками и воспитателями в процессе познания и творчества) и творческое (различные виды и формы творческой деятельности, художественно-эстетическое развитие).

Названные задачи органично вписываются в содержание и возможности такого современного направления всестороннего развития дошкольников, как **культурные практики**. По определению Н.Б.Крыловой «культурные практики представляют собой разнообразные, основанные на текущих и перспективных интересах ребенка виды самостоятельной деятельности, поведения и опыта» [3].

Культурные практики – это ситуативно-самостоятельное, побуждаемое взрослым или совершаемое самим ребенком приобретение, и повторение, развитие и пополнение различных видов опыта общения и взаимодействия с людьми в различных группах, командах, сообществах и общественных структурах, а также с ближайшим окружением - со взрослыми (родителями, воспитателями), детьми из группы и другими сверстниками [4,5,6]. В процессе участия в культурных практиках дети осваивают позитивные эмоции сопереживания, эмпатии, доброжелательности, дружбы, помощи, заботы. Это также освоение позитивного гуманистического жизненного опыта переживания особых чувств и эмоций - сопереживания, доброжелательности, любви, признательности, благодарности, самоотдачи, взаимопомощи, дружбы, заботы, альтруизма.

Современные виды культурных практик располагают большими возможностями в процессе эстетического воспитания:

1. **Совместные викторины, конкурсы, игры воспитателей и детей** (сюжетно-ролевая, творчески-демонстрационная, проблемно-познавательная, режиссерская, театральная, проектировочно-схематичная, строительная и др.).

Возможности, реализация - обогащение игр творческим содержанием, освоение детьми игры как «по правилам», так и с отступлениями от них, освоение действий, показанных взрослыми (воспитателями) по принципу повтора, копирования, что позволяет в дальнейшем чувствовать себя более уверенно и раскованно в процессе различных игровых действий.

2. **Ситуации общения и накопления положительного социально-эмоционального опыта** строились как ситуации, связанные с жизнью детей, заключающие проблему и требующие разрешения самими детьми. Такие ситуации а) берутся из жизни (помощь взрослым, несложный ремонт игрушек, посуды, детских книг, уход за растениями и животными), представляются как условно-воображаемые (на основе известных сказок, детских фильмов, мультфильмов – Король Лев, Мадагаскар, Ледниковый период, Как приручить дракона и др.), дополняются имитационно-игровыми действиями.

Возможности - в реально-практических ситуациях (смоделированными воспитателем или возникшими внезапно в связи какими-либо событиями в группе или поступками детей) дошкольники приобретали опыт проявления ответственного, заботливого, участливого отношения к людям, участия в посильных для них делах (помогают маме и бабушке по хозяйству, готовят рисунки и поделки для поздравлений, участвуют в оформлении утренников и пр.). С помощью условно-вербального общения воспитатель сам или вместе с родителями обсуждают жизненные ситуации и художественно-эстетические впечатления детей, связывая их с личностным опытом дошкольников, побуждая детей к рассуждениям, оценке событий или поступков вымышленных героев. Такая форма общения позволяет формировать позитивные и устойчивые духовные и нравственные ценности у детей, расширяет их представления, развивает речевые навыки.

3. **Творческие задания.** Это задания на вспоминание и придумывание слов, описание предметов, людей, животных, спонтанное или заданное рисование, пение и слушание мелодий, любимых песенок, предмета, воспоминания. Особую роль играют практические задания – работа с различными материалами – цветной бумагой, картоном, пластилином, кубиками.

Возможности - овладение детьми новыми умениями, развитие мышления, речи, оценочной деятельности с помощью рефлексивных вопросов - «Что узнали? Чему научились? Что понравилось? Что не понравилось? Что почувствовали? Это было интересно? Что расскажете о сегодняшнем занятии? Что бы вы хотели добавить? Чем еще хотите заняться?» Формирование осознанного восприятия, осмысления и запоминания.

4. **Творческая мастерская** - следующая ступень культурно-творческого подхода. Здесь обеспечивается усиление практической стороны занятий путем предоставления детям условий для применения знаний и умений по самым разнообразным направлениям. Мастерские разнообразны по своей тематике, содержанию, например: занятия рукоделием (вышивание нитями, бисером), шитьем - наряды для кукол, детали для праздничных костюмов – пояса, аппликации, рисование картин - «Художественная галерея», составление дизайна игровой комнаты, детской библиотеки, маршрута экскурсий по

детскому саду, парку, участие в развивающих играх, создание детского журнала, коллекционирование тематических открыток, составление икебаны.

Возможности - комплексное развитие практических умений и художественно-творческих способностей детей, их воображения, фантазии, вовлечение дошкольников в деятельность по интересам и склонностям, погружение в состояние творческого вдохновения и самовыражения.

Культурные практики являются новым действенным средством всестороннего развития личности дошкольника через передачу детям опыта творческой деятельности, формирование эмоционально-ценностного отношения к окружающему миру.

Интересным и перспективным современным направлением всестороннего и творческого развития дошкольников представляется **иррадирующее (распространение, увеличение) обучение**, представленное в последних разработках узбекских ученых, педагогов, специалистов дошкольного образования. Данный вид обучения основывается на признании различных интересов, мотивов детей и отслеживания динамики их продвижения.

Тактика иррадирующего обучения состоит из **трех основных действий**:

1-е действие: представление детям чего-то нового – игра, конкурс, викторина, задача.

2-е действие: предложение детям рассказать о том новом, что они узнали в группе.

3-е действие: побуждение детей к обмену своими новыми знаниями, впечатлениями со своими друзьями в группе и другими детьми.

Вышеназванные технологии призваны решать такую важнейшую задачу детского творчества, как развитие сенсорного опыта детей, основанного на всех видах восприятия (зрительного, осязательного, кинестетического, слухового), способствуя тем самым формированию стороны развитой личности.

Разнообразные формы и методы с детьми, комфортные условия, благоприятная психологическая атмосфера доброжелательности и сотрудничества, богатый набор подручных материалов и предметов для развивающе-творческих игр и деятельности усиливают как желание детей заниматься творческой деятельностью, так и развитие их творческих способностей. Творческая атмосфера создает такое состояние детей, при котором они испытывают чувство приподнятости, увлеченности, усиливаются их эмоции и реакции, работает воображение, когда ребенок увлечен тем, что делает. При этом для того, чтобы каждый ребенок чувствовал себя свободно, раскрепощено, комфортно используются следующие **приемы**:

— организация разнообразных, активных видов деятельности, общение детей и взрослых на принципах сотрудничества, тактичного консультирования и руководства;

— в социальной микросреде (ближайшем социальном окружении), в которой живет и действует ребенок обращается внимание на достойные образцы поведения, этики и общения;

- воспитанникам обеспечивается возможность выражения своих эмоционально-ценностных отношений к различным явлениям, событиям, поступкам людей;

— моделирование поисково-проблемных ситуаций, доступных детям данного возраста. В более широком плане творческое развитие детей в детском саду направляется на формирование навыков рисования, лепки, пения, танцев.

Педагогическая значимость перечисленных условий заключается в методически правильной организации деятельности детей во всех сферах - познавательной, социально-коммуникативной, спортивной, игровой, создании различных ситуаций, активизирующих развитие творческих задатков и способностей, побуждающих к действиям по проявлению творческой активности, обеспечивая тем самым реализацию личностного потенциала ребенка.

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**QISHLOQ XO'JALIGI MAHSULOTI ISHLAB CHIQRARISH HAJMIGA ASOSIY
KAPITALGA O'ZLASHTIRILGAN INVESTITSUYALARNING TA'SIRINI
EKONOMETRIK BAHOLASH**

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Annotatsiya. Ushbu maqolada qishloq xo'jaligi mahsuloti ishlab chiqarish hajmiga asosiy kapitalga o'zlashtirilgan investitsuyalarning ta'siri ekonometrik tahlil qilingan. Natijada qisqa va uzoq muddatli multiplikatorlar qiymatlari aniqlangan va xulosa qilingan.

Kalit so'zlar: model, avtoregressiya, regressiya tenglamasi, styudent, t mezon, Fisher, instrumental o'zgaruvchi.

Tadqiqot uchun 2010-2023 yillardagi qishloq xo'jaligi mahsuloti ishlab chiqarish hajmi va asosiy kapitalga o'zlashtirilgan investitsuyalar hajmi to'g'risida ma'lumotlar www.surxonstat.uz saytidan olindi (1-jadal).

1-jadval

Surxondaryo viloyati qishloq xo'jaligi mahsuloti ishlab chiqarish hajmi va asosiy kapitalga o'zlashtirilgan investitsiyalar hajmi qiymatlari¹¹

Yillar	Qishloq xo'jaligi mahsuloti ishlab chiqarish hajmi, mlrd so'm	Asosiy kapitalga o'zlashtirilgan investitsiyalar, mlrd so'm
<i>n</i>	<i>y</i>	<i>x</i>
2010	2286,8	655,3
2011	4099,6	802,9
2012	4825,7	980,3
2013	5411,0	1371,0
2014	6761,9	1509,1
2015	8218,0	1843,6
2016	8737,2	2142,4
2017	11608,1	3551,0
2018	15046,2	7240,6
2019	17844,1	11835,1
2020	19424,0	10068,2
2021	23415,5	12037,8
2022	26755,7	11569,4
2023*	32756,1	17956,0

Investitsiyalarning loq xo'jaligi mahsuloti ishlab chiqarish hajmiga ta'sirini baholashda avtoregressiya modelidan foydalanamiz. $ARIMA(1,0,0) + x$ modeli umumiy ko'rinishi quyidagicha:

¹¹ Surxondaryo viloyati Statistika boshqarmasi www.surxonstat.uz sayti

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$$y_t = a + b_0 \cdot x_t + c_1 \cdot y_{t-1} + e_t \tag{1}$$

Ushbu modelni hisoblash uchun dastlab instrumental o'zgaruvchini baholovchi model tuzish talab etiladi:

$$\hat{y}_{t-1} = d_0 + d_1 \cdot x_{t-1} \tag{2}$$

Hisob kitoblar 2-jadvalda berilgan.

2-jadval

Surxondaryo viloyati qishloq xo'jaligi mahsuloti ishlab chiqarish hajmi va asosiy kapitalga o'zlashtirilgan investitsiyalar hajmi ko'rsatkichlarning $t - 1$ davrdagi qiymatlari¹²

Yillar	y_t	x_t	y_{t-1}	x_{t-1}
2010	2286,8	655,3	-	-
2011	4099,6	802,9	2286,8	655,3
2012	4825,7	980,3	4099,6	802,9
2013	5411,0	1371,0	4825,7	980,3
2014	6761,9	1509,1	5411	1370,992
2015	8218,0	1843,6	6761,9	1509,144
2016	8737,2	2142,4	8218	1843,612
2017	11608,1	3551,0	8737,2	2142,412
2018	15046,2	7240,6	11608,1	3551
2019	17844,1	11835,1	15046,2	7240,6
2020	19424,0	10068,2	17844,1	11835,07
2021	23415,5	12037,8	19424	10068,2
2022	26755,7	11569,4	23415,5	12037,76
2023	32756,1	17956,0	26755,7	11569,4

Microsoft Excel dasturining «Анализ данных» paketidan foydalanib 2-jadvaldagi ma'lumotlarning regression bog'lanishini ko'rib chiqamiz (3-jadval).

3-jadval

Regression tahlil natijalari¹³

ВЫВОД ИТОГОВ				
<i>Регрессионная статистика</i>				
Множественный R	0,96			
R-квадрат	0,92			
Нормированный R-квадрат	0,91			
Стандартная ошибка	2 366,10			
Наблюдения	13			

¹² Surxondaryo viloyati Statistika boshqarmasi www.surxonstat.uz sayti

¹³ Muallif ishlanmasi

Дисперсионный анализ					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Значимость F</i>
Регрессия	1	689010133	689010132,8	123,07	2,6E-07
Остаток	11	61582855,1	5598441,377		
Итого	12	750592988			
	<i>Коэффициенты</i>	<i>Стандартная ошибка</i>	<i>t-статистика</i>	<i>P-Значение</i>	<i>Нижние 95%</i>
Y-пересечение	3 792,42	980,84	3,87	0,00	1 633,60
Переменная X 1	1,60	0,14	11,09	0,00	1,28

\hat{y}_{t-1} instrumental o'zgaruvchini aniqlovchi regressiya tenglamasining umumiy ko'rinishi

$$\hat{y}_{t-1} = 3792,42 + 1,6 \cdot x_{t-1} \quad (3)$$

Ushbu (3) model bo'yicha Fisherning F mezonining hisoblangan qiymati $F_{his} = 123,07$ ga teng, bu esa $df_1 = m = 1$ va $df_2 = n - 1 - 1 = 12$ erkinlik darajasida hamda, $\alpha = 0,05$ ahamiyatlilik darajasida Fisherning jadval qiymati $F_{jad} = 4.75$ dan katta. Shuningdek (3) modelning parametrlari bo'yicha Studentning t mezon qiymatlari $t_{d_0} = 3,87$ hamda $t_{d_1} = 11,09$ ga teng, bu esa $\alpha = 0,05$ ahamiyatlilik darajasida hamda $df = n - m = 13$ erkinlik darajasida Studentning $t_{jad} = 2,16$ dan katta. Shu sababli model statistik ahamiyatga ega hisoblanadi.

\hat{y}_{t-1} instrumental o'zgaruvchining nazariy qiymatlarini aniqlaymiz. (4-jadval). 4-jadval
Instrumental o'zgaruvchining nazariy qiymatlari¹⁴

Yillar	y_t	x_t	y_{t-1}	x_{t-1}	\hat{y}_{t-1}
2010	2286,8	655,3	-	-	-
2011	4099,6	802,9	2286,8	655,3	4842,5
2012	4825,7	980,3	4099,6	802,9	5079,0
2013	5411,0	1371,0	4825,7	980,3	5363,3
2014	6761,9	1509,1	5411	1370,992	5989,4
2015	8218,0	1843,6	6761,9	1509,144	6210,8
2016	8737,2	2142,4	8218	1843,612	6746,7
2017	11608,1	3551,0	8737,2	2142,412	7225,6
2018	15046,2	7240,6	11608,1	3551	9482,8
2019	17844,1	11835,1	15046,2	7240,6	15395,2
2020	19424,0	10068,2	17844,1	11835,07	22757,7
2021	23415,5	12037,8	19424	10068,2	19926,3
2022	26755,7	11569,4	23415,5	12037,76	23082,5
2023	32756,1	17956,0	26755,7	11569,4	22332,0

4-jadvaldagi y_t , x_t hamda \hat{y}_{t-1} o'zgaruvchilar ishtirokida (1) modelni baholadik. Buning uchun yana Microsoft excel imkoniyatlaridan foydalandik. Biroq (1) model parametrlari statistik ahamiyatga ega bo'lmadi. Shu sababli (1) modelni o'zgaruvchilar ishtirokisiz baholadik (5-jadval).

¹⁴ Surxondaryo viloyati Statistika boshqarmasi www.surxonstat.uz sayti

3-jadval **Regression tahlil natijalari**¹⁵

ВЫВОД ИТОГОВ					
<i>Регрессионная статистика</i>					
Множественный R	0,991				
R-квадрат	0,981				
Нормированный R-квадрат	0,889				
Стандартная ошибка	2494,071				
Наблюдения	13				
<i>Дисперсионный анализ</i>					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Значимость F</i>
Регрессия	2	3584501224	1792250612	288,125	1,44406E-09
Остаток	11	68424287,74	6220389,794		
Итого	13	3652925512			
	<i>Коэффициенты</i>	<i>Стандартная ошибка</i>	<i>t-статистика</i>	<i>P-Значение</i>	<i>Нижние 95%</i>
Y-пересечение	0	#Н/Д	#Н/Д	#Н/Д	#Н/Д
Переменная X 1	0,908	0,295	3,075	0,011	0,258
Переменная X 2	0,655	0,179	3,668	0,004	0,262

Bundan avtoregressiya tenglamamiz:

$$y_t = 0,908x_t + 0,655y_{t-1} \quad (4)$$

ko‘rinishga ega bo‘ladi. (4) modeldan ko‘rinib turibdiki qisqa muddatli multiplikator $b_0 = 0,908$ ga, uzoq muddatli multiplikator $b = \frac{b_0}{1-c} = \frac{0,908}{1-0,655} = 2,631$ ga teng. Xulosa, shunday qilib x_t - asosiy kapitalga o‘zlashtirilgan investitsiyalar hajmining 1 mlrd so‘mga ortishi y_t - qishloq xo‘jalik mahsulotlari ishlab chiqarish hajmini o‘rtacha 0,908 mlrd so‘mga oshiradi. x_t ning uzoq muddatda 1 mlrd so‘mga oshishi esa, y_t ni 2,631 mlrd so‘mga oshiradi.

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Annotation: In order to live a quality and healthy life, people need to take action. Simple movements that begin with reflexive movements in the womb are replaced by more complex movements over time. It is known that childhood is the period when growth and changes in the body happen the fastest. This period is also the period when the body is most affected by external factors. A person's regular physical activity from a young age not only creates a healthy physical structure, but also delays the deterioration of this structure in old age.

Keywords: Psychomotor development, Healthy growth and development, Rhythmic gymnastics, Trampoline gymnastics, Acrobatic gymnastics, Gymnastics sports networks.

ENTER

The healthy development of future generations is a desirable feature of all societies. Healthy growth and development parallel genetic factors as well as environmental and living conditions.

Gymnastics is the main basis of sports. With basic forms of movement, it includes walking, running, jumping, turning, etc. It is an area that allows you to train locomotor and balance skills and develop spatial awareness by developing various movement skills by exercising all the joints and muscles of the body. In this regard, gymnastics makes a great contribution to preparing children for all kinds of sports and, most importantly, for life.

It is believed that gymnastics is important for preschool children. Activities that provide movement in age groups and special studies programmed according to these age periods are assumed to have a positive effect on the natural development of children. It can be said that gymnastics is an important sports discipline that requires continuous continuity, determination, passion, skill and discipline and brings with it mental strength as well as physical strength. With basic gymnastics training, children gain body awareness, balance, coordination and flexibility, which lays a solid foundation for any sport they play in the future. However, it is said that basic gymnastics exercises play an important role in the motor development of children. It can be said that the starting age for practicing gymnastics is 3-4 years old, and regular basic gymnastics training for a child has a positive effect on the child's physical development. Movement properties are activated to provide the human body with motor movements that require strength, endurance, speed and skill.

Main engine characteristics; Strength, endurance, speed, mobility and coordination can be present at birth, but they can also develop at a later age.

Skills such as running, jumping, and jumping are important elements in children's daily lives. The development of basic movement skills is based on more experience. Advanced or effective skills require multiple structured or unstructured opportunities. On the other hand, not providing or limiting opportunities for movement and experience can negatively affect motor skills in early-age individuals.

The healthy development of new generations is a desirable feature of all societies. Healthy growth and development are directly proportional to genetic factors as well as the adequacy of environment and living conditions.

Measuring, evaluating and understanding psychomotor development in children is of great importance in identifying and finding ways to solve problems that may arise in children who do not develop normally. In addition, it is necessary to determine the level of psychomotor development in order to prepare programs to improve psychomotor performance.

Psychomotor development studies the changes that occur in motor skills over the course of a person's life and the factors that underlie and influence these changes. Occurring in actions and behaviors throughout life; It is also described as a continuous change resulting from the interaction of physiological characteristics, task demands, and environmental conditions.

Psychomotor development is the emergence of voluntary actions in the body along with the development of the central nervous system along with physical growth. It is a process that begins before birth and continues throughout life, involving the acquisition of movement-based skills.

Looking at the literature, physical activity that includes gymnastics has a positive effect on the development of movement skills in children and has a positive effect on the development of muscle bones, increasing muscle flexibility, increasing joint angles and muscle strength. shows. activities such as running, jumping, jumping and ricocheting in the development of the physical structure of the body and in the gymnastics training program. The exercises also help to develop the coordination and balance skills of the athletes.

Gymnastics; It is a sport that requires endurance, strength, speed, coordination, flexibility and aesthetic presentation. By perfecting these elements, it is emphasized that in order to achieve advanced levels of success, it is necessary to start the sport at a young age.

Gymnastics started earlier than other fields. It was noted that the age of practicing gymnastics is 3-4 years, and the age of entering the net is 9-10 years. Gymnastics is a sport that requires individual talent and involves a wide range of motor skills. Children introduced to gymnastics at the age of 3-4 reach the elite level at the age of 12-14. To be an active athlete, an athlete must work continuously in the gymnastics department for 9-11 years with at least 26-29 hours of programmed training per week.

Gymnastics; It is a branch where practical and repetitive actions are performed with intelligence and great courage. Leveling up is difficult and possible with individual efforts. Athletes strive to be efficient in order to discover new movements that have not been performed before and to perform these movements without error. However, in addition to physical development, mental development also develops. Thus, those who are involved in sports from an early age will be successful in the future.

Gymnastics nets, competition, equipment and rules

There are 7 branches of gymnastics organized by the International Federation of Gymnastics (FIG). These are Rhythmic Gymnastics, Rhythmic Gymnastics, Aerobic Gymnastics, Trampoline Gymnastics, Acrobatic Gymnastics, Gymnastics for All and Parkour included in 2019. Rhythmic gymnastics, rhythmic gymnastics and trampoline gymnastics are among the Olympic disciplines, while aerobics, parkour, acrobatic gymnastics and gymnastics for everyone are developing in our country and are not Olympic sports. Gymnastics is for everyone, on the contrary, it is an exhibition organization, in which only demonstrations are held and everyone can participate

without the goal of competition.

Gymnastics is one of those specialized sports that requires a high level of complex movements and uses multiple movements at the same time, and one of the things that makes gymnastics unique is that it is a discipline of gymnastics. A sport that is constantly renewing itself in terms of action despite having countless moves. An athlete and their coach can use their creativity to create a new movement, and this new movement is recorded in the literature by taking the athlete's last name. Although there are many examples in the world, our country also has very valuable athletes who have their own actions.

Although athletes use complex training programs under the supervision of coaches in order to improve themselves, changes can occur as a result of injuries, excess weight gain, insufficient development in the field of sports, and sometimes the emergence of new sports sectors. It is constantly developing and new sports outlets are opening accordingly. The development of sports and discipline allows people to focus on sports according to their interests.

Generally speaking, gymnastics, which is one of the main sports, is among the activities that provide the best awareness of the body. Through gymnastics, we can achieve the best development of many motor skills, for example, a better understanding of how to use the body and the relationship between body parts in different exercises and equipment, the ability to balance in different body positions, and flexibility.

Physical and physiological findings in gymnasts should be applied according to certain standards. Sports performance evaluation criteria were defined as muscle strength, muscle strength, agility, flexibility, speed, muscular endurance, anthropometric structure, balance and coordination, and cardiovascular endurance. Gymnasts who want to reach the elite level must have the maximum of these characteristics.

It is difficult to understand gymnastics as a discipline or a sport. Because when it comes to sports, there is an idea that an athlete competes against another athlete or a team against another team. As in track and field, in a sport measured by meters, athletes do not have to compete against each other against time, jump over high hurdles, or be in contact with the movements and actions of their opponents, but rather compete against them. There is also difficulty in distinguishing. Naturally, here is the struggle of the athlete with himself. In this competition, the athlete is required to keep the body under control in order to perform gymnastic movements of high difficulty flawlessly and smoothly. Its development requires regular, effective and active work for years.

Gymnastics is a sport discipline that requires many years of technical work and serious effort to master the movements specific to the branches very early.

Although they are grouped under one heading, gymnastics has different areas, and knowing and defining the skill portfolio and requirements of these areas in advance will lead us to more accurate and faster success without wasting time in other areas.

Each sport network has a differentiated training structure and consequently a physicality according to its own rules. One of the most important concepts for distinguishing these features is anthropometric structure. It is known that the appropriate anthropometric structure is important for athletes to be successful. According to scientists, a fit athlete's body is necessary to achieve successful results in sports.

Development is a change in adaptation to competence. This indicates the need for change and adaptation to this change in order to acquire and maintain competence throughout life. For example, a baby learning to walk must make some adjustments due to mobility in support and

traction. On the other hand, an older person with reduced axial flexibility and arthritis (inflammation of the joints) will need to make some adjustments to accommodate the impaired and decreased mobility due to current problems.

Development must always be considered as a whole, and developmental research must span multiple domains, given that failure in one area of development can slow or even prevent the development of skills in other areas of development.

Development proceeds in sequence from head to toe, from the inside out, from the general to the particular. Development follows a path of continuity, but the progress of development is not the same in every period. Although development is continuous, within this continuity there are some fluctuations and it moves forward, sometimes slowly, sometimes quickly. Periods of high development are called critical periods.

, can occur if children's developmental characteristics are known and their basic needs are met during pre-school (0-6 years), which is crucial due to the child's rapid development. Unmet developmental needs during this so-called magical years of life have a significant impact on children's future lives.

Exciting to do and awe-inspiring to watch, gymnastics uses the whole body to fully activate the muscles. gymnastics; It can be defined as physical activity performed on the ground or with gymnastic equipment to promote endurance, strength, flexibility, agility, coordination and body control.

It allows the development of the functions of the body, muscles, ligaments, bones and joints and plays an important role in the acquisition of anatomical and psychological skills. In gymnastics, the athlete literally fights against himself and does not participate in the actions of the opponent. In this competition, athletes are asked to perform movements that require great strength and determination in a flawless and smooth manner. This can be improved with training programs that require years of work. Since the content of gymnastics training affects the motor development of children with basic movement skills such as running, jumping, jumping, rolling, turning, static balance, dynamic balance, it is important for athletes to know which direction their body is in. knowing how to move also helps their cognitive and social development.

History of gymnastics

Gymnastics is derived from the word humos, the root of which means naked, which goes back to the ancient Greek civilizations, entertaining the people with their performances. It has seen many changes during the entire historical process, was named after the Olympic Games and changed to its modern appearance at the beginning of the 19th century. Later, in 1881, the International Gymnastics Federation was established in Liege, Belgium. Currently, there are 129 federations and 5 types of gymnastics: artistic, aerobic, trampoline, acrobatics and rhythmic gymnastics.

Development of gymnastics in the world

It is derived from the Latin word gymnos (naked), and through the ancient Greeks, the exercises they created for physical training were systematically created and named "gymnastics". Although it means "exercise naked", it also includes a variety of movements and physical activities that do not require nudity.

Gymnastics, which developed between 430-354 BC, developed various styles as it was practiced within the borders of Greece. Although shown as war games in Sparta; It was put on display in Athens in preparation for the Olympic Games.

Gymnastics sports networks

Gymnastics branches include artistic, artistic, aerobics, acrobatics and trampoline gymnastics. However, parkour, which has been included in the federation in recent years, can be considered as a small branch of gymnastics.

Artistic gymnastics

Rhythmic gymnastics has been held every four years since 1896 and is one of the sports that have participated in all modern Olympic Games. In rhythmic gymnastics, women compete in four and men in six apparatus. Equipment used by female athletes; This is a jumping table, asymmetric parallel, balance and floor equipment. Equipment used by male athletes; floor, pommel horse, hoop, springboard, parallel and chin-up equipment. In all 11 devices, the physical skills required of an athlete vary, including neuromuscular strength, power, flexibility, speed, coordination, balance, and the energy system.

Rhythmic gymnastics

It is a combination of gymnastics, ballet and dance, in which aesthetics are in the first place, and the movements are determined by the selected music in about 60-90 seconds. Rhythmic gymnastics is a field in which there are no male athletes and only women.

It is important that the athlete's body is strong and strong. However, athletes must be reliable. To achieve significant success, an athlete must be in harmony with his movements and perform flawlessly. In rhythmic gymnastics, athletes can compete only with body movements without the use of equipment; They can only perform their performances with hand tools such as balls, hoops, ropes, ribbons and clubs that are unique to their branch.

Aerobic gymnastics

Aerobic gymnastics is a sport that requires self-care, introduces the athlete's weaknesses and strengths, tries to regulate the weaknesses and presents the strengths. The gymnast is asked to decorate his sequence by creating dance steps, build it with aerobic steps and perform the movements in harmony with each other and with music.

Aerobic gymnastics competitions require excellence in flexibility, technical skill, strength, balance, aerobic endurance, coordination and anaerobic power parameters. The created series wants to match the music. It is considered an error when the contestants cause a synchronization failure.

Trampoline gymnastics

This is the Olympic sports section. Trampoline attempts to perform a continuous series of movements and connections in the best possible way. Competitions consist of 3 series with a maximum of 10 items each. There are two ways to compete: individual and synchronized.

Acrobatic gymnastics

Although not an Olympics, it is a discipline consisting of pairs, trios and group categories, in which the outstanding abilities of athletes are demonstrated by performing with a partner or in groups of the same number.

Parkour

It is a sports discipline that includes various transitions from one point to another in the fastest and safest way, without equipment, making full use of the capabilities of the human body and pushing all its limits.

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Annatasi: Physical education development Gradually , historically process during people more active and mobile marriage style take went tribe members this that he repeated attention focus must or another physical actions , physical strength showed that it is stronger and more durable and more efficient was It's people physical exercises (movements repetition) event conscious respectively to understand take came

Keywords: modeling, done increase criteria, health to keep improvement, modes, environment.

Physical education and of sports appear to be and formation about this of direction essence and appear to be reasons in society physical education Physical education appear to be for years go is worn humanity society of history initial era Elements physical education primitive in society to the body came (NI Ponomarev, 1970). People own to food have they were, ov they did they built a house and this natural, necessary activity in the process their physical abilities - strength, endurance, speed - by themselves improved.

Gradually , historically process during people more active and mobile marriage style take went tribe members this that he repeated attention focus must or another physical actions , physical strength showed that it is stronger and more durable and more efficient was It's people physical exercises (movements repetition) event conscious respectively to understand take came Physical education to the basis has become physical exercises event was Physical exercises effect understand and imitate started his work in the activity to him necessary has been actions (movement). real work from the process except , for example , of an animal to the image spear shoot Labor actions real work from processes outside apply started immediately they are physical to exercises turned . Labor activities physical to exercises rotate their effect scope significant level expanded person per head and the first in turn comprehensively physical improvement point of view in terms of From this except , evolutionary development in the process known to be physical education in training significant level good to the effect man exercise do it when he started is achieved childhood , and in adults not , that is , to life and to life while preparing in advance work process to quality was considered

Marked of the object (of the event) eng important aspects , features or signs on and to express

Physical the main theory of education1 concepts the following includes: 1) " physical education ";

- 2) " physical preparation ";
- 3) " physical development ";
- 4) "physical perfection ";
- 5) "sport".

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Physical education. It's to himself typical education is the type. His content - to actions teaching, physical adjectives education, special physical education knowledge appropriation and physical education to training conscious the need formation

Movement training own content as physical to the content have

Education is a person by own actions of management reasonable methods regularly respectively work output, that's it with in life necessary movement skills basis take over and belongs to knowledge.

Life or for sports important the actions of the appropriation through students their own physical qualities reasonable and complete manifestation to do ability eg a will be With that Together, they are body movements free movement process they learn

Appropriation level according to, action action technique two in form - movement skills in the form of done increase possible and skill in the form of. That's why for physical education learning in practice the phrase " movements ". instead of they are most of the time they use" motor skills the term " formation ".

Physical qualities development physical education one different level important aspect is considered Strength, speed, endurance, flexibility and quickness physical of virtues progressive development purposeful manage natural to complexes effect does of the organism properties and that's it with quantitative and determines his in functionality quality changes.

All physical qualities is innate, that is given development and improvement need has been natural desire in the form of to the individual and natural development process when special organize done takes, that is. Pedagogical to the feature have if not " development " but " physical qualities " to educate ". more correct.

Physical education in the process wide comprehensive physical education and sports knowledge, sociological, hygienic, medical and methodical content. Knowledge physical exercises process more meaningful and therefore for more efficient does

So so, physical education certain eating and education problems solution to do process pedagogical of the process all features have has been tasks. Physical education to himself typical feature it is the ability to move and skills systematic respectively to form and physical purposeful development provides of a person total his physical opportunities solution doer level defines qualities.

Physical education " Physical the term " education ". physical education practical direction emphasizes the work or another activity for. General physical features there is training and special.

General physical preparation degree to increase directed physical development, wide tool readiness different at events to success reach for necessary conditions as.

Special physical training - specialized certain in action to success help giving process (kind of profession , sport and others) to human ability to move special requirements puts Physical of preparation result physical preparation is purposeful of activity efficiency contribution adding formed tool skills and in their abilities achieved the results reflection makes (this purposeful of activity efficiency to increase focused).

Physical development. This is formation, formation is a process and from him next changes of a person whole life during happen will be his of the body morphofunctional features and based on their physical qualities and abilities.

Physical development three in the group changes with is described indicators.

1. Physical indicators (body length, body weight, posture, body separately parts volumes and forms of fatty compounds quantity and others), they the first in line biological is characterized **Of the person forms or morphology.**

2. Morphology reflection bringer health indicators (criteria). Physiological in systems makes sense and functional changes a person body Man health for solution doer important have heart-blood vein, breath get bodies to work effect does and central nerve system, food digestion to do and release organs nia, thermoregulation mechanisms and others

3. Physical of adjectives development indicators (power, speed abilities, endurance and others). Until about 25 years of age (formation and growth period) many morphological indicators increases dimensions and bodily functions will improve. Then up to 45-50 years during physical development known level stabilized it seems Later, we are old sain, of the body functional activity little by little weakens and gets worse

Body length, muscle mass and others decrease can

Life during this of indicators change process as physical of development nature a lot reasons depends and series laws with is determined. Successful manage physical development only this patterns known if and they are in construction account is taken physical education process.

Physical development known level laws with is determined Heredity, that is physical the situation supportive or on the contrary, prevention receiver factors as attention taken need human improvement. Heredity, in particular of a person possibilities and in sports success prophecy in doing attention get need

Physical development the process is also young gradation (of the earth weight power) to the law obeys. Human physical development to the process only basically control to do for interference possible different young periods a person of the body features and opportunities account received without: formation and growth during his forms and of functions the most high development during, aging during Physical development process unity to the law obeys organism and the environment and therefore for significant level of a person to live conditions depend First in line to live conditions social conditions enters Live conditions, work, education and material help significant level effect does of a person physical status and of the body forms and of functions development and to change determines Geographical the environment is also physical to development known effect shows.

Physical development manage for big important have Physical education process physical of exercises biological to the law and of the organism forms and of functions unit to the law have

This laws in choosing initial each is a point sure in case physical education tools and methods.

Physical exercises choose and their size determination downloads, exercises ability to the law according to count possible attraction done in the body necessary adaptive changes for. This is the body one whole as work account takes That's why for exercises and loads in choosing, mainly selective influence, their of influence all aspects sure imagination to do need

Physical perfection It is historical defined of my body is ideal of a person physical development and physical preparation;

life requirements the most suitable will come.

Ours of our time physically perfect of the person the most important to himself typical indicators:

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1) good health to a person chance give, that's it including , adapts and life , work , marriage uncomfortable conditions ;

2) high common physical indicators, I allow I will give important special to indicators to achieve the goal did

3) proportional developed physics, right to stand up , it is known anomalies and of disparities absence ;

4) comprehensive and perfect developed physical virtues; of a person one bilaterally development an exception to do

5) main of vitality rational technique take over actions are also new actions quickly learning ability negative actions ;

6) physical education, that is . special ownership knowledge and from your body efficient use ability and in life , at work , in sports physical abilities .

Society of development present stage physical of maturity main criteria the norm and are requirements state programs combined standards with joint sports classification .

Sports. Real competitiveness represents activity, to him separately training as well as interpersonal relationships and to him typical has been norms

Sports to himself typical feature is this to himself typical shape has been competition activity

Competitors mutually relationships sure in order putting , actions composition (of the projectile weight , opponent , distance and others) combine , they for conditions based on of a person opportunities identification , comparison and comparison enable giving competitions , defined according to done increase and achievements evaluation methods rules .

Competition events special preparatory sports training sports training in the form of done is increased.

XXI century in their heads education in philosophy important changes in education humanity direction increase physical education issues updated : what for , who and how teaching and educate ?

Received to questions answer looking for one series of scientists to his thoughts Based on the physical education pedagogical models systematized.

Human to live methods and environment to himself typical features and others are also physical culture of appearances appear to be and of diversity essence analysis to do and others to us possibility gave Physical education in the field pedagogical of models real collection their anthropological and ontological structural parts , that is mutually depends and mutually depends has been two or of the vector this combination with is determined to the conclusion arrival : "body-soul " and " nature-culture " . physical education four pedagogical model determination for base

Health to keep within the adaptive model physical education purpose health improve the normal physical condition of students development and common physical preparation reach, their natural and social life conditions adaptation for necessary individual morphofunctional and motor base is to create. This in the model of the environment role not only physical exercises, maybe natural factors are also wide apply through of the teacher of the student physical -motor potential , its individual characteristics account received without adaptive training effect with depend sun , air , water).

in the east healthy and flexible physical education development traditions of Ayurvedic teachings and of treatment prophylactic methods principles come turns out , their philosophical

basis is cosmocentrism . In the west natural centrism and natural compliance ideas Aristotle , Democritus , Plato , later names with connected . Rousseau. However, in pedagogy to nature compatibility principle the founder Yes. A. Komensky is " school's sure order from nature get it is necessary," he said.

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THE USE OF COLLABORATIVE TECHNOLOGY IN PEDAGOGY

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Abstract: Collaborative technology has revolutionized the way educators and students interact and learn in the digital age. This article explores the benefits of incorporating collaborative technology in pedagogy and its impact on student engagement, critical thinking, and overall learning outcomes. By examining various literature sources, this article aims to highlight the importance of integrating collaborative tools in educational settings to enhance the teaching and learning experience.

Keywords: Collaborative technology, pedagogy, student engagement, critical thinking, learning outcomes

INTRODUCTION:

In today's rapidly evolving technological landscape, the use of collaborative technology in pedagogy has become increasingly prevalent. Collaborative tools such as online discussion forums, virtual classrooms, and group project platforms have transformed traditional teaching methods by promoting active participation, collaboration, and knowledge sharing among students. This shift towards a more interactive and dynamic learning environment has proven to be beneficial for both educators and learners alike.

Pedagogical technology is inherently subjective. Regardless of the form, methods and means of organization, technologies:

- increase the effectiveness of pedagogical activity;
- to decide on mutual cooperation between the teacher and students;
- ensuring that students acquire thorough knowledge of educational subjects;
- formation of independent, free and creative thinking skills in students ;
- creating the necessary conditions for students to realize their potential;
- it is necessary to guarantee the primacy of democratic and humanitarian ideas in the pedagogical process.

Pedagogical technologies cannot be used forcibly. On the contrary, it is desirable to creatively develop them along with appropriate use of advanced technologies based on or used by experienced pedagogues.

Today, a number of developed countries have accumulated a lot of experience in the use of pedagogical technologies that increase the educational and creative activities of students and guarantee the effectiveness of the educational process.

One of these is the idea of designing lessons using collaborative learning technology.

The idea of co-teaching in different countries, including the professor of J. Hopkins University in America - R. Slavin (1990), the professor of the University of Minnesota - R. Johnson, D. Johnson (1987), the professor of the University of California - SH. Sharon (1988)), developed by

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Collaborative teaching, developed by American scientists, is mainly the formation of students' knowledge, skills and competences mentioned in the DTS and science curriculum, collaborative teaching recommended by Israeli and European scientists, as mentioned above, more processing of educational material by students involves the development of design activities, educational discussion and debates.

These ideas complement each other, didactically enrich and require each other.

The idea of cooperative teaching appeared in didactics in the 1970s. Cooperative teaching technology is widely used in educational institutions of Great Britain, Canada, Germany, Australia, the Netherlands, Japan, and Israel.

The main idea of co-teaching is not only to do the tasks together, but also to study and learn together .

Collaborative teaching is to teach every student to daily intensive mental work, to think creatively and independently, to educate individual consciousness, independence, to create a valuable sense of personal value in each student, to have his own strength. and aims to strengthen confidence in one's abilities, to form a sense of responsibility in studying.

and diligently mentally, to fully and qualitatively complete educational tasks, to thoroughly master the educational material, to cooperate with their friends, realizing that the success of each student in obtaining analysis leads to the success of the group. and prepares the ground for mutual assistance.

In cooperative learning technology, there are several methods of organizing cooperative learning of students:

1. Teaching in teams (R. Slavin) students are divided into two teams of equal number. Both teams perform the same task. The members of the team perform the educational tasks in cooperation, and each student focuses on mastering the knowledge, skills and abilities provided by the subject.

R. Slavin, who is one of the authors of cooperative teaching technology, said that it is not enough to instruct students to complete tasks cooperatively. It is necessary for students to cooperate in the literal sense, to rejoice at the success of each student, to sincerely help each other, and to create a comfortable social and psychological environment. In this technology, when determining the quality of knowledge acquisition of students, they are compared not with each other, but with the daily result of each student with the previously achieved result. Only then, students, realizing that the results achieved during the lesson will benefit the team, feel responsible and strive to learn more, acquire knowledge, skills and abilities.

2. Collaborative teaching in small groups (R. Slavin, 1986).

In this approach, small groups consist of 4 students. The teacher first explains the topic, and then students' independent work is organized. The educational assignments given to students are divided into 4 parts, and each student performs a certain part of the assignment. At the end of the task, each student thinks about the part he has completed and teaches his friends, then the group members make a general conclusion about the task.

The teacher listens to the information of each small group and evaluates the knowledge with the help of test questions.

Educational activities of students in small groups can be organized in the form of a game (tournament, competition) and individually.

of the teacher and the student, the main attention is paid to the study of the development of mutual relations, the process of group organization of teaching is described.

are an important factor of mutual cooperation and the basis determining the nature of student interaction. Collaborative educational activity is a special type of teacher - student relationship and joint behavior, which provides the object of mastery, reconstruction of all parts of knowledge activity.

The goal of cooperative learning activities is to create a mastery of activities and a mechanism for managing joint actions, attitudes, and communication. The product of cooperative activity is the emergence of new ideas put forward by students and goals related to the nature of the activity being mastered, and the desire to manage the individual's position in partnership.

The method of cooperative activity should be understood as the system of joint actions of the teacher and the student. Such behavior begins with the teacher's assistance to the student;

Pupils' activity gradually increases and becomes completely self-directed practical and mental activity; and the relationship between the teacher and the student will have the character of partnership position.

There are 8 forms of cooperation in the field of pedagogy and psychology. They consist of:

- into activity ;
- independent actions are performed by the teacher and the student in cooperation;
- the teacher initiates the action and involves the student in it;
- imitative actions (the student who takes a lesson from the teacher acts on the basis of this example);
- supporting actions (the teacher helps the student to choose an intermediate goal and methods of achieving it, and monitors the final result);
- self-directed actions (the teacher participates in the assessment of the final result, indicating the common goal);
- self-directed actions;
- self-organizing actions.

Interactivity is the interaction between the teacher and the student. In the process of transitioning to the stage of improvement of cooperation activities, there is an increase in the level of self-evaluation from the evaluation of the action of interaction. This process is one of the most important factors indicating the dynamics of cooperation.

1. Forms of training in cooperation

Cooperative teaching technologies are based on improving the pedagogical process, focusing it on the child's personality. To create a creative environment aimed at forming a creative personality, to serve to increase the quality and efficiency of education.

The main processes of cooperative learning activities are: cooperative exchange of ideas, conversation, analysis, discussion, negotiation, practical tasks, building something, solving problems , etc.

Organizational forms of training in cooperation: educator - child, educator - small group, educator - large group, small group - small group, small group - child, etc.

to share ideas with the teacher and with each other :

2. Preparation and practice of various forms of cooperative learning activities

Arrange for each trainee to prepare some type of cooperative learning activity for practical application of the learning material. The trainees will prepare a lesson on the topic of their choice

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in the most appropriate form of cooperative teaching, and based on it, they will give a short summary of the lesson with the participation of the group, and a corresponding discussion will be held. : For example

"Cooperative Squares" exercise.

Materials.

Five cardboard rectangles cut according to the diagram for each group of five people.

Pieces are placed in one of five letter-marked envelopes up to AE.

Each group of five should sit as comfortably as possible around the table .

Order:

Each member of the group receives an envelope. The goal of the exercise is for the group to make five rectangles of the same size. The training is done non-verbally.

This exercise will take 20 minutes.

based on group cooperation and can be interpreted in different ways. At the beginning, some children make a rectangle of the correct size, but other participants use the appropriate shape. The solution to the problem can be found not through competition between individuals, but only through group cooperation. This exercise will help start a discussion about cooperation issues.

Literature Review:

Several studies have demonstrated the positive impact of collaborative technology on student engagement and motivation. According to a study by Dillenbourg (1999), collaborative learning environments can facilitate deeper understanding of complex concepts through peer interactions and discussions. Similarly, Warschauer et al. (2000) found that students who engaged in collaborative online activities showed higher levels of critical thinking skills compared to those in traditional classroom settings.

The use of collaborative technology in pedagogy has been rapidly gaining popularity in educational institutions around the world. This innovative approach to teaching and learning allows students to work together on projects, share ideas, and collaborate with their peers in real-time. Collaborative technology provides a platform for students to engage with course material in a more interactive and dynamic way, fostering a sense of community and shared learning experience.

One of the key benefits of using collaborative technology in pedagogy is that it encourages active participation and engagement among students. By working together on projects, students are able to learn from each other, share their perspectives, and collaborate on solving problems. This not only helps to deepen their understanding of the subject matter but also promotes critical thinking skills and teamwork.

Collaborative technology also allows for greater flexibility in the learning process. With tools such as online discussion forums, video conferencing, and shared document editing platforms, students can collaborate on projects outside of traditional classroom hours and from any location. This enables them to work at their own pace, access resources easily, and communicate with their peers effectively.

Another advantage of using collaborative technology in pedagogy is that it helps to develop important digital literacy skills among students. In today's digital age, being able to navigate online platforms, communicate effectively through digital tools, and collaborate virtually are essential skills for success in both academic and professional settings. By incorporating collaborative

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technology into their learning experience, students are better equipped to thrive in the digital world.

Furthermore, collaborative technology can increase student motivation and engagement by making learning more interactive and enjoyable. By providing opportunities for hands-on activities, group discussions, and peer feedback, students are more likely to be actively involved in the learning process and retain information better.

In conclusion, the use of collaborative technology in pedagogy offers numerous benefits for both educators and students. By promoting active participation, fostering collaboration among peers, enhancing digital literacy skills, increasing flexibility in learning opportunities, and boosting student motivation, collaborative technology has the potential to revolutionize traditional teaching methods. As educational institutions continue to embrace new technologies in the classroom, the integration of collaborative technology is proving to be a valuable tool for enhancing student learning experiences.

Furthermore, research by Shih et al. (2010) highlighted the role of collaborative technologies in promoting creativity and innovation among students by providing opportunities for brainstorming, idea-sharing, and project-based learning. These findings underscore the importance of integrating collaborative tools into pedagogical practices to foster a more interactive and engaging learning experience for students.

Conclusion:

In conclusion, the use of collaborative technology in pedagogy offers numerous benefits for both educators and students by promoting active participation, critical thinking skills, and overall academic achievement. By leveraging collaborative tools effectively, educators can create a more interactive and engaging learning environment that enhances student learning outcomes. As we continue to embrace digital advancements in education, it is imperative for educators to explore innovative ways to integrate collaborative technology into their teaching practices to prepare students for success in an increasingly digital world.

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"THE IMPORTANCE AND PROPER ORIENTATION OF CHILDREN TO DIALOGIC SPEECH"

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Abstract: The task and purpose of the formation of specific characteristics in teaching children to dialogic speech

Key words: dialogue, polylogue, pronunciation, grammatical skill, monologic speech, dialogic speech, revitalization complex, emotional situation, positive attitude, speech ability

Dialogic speech is carried out between two or more people. This form of speech has its own characteristics, it does not require long sentences. That is why there are many incomplete sentences in dialogic speech. Interrogative and exclamatory sentences are also found in such speech. Content and tasks of dialogic speech Dialogue - conversation is the main form of communication of a child with adults and peers. Teaching in kindergarten is carried out in two forms: a) free speech communication b) in special classes Dialogue appears more in free speech communication and it enriches children's vocabulary: pronunciation-related grammatical skills naturally It is the basis for developing fluent speech skills. Dialog is taught in special classes (1-2 classes per month); During his stay in the kindergarten, the child freely communicates with the teacher and other children. At home, adults should engage in dialogue with the child on various topics. Teaching dialogic speech (or oral speech) usually takes place in the form of a conversation, that is, in the form of an exchange of ideas between an adult and a child, and between children themselves. The importance of special training for the development of dialogic speech. Special classes on the development of dialogic fluency are conducted based on the luhbat method (conversation) and the imitation method. These methods are often implemented using the following methods: Preparatory conversation (speech) methods; Theatrical methods (imitation, retelling). A prepared conversation has the following tasks: Direct - to encourage children to talk, that is, to listen without interrupting the interlocutor's words, to hold back while waiting for a convenient moment to throw a bite, to make it understandable for the interlocutor to speak; Companion - practicing pronunciation and grammar skills, clarifying the meaning of certain words. During the conversation, the educator uses various methods, such as questions, riddles, artistic words. All these methods help to direct the process of knowledge acquisition during the conversation, to ensure speech communication, to activate children's thoughts, attention, memories, and emotions. The first signs of a child's dialogue with adults appear in the form of a "revival complex", that is, a child's emotional-positive attitude towards adults. From 2-2.5 months, the baby begins to actively demand to engage in dialogue. The first form of dialogue is emotional-free (situation-person) form. It is characterized by an interest in another person, an emotional attitude towards him. This form of dialogue is characteristic of the first six months of a child's life. The second, more developed form of dialogue - i.e. motor-mediated (situational-practical) form occurs in the second half of a child's life. This dialog is converted into a tool dialog through objects. At this age, the child's interests are focused on the world around him. In him, the need for new experiences is evident. Developmental tasks at this age are as follows: Cultivating a sense of emotional connection and trust in children's institutions and adults who take care of the child in

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the family. Satisfying the need for positive attention towards him. Helping the child develop interest in the world around him and in himself. The situation of early social development and its genetic function. The results achieved by the end of the first year of the child's life require the construction of a new social development situation. This is a situation related to the activity of a child with an adult. The content of this joint activity consists in mastering the ways of using objects developed by society (the child learns to eat with a spoon, drink from a glass, draw a picture, sit on a chair, etc.). Dialogue will continue to develop rapidly, because without direct communication with adults, meaningful activity is impossible. The dialogue related to the subject activity does not remain only emotional, it becomes a verbal dialogue. Thus, the main task of the first age is to master the human ways of using things and to develop speech. By the second year of his life, while the child moves with objects, he learns the physical (size, shape, color) and dynamic properties of the world, distance relations (near, far), dividing the whole thing into parts and assembling the whole thing from the parts (like a pyramid, a matryoshka doll). disassembles and reassembles a toy) discovers for himself. However, no matter how much the child acts with things, he still learns the socially developed ways of using them (eats food with a spoon, stirs porridge; hands on a towel, wipes the face; draws with a pencil, etc.) cannot discover. The function of things and the methods of their practical application are taught to the child by adults.

The need for dialogue, the mastery of object movement also requires the child's own active speech. On the basis of speech, generalizations, the symbolic task of thinking, that is, the ability to replace the meaning of real things and to perform actions with language symbols and objects that suppress the meaning, are developed. However, before speech, there is a long way to go regarding the development and generalization of the object movement and the same movement with different objects or the same movement with different objects. For a child, an adult is a source of inexhaustible positive emotions, interesting impressions and games, where the word becomes more and more important. Entering into a dialogue with adults, striving to own things and toys, the child responds to the call to use words to achieve these goals, sometimes taking the initiative and giving feedback. An adult enters into a dialogue with the child, "corrects" the child's shortcomings by turning the child's one-word thoughts into a grammatically fully formed phrase (Temur saw his dad's car: "Bibi, dad." Mother: "Dad's car Let's go, we're going to dad's place»). The child actively acquires the language . The image behind the word ranges from a single simile ("lyalya" is a large and small doll) to more similes, and later to relatively clear generalizations (from the word "mol" to cow, sheep, goat and from being used to describe horses and donkeys to the later use of the word "cattle" only for cows and calves). Multi-image relationships are expressed with the help of one word (the word "nanna" can simultaneously mean "this is bread", "give bread", "the bread fell", etc.). The child gradually learns to express this relationship through ungrammatical two-word, and later three-word sentences. By the end of the second year, the first grammatical forms appear. The child's vocabulary increases. At 1 year and 6 months, his vocabulary should be 30-40 words. Thoughts are mainly composed of one-sentence sentences. In this, non-verbal means of dialogue (expressive movement, direct demonstration, eye contact, facial expressions, gestures, etc.) still prevail. The child understands the meaning of everyday situations and the content of speech used in them. By the age of 2, the child's vocabulary grows to 200-300 words. His thoughts consist of two or three sentences that are not grammatically formalized. In a situation where a child and an adult enter into a direct dialogue, speech dialogue becomes the leading type of dialogue. By the third year of a child's life, the development of speech continues

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within the framework of more comprehensive tasks, first of all, by entering into a relationship with older close relatives and children and acting together with them (communicative task of speech), knowing the world around (intellectual task of speech). is enough. The child learns the main form of speech dialogue - dialogic speech. He learns to take the initiative to express opinions, ask questions, wait for answers, answer questions himself, and address others with requests and suggestions. The child uses words to express his wishes, feelings, thoughts, and to achieve expected results. However, the words used by the child are phonetically very imperfect, and it has a broad meaning. By using words and object movements, acting in accordance with them, an adult helps a child understand each other and enriches his language.

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Culture and art institutions of Termiz State University student of the 2nd stage of organization and management

Annotation: In this article, information about the work of Shukur Kholmirzayev, his works, stories, creative heritage were touched upon. The work of his contemporaries thoughts about his work, his place in literature, a comment on the study of his work is conducted.

Key words: Uzbek storytelling, literary style Life is in constant motion, it does not stop.

ШУКУР КОЛМИРЗАЕВ – ИЗОБИЛЬНОЕ ТВОРЕНИЕ

Учреждения культуры и искусства Термезского государственного университета студент 2 ступени организации и управления

Аннотация: В данной статье затронуты сведения о творчестве Шукура Холмирзаева, его произведениях, рассказах, творческом наследии. Приводятся размышления современников о его творчестве, его месте в литературе, комментарии к изучению его творчества.

Ключевые слова: узбекское повествование, литературный стиль. Жизнь находится в постоянном движении, она не останавливается.

Adjectives given to our time such as intensity, abundance of information and speed of exchange At the beginning of the cycle, human needs change frequently can't be surprised. So, last night excited many people the event may be overlooked today. But in life, it is unchanging, fixed concepts are not good. In particular, he betrayed his country a thousand years ago The harsh attitude towards the traitor has not changed so much today in our day, a righteous child finds value by honoring his parents Tomorrow, someone who turns away from goodness, kindness and goodness will act as an example not shown. In other words, the people settled for a long time, formed, polished moral, religious, household rules In this sense, he called everything by his name and measured it with the standard of justice ok The writer Shukur Kholmirzaev is the principle of the place of this issue in literature because he sees it as a problem, we can see in his works the image of people with a complex destiny and a unique fate. Literature during the former Soviet regime of heroes in most of the works because it is accepted as a weapon of ideology special attention is not paid to his money, Adam is not evaluated as a person, perhaps more attention to their work, social activities, Zafaru's success was increasing. That's why his parents are alone at home, Being neglected, he did his work at the factory with excess, and his picture was titled "Respect writings containing a description of the work of the worker, who were eager to be hung on the board He says that such an approach was suitable for the requirements of the writer

It is logical to study Shukur Kholmirzayev's creative works in 3 stages it will be right.

The first stage: 1953-1969 In this period, familiarity with literature, familiarity with words, writing of the first stories and so on initial press releases. The second stage: includes the 1970s-1990s. The writer is majoring in literature the period when he was recognized as a talent and had

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his fans and students. This works created between the years in terms of theme and idea, style and skill it can be like a different world. 34 S.Mamajonov, "Style polishes", page 79 The third stage: 1991-2005, this period is the peak of the writer's creativity, It would be correct to say that it is a summary of almost fifty years of creative work. In 1953-1969 "Stranger Man", "Something is missing", "Under the distant stars", "Missing", "Blue boy", "Wild flower" Stories such as "Yesterday - Yesterday" came in, and through these works, his own way and style indicated that it is forming. These stories are completely new in Uzbek literature it was a document that a voice appeared, that at that time these works were not only the literary critic attracted the attention of specialists, but also readers. Rise in Sh. Kholmirezayev's work, i.e. as a professional storyteller its popularity began in 1970. Adib 1970-1990s "Life is forever" "If a heavy stone moves", "Horse owner", "Chicken pox broke out", "Man who fell into a cliff", "He made me laugh with laughter", "Uzbek's simple", "We stay up late", "Ora" road", "In the village of Arpali", "The old tinkerer", "The child", "Spring has passed", "Old man", "Man", "Herdsman", "Dewed field", "Lame crane", "The Law of Gravity", "The Deserted Yard", "Almond Blooms in Winter", "Smile", "Death of a safe hunter", "Green Niva", "Statue", "Uzbek character", He created beautiful artistic masterpieces such as "Government" and "Once upon a time". Shukur Kholmirezayev is on one side of the big battle called "Uzbek Soviet literature". boldly lined up true national, Uzbek heroes. Another aspect is special if we will stop, in the stories of the creator, the hardened socialist of that time we do not see the method of realism. Above mentioned works, first of all, this aspect drew the students to him. His stories are artificial, fake, which the students are fed up with A live person is depicted, not pictures. They are in complicated, complicated situations of life depicted in the ups and downs of life. They did not build dams, did not chase the desert, oil and gas did not seek their own "little" truths - human dignity, national pride, etc Shukur Kholmirezayev is a phenomenon of our national storytelling of the 20th century. The concept of phenomenon is rarely mentioned in the National Encyclopedia of Uzbekistan. an unusual event, a fact, an event characterized by an emotional experience It is defined as a philosophical concept"³⁵. The personality of the writer, his work and Many people who knew him closely said that even his lifestyle was completely unique noted. A great author who has his own place and influence in the history of Uzbek national prose. It should be said that he wrote without disparaging the works of our writers not only the weight of his works, but also the beauty of language and style, original image and bright Shukur Kholmirezayev, with his ability to create characters, is the perfect example of our national prose A great writer is a slogan that is the basis of a new direction. With attention to the writer's work we can see that he was first of all in the vivid portrayal of the hero's portrait at the same time, the emotional experiences and spiritual world of the heroes skillfully you can see what it describes. Because he perfectly knows the life of the people, their psychology, their pastimes, the Uzbek world, living characters, able to create heroes. Shukur Kholmirezayev ruled during the autocratic regime literature, which has become the party's political weapon and propaganda machine, is his own He tried to return to his ancient heart and overcome all the pitfalls and obstacles on this way Professor U. Normatov overcame Shukur Kholmirezayev in 1978 expressed the following opinion about the unique artistic form of his stories:., Thank you

Kholmirezayev's story style, expression methods, image tone, and rhythm attracts attention it shows that he is used to short description of his thoughts. His U. Nazarov, one of his peers Normatov U. Traditions of our prose. Page 205. "explanatory method", Otkir In Hoshimov, the ``explanatory style" is observed, while in Sh. Kholmirezayev, ``describing the state of mind" takes

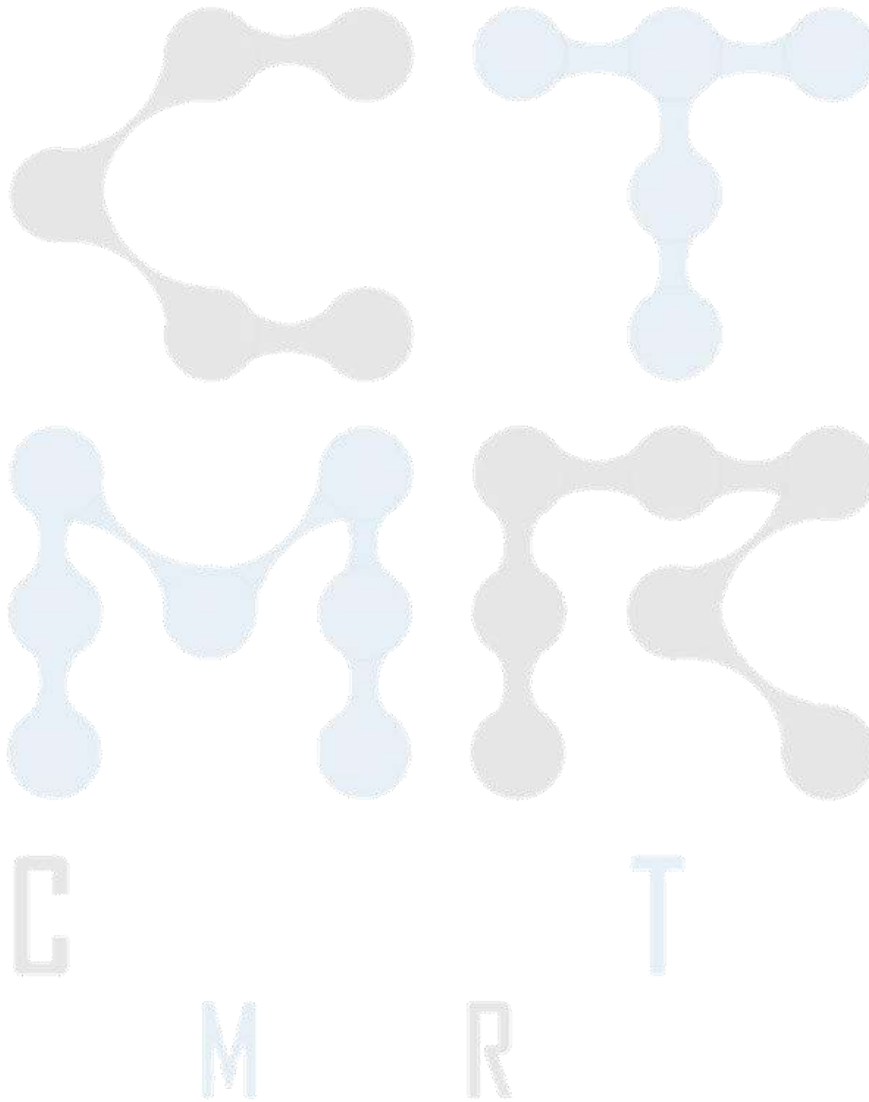
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priority. His first word begins with a description of the situation. That's why the writer does not "turn" the sentence, immediately goes to the goal. This is also in the writer's way of expression indicates the existence of uniqueness.

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ASSESSMENT OF EFFICIENCY OF ULTRAFILTRATION METHOD IN
TREATMENT OF OILY WASTEWATERS

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Abstract: This paper is devoted to the study of ultrafiltration method in the context of oily wastewater treatment. Oily wastewater is a serious environmental problem and requires effective treatment methods to prevent pollution of water resources. The ultrafiltration method is a promising approach to remove micro- and macromolecular contaminants, including petroleum products, from wastewater. This article discusses the principles of ultrafiltration, the main components of the system and the process of oily wastewater treatment. In addition, the advantages and limitations of the ultrafiltration method are discussed, as well as the prospects for its use in industry and research. Based on the results obtained, this paper contributes to the field of wastewater treatment and suggests new ways to improve the efficiency and environmental sustainability of the ultrafiltration process.

Keywords: ultrafiltration, oily wastewater, water treatment, environmental pollution, water resources, environmental sustainability.

ОЦЕНКА ЭФФЕКТИВНОСТИ МЕТОДА УЛЬТРАФИЛЬТРАЦИИ ПРИ ОЧИСТКЕ
НЕФТЯНЫХ СТОЧНЫХ ВОД

Аннотация: Данная статья посвящена исследованию метода ультрафильтрации в контексте очистки нефтесодержащих сточных вод. Нефтесодержащие сточные воды представляют собой серьезную экологическую проблему и требуют эффективных методов очистки для предотвращения загрязнения водных ресурсов. Метод ультрафильтрации является перспективным подходом для удаления микро- и макромолекулярных примесей, в том числе нефтепродуктов, из сточных вод. В данной статье рассматриваются принципы ультрафильтрации, основные компоненты системы и процесс очистки нефтесодержащих сточных вод. Кроме того, обсуждаются преимущества и ограничения метода ультрафильтрации, а также перспективы его использования в промышленности и научных исследованиях. На основании полученных результатов данная статья вносит вклад в область очистки сточных вод и предлагает новые способы повышения эффективности и экологической устойчивости процесса ультрафильтрации.

Ключевые слова: ультрафильтрация, нефтесодержащие сточные воды, водоочистка, загрязнение окружающей среды, водные ресурсы, экологическая устойчивость.

Most of the pollutants that enter the atmosphere or lithosphere from natural water bodies are natural accumulator. The reason for this phenomenon is the global water cycle, the ability to dissolve various gases and mineral substances. And it is also important that any body of water is a pit for the discharge of all kinds of solid particles from land. Oil-containing wastewater is a serious problem in terms of environmental pollution and requires effective treatment methods. One such method is ultrafiltration, which is based on the use of membrane separation to purify petroleum products from wastewater. Determining the effectiveness of the ultrafiltration method in the treatment of oily wastewater is an important aspect of the study because it allows us to evaluate the results and efficiency of this method. The effectiveness of the ultrafiltration method is measured by the degree of purification of petroleum products from the wastewater. This is done by analyzing the concentration of petroleum products before and after the ultrafiltration process. High efficiency of the method means a significant reduction in the petroleum product content of the treated water. One of the important aspects of determining the efficiency is analyzing the quality of the treated water. The treated water must comply with the norms and standards of environmental safety, not contain hazardous substances for the environment and be suitable for reuse.



Figure 1. Ultrafiltration process for oily wastewater treatment

Evaluating the performance of an ultrafiltration method also involves analyzing the pore size of the membrane used and its ability to remove macromolecular contaminants and colloidal particles. The smaller the pore size, the more efficient the filtration and removal of contaminants. The efficiency of the ultrafiltration method also depends on the degree of filtration and the backwashing efficiency of the membrane. Regular maintenance and optimization of the filtration and washing processes help to maintain the high efficiency of the method. To better determine the efficiency of the ultrafiltration method, it is necessary to compare it with other methods of oily wastewater treatment. This identifies the advantages and disadvantages of each method and determines how effective the ultrafiltration method is compared to alternative methods. Pressure plays an important role in the ultrafiltration process. The optimum pressure should be sufficient to overcome the resistance of the membrane, but should not be too high to avoid membrane damage. Experimenting with different pressure values and measuring the cleaning efficiency will help to

determine the optimum value. The flow of wastewater also affects the ultrafiltration process. High flow can lead to turbulence and reduce removal efficiency, while low flow can lead to membrane fouling. It is necessary to determine the optimum flux at which the best cleaning efficiency is achieved. The concentration of petroleum products in the wastewater is also important when optimizing the ultrafiltration process. High concentrations can lead to membrane fouling and reduced performance.



Figure 2. Physico-chemical treatment of oily waste water

Optimization of ultrafiltration process parameters and conditions plays a key role in achieving high efficiency of oily wastewater treatment. Investigation and optimization of these parameters will enable the development of more efficient and sustainable ultrafiltration systems that can effectively treat oily wastewater, reduce environmental impact and ensure sustainable use of water resources. Collection of oily wastewater samples is an important procedure for analyzing and assessing the quality of water resources. This process is critical for assessing pollution and determining whether the wastewater meets regulatory requirements. Gravity sample collection: based on the use of gravity flow of wastewater to collect samples. Samples are collected using tanks or containers placed under pipes or orifices from which wastewater flows. Gravity sample collection is widely used in industry and can be a convenient way to collect representative samples. A sampler is a specialized device that allows wastewater samples to be collected at specified locations and depths. It is usually a cylindrical tube with a mechanism to capture the sample inside. The sampler is used to accurately collect samples at specific points in the wastewater system. Automatic collection devices are used to continuously monitor and collect samples over a period of time. They are usually connected to the wastewater system and collect samples at predetermined intervals. Automatic sample collection provides long time series of data for more complete analyses. Wastewater characterization is important for understanding and effectively treating oily wastes. One of the main characteristics of oily wastewaters is their chemical composition. They may contain a variety of hydrocarbons including volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), phenols, benzene, toluene, xylene and other harmful substances. The concentrations of these substances can vary widely depending on the source of the wastewater and the processes with which they are associated.

The physical characteristics of oily wastewater are also important to its treatment. These include viscosity, density, temperature, pH, and solids. High viscosity of oily wastewater can make

it difficult to transport and treat. Density and temperature can influence the physical properties of the wastewater and the choice of treatment methods. pH may indicate the presence of acidic or alkaline compounds that may require special treatment. The presence of solids such as sand or clay may require pretreatment to clean up these contaminants. Another important characteristic of oily wastewater is its toxicity and environmental impact. Some components of oil and petroleum products can be toxic and cause serious adverse effects on aquatic ecosystems. Therefore, it is necessary to assess the toxicity of wastewater and take measures to reduce or completely eliminate them. Understanding the characteristics of oily wastewater is the basis for developing effective methods and technologies for its treatment. Different methods such as physico-chemical treatment, biological treatment, filtration and membrane technology can be applied depending on the characteristics of the wastewater and its treatment requirements. The characterisation of oily wastewater plays an important role in determining the best treatment methods and ensuring the safe and effective treatment of such wastes. The selection of the right ultrafiltration membrane depends on several factors including fluid type, particle composition, required degree of purification and process performance.

The study found that the selection of an optimal ultrafiltration membrane plays an important role in achieving high purification efficiency. The membrane parameters such as pore size, hydrophilicity and strength should be carefully selected based on the characteristics of the oily wastewater and the required purification level. Optimisation of ultrafiltration process parameters and conditions is also important to maximise efficiency. Factors such as flow rate, pressure, solution concentration and pH value must be optimised to meet the specific requirements of the system under investigation. Studies have shown that non-stationary conditions such as changes in temperature and solar radiation intensity can affect the efficiency of the ultrafiltration process. Therefore, it is necessary to consider these factors when designing optimal conditions for a specific application. Improving energy efficiency and reducing costs are also important aspects of ultrafiltration method research. The development of new materials and technologies such as modified membranes and integration with other purification processes can significantly improve the efficiency and sustainability of the process. Overall, the study of the ultrafiltration method for the treatment of oily wastewater confirms its potential in solving the problem of water pollution. However, for its successful implementation, further research, process optimisation and development of innovative solutions are needed to ensure the environmental sustainability and economic viability of this method.

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ANALYSIS AND SELECTION OF THE METHOD OF PURIFICATION OF OILY
WASTEWATER

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Abstract: This article is devoted to the analysis and selection of a method for wastewater treatment containing petroleum products. The advantages of baromembrane separation are given, as well as the rationale for choosing the ultrafiltration method as the most promising membrane method for wastewater treatment of transport enterprises. Ultrafiltration membranes have a wide range of applications in various industries. They are successfully used in the wastewater treatment processes of oil refineries and transport enterprises from emulsified petroleum products, in industrial wastewater reuse systems. For the purification of oily wastewater from transport enterprises, a design of a flat-chamber multi-section apparatus of the "filter press" type is proposed, which most fully meets the requirements for the purification of oily wastewater.

Keywords: treatment methods, baromembrane separation, ultrafiltration, oily wastewater, water purification, ultrafiltration membranes, flat-chamber membrane module, quality of wastewater

АНАЛИЗ И ВЫБОР МЕТОДА ОЧИСТКИ НЕФТЕСЫЩЕННЫХ СТОЧНЫХ ВОД

Аннотация: Данная статья посвящена анализу и выбору метода очистки сточных вод, содержащих нефтепродукты. Приведены преимущества баромембранного разделения, а также обосновано выбор метода ультрафильтрации как наиболее перспективного мембранного метода очистки сточных вод транспортных предприятий. Ультрафильтрационные мембраны имеют широкий спектр применения в различных отраслях промышленности. Их успешно применяют в процессах очистки сточных вод нефтеперерабатывающих и транспортных предприятий от эмульгированных нефтепродуктов, в системах повторного использования промышленных сточных вод. Для очистки нефтесодержащих сточных вод транспортных предприятий предложена конструкция плоскокамерного многосекционного аппарата типа «фильтр-пресс», наиболее полно отвечающего требованиям очистки нефтесодержащих сточных вод.

Ключевые слова: методы очистки, баромембранное разделение, ультрафильтрация, нефтесодержащие сточные воды, очистка воды, ультрафильтрационные мембраны, плоскокамерный мембранный модуль, качество сточных вод.

The widespread use of oils and petroleum products in industry leads to the fact that wastewater from almost all transport enterprises contains emulsified petroleum products in greater or lesser quantities. The most common methods of wastewater treatment from emulsified petroleum products are based on the destruction of the emulsion structure by inorganic electrolytes, followed by separation of oil pollution by sedimentation, flotation, separation in the field of centrifugal forces. At the same time, the chemical composition of the water changes, making it difficult to reuse it.; significant consumption of reagents and electricity. Currently used methods and technological schemes for the purification of oily wastewater containing emulsified petroleum products most often do not reduce the content of harmful substances to concentrations that allow water to be reused or sent to urban sewers or dumped into a reservoir, which causes significant environmental pollution. Petroleum products in the wastewater of transport enterprises are polydisperse and can be in coarse form, with a droplet size of 100 microns; finely dispersed form, with a droplet size of 1-100 microns and colloidal form, with a droplet size of up to 1 microns [1]. Since petroleum products belong to high-molecular compounds, ultrafiltration has become the most widespread for the treatment of oily wastewater. Separation of dispersed particles by an ultrafiltration membrane. This is primarily due to the fact that the particle size exceeds the pore size of the membranes. Ultrafiltration membranes have a pore size from 0.01 to 0.1 microns. To carry out the ultrafiltration process, an excess pressure of 2 to 10 atm is required, while emulsified oils, metal hydroxides, colloids, emulsions, suspended particles and other high-molecular compounds are removed from water or other liquid medium. Ultrafiltration membranes have a wide range of applications in various industries. They are successfully used in the wastewater treatment processes of oil refineries and transport enterprises from emulsified petroleum products, in industrial wastewater reuse systems [2,3]. Industrial devices for conducting membrane processes should be easy to assemble and install, and have the ability to replace membranes. The liquid should be evenly distributed over the membrane surface and have sufficiently high flow velocities to reduce concentration polarization. The pressure drop in the device should be as minimal as possible. These requirements are most fully satisfied by the designs of flat-chamber type devices [4,5]. The diagram of the flat-chamber membrane module is shown in Fig. 1.

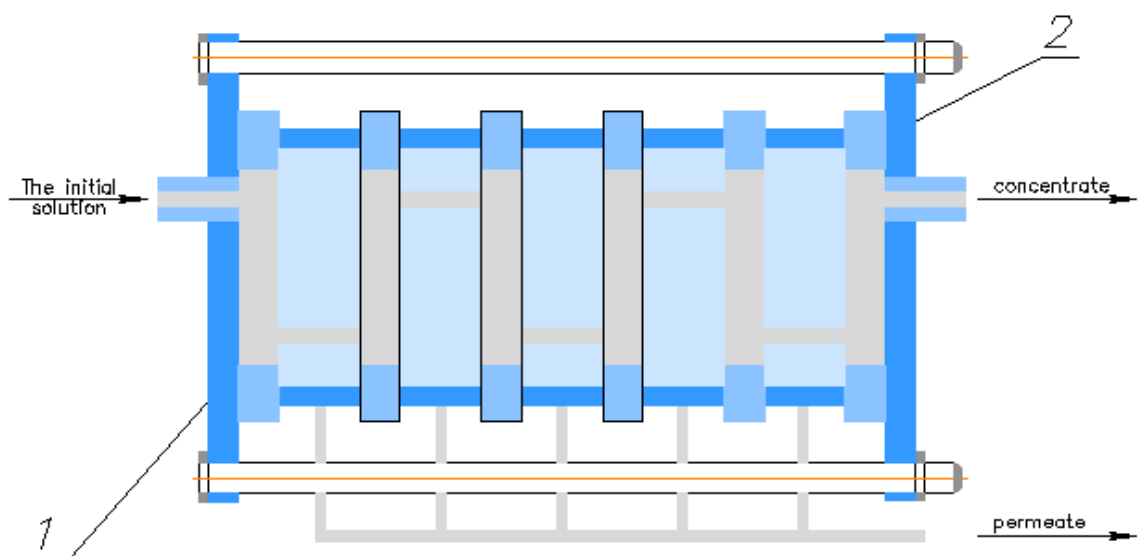


Fig. 1. A flat-chamber multi-section apparatus of the "filter press" type (1 — membrane; 2 — drainage material)

The purified water moves in a space limited by a selectively permeable membrane. The transit flow passing through the filter unit returns to the source tank, the filtrate is discharged through the filtrate outlets. Continuous cleaning of the filter surface of the flat-chamber membrane module is achieved by a transit flow of waste liquid.

The treatment of oily wastewater by baromembrane methods is increasingly being used. Comparative studies were conducted [6,7] of different methods used for the treatment of oily wastewater from railway enterprises, according to the amount of costs per cubic meter of wastewater treatment. The use of gravity separation and flotation with dissolved air cost \$3.65. The cost of wastewater treatment on the CURE electrocoagulator is \$2. At the same time, after electrocoagulation treatment, about 2% of the sludge from the total volume of wastewater was obtained. The treatment of oily wastewater was also evaluated using semi-fiber ultrafiltration modules Romicon Sh 32-5 and tubular ultrafiltration modules Koch-nFM 276. The cost of cleaning on membrane modules is \$1.03-\$1.56. The paper also provides comparative data on the quality of purification on ultrafiltration modules, an electrocoagulator, a flotation device, see Table 1. At the same time, the initial content of petroleum products is 1g/l, COD is 1.5 g/l, suspended solids are 0.1 g/l.

Table 1 The quality of wastewater after various treatment methods

Indicators of purified water	Hollow fiber membrane modules	Tubular membrane modules	Electrocoagulation	Flotation
Petroleum products, g/l	0,01	0,005	0,03	0,024
COD, g/l	0,75	0,375	0,780	0,742
Suspended solids, g/l	<0,001	<0,001	0,03	0,049

It is advisable to pre-purify the purified water (sedimentation, filtration), since a high concentration of petroleum products and suspended particles requires frequent flushing of the membranes. [8].

Baromembrane separation is carried out without phase transformations and energy is spent mainly on creating the pressure of the initial solution, moving it in the apparatus and pushing it through the membrane [5-7]. Another advantage of baromembrane separation is the simplicity of the design of installations, which include two main elements: a pump for creating pressure of the initial liquid and a membrane apparatus [5-7]. The separation process takes place at ambient temperature, does not require the use of reagents, concentrated substances are easy to dispose of, purified waters or solutions can be reused [5,6], thereby saving natural resources and electricity.

Membrane technologies belong to the category of resource-saving technologies, the use of which makes it possible to improve the quality of wastewater discharged, reduce the quantitative discharge of pollutants into reservoirs and minimize the intake of natural waters due to the possibility of reuse of treated wastewater in closed water supply systems. The widespread use of membrane methods in many industrial processes is possible due to the fact that the properties of membranes can be adapted to the technical requirements, the satisfaction of which is necessary for

the successful implementation of these processes [9-11]. Thus, it is necessary to conduct theoretical and experimental studies aimed at substantiating the choice of determining technological parameters of ultrafiltration plants, as well as choosing the optimal combination of methods for pretreatment of oily wastewater, which allows reducing environmental damage from transport enterprises and saving natural resources.

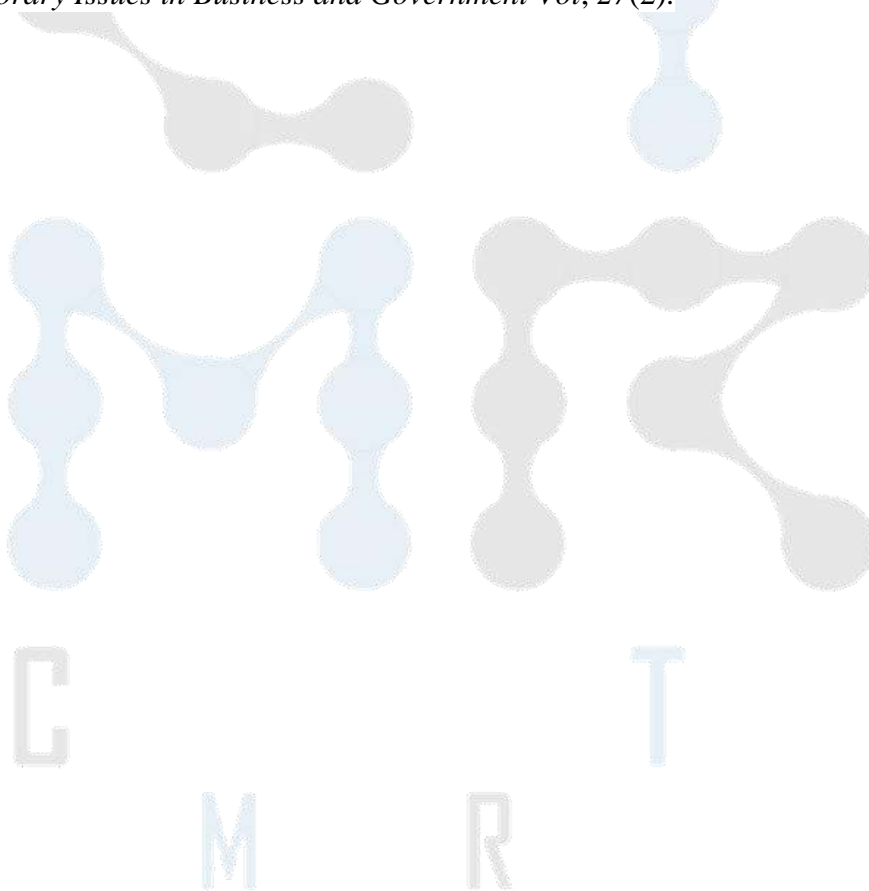
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IMPROVING THE QUALITY OF RESEARCH WITH THE HELP OF NEW
EDUCATIONAL PLATFORMS

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ABSTRACT

This article examines the significance of contemporary information and communication technologies in the era of digitalization, facilitating the process of doing research. The study elucidates the manner in which contemporary information and communication technology enhances the research aptitude of students, professors, and researchers. This study investigates the fundamental characteristics of information and communications technologies, and also explores many widely used platforms such as Web of Science, ORCID, Springer Nature, Elsevier, and Academia.edu. The study aims to analyze the potential influence of these platforms on research competency.

Keywords: information and communications technologies, competence, Web of Science, ORCID, Springer Nature, Elsevier, and Academia.edu.

**ПОВЫШЕНИЕ КАЧЕСТВА ИССЛЕДОВАНИЙ С ПОМОЩЬЮ НОВЫХ
ОБРАЗОВАТЕЛЬНЫХ ПЛАТФОРМ**

АБСТРАКТНЫЙ

В данной статье рассматривается значение современных информационных и коммуникационных технологий в эпоху цифровизации, облегчающих процесс проведения исследований. Исследование выясняет, каким образом современные информационные и коммуникационные технологии повышают исследовательские способности студентов, профессоров и исследователей. В этом исследовании изучаются фундаментальные характеристики информационных и коммуникационных технологий, а также изучаются многие широко используемые платформы, такие как Web of Science, ORCID, Springer Nature, Elsevier и Academia.edu. Целью исследования является анализ потенциального влияния этих платформ на исследовательскую компетентность.

Ключевые слова: информационные и коммуникационные технологии, компетентность, Web of Science, ORCID, Springer Nature, Elsevier и Academia.edu.

Introduction. The term "ICT" is an abbreviation for "Information and Communication Technology." It consists of a wide range of technologies that enable the modification and distribution of data. ICT encompasses a variety of interconnected systems, equipment, programs, and support that are essential in the information-based civilization of the 21st century. Information and Communication Technologies (ICT) have become essential in many areas of our life. Colleges and universities must meet the needs of students and help them overcome challenges in order to provide them with the essential abilities to adapt to technological changes.

Literature review. Within contemporary higher education institutions, the complex network of information and communication learning resources is evolving into what is known as an "electronic learning environment" [1]. The system, comprising hardware, software, and

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telecommunications, aims to streamline the educational process and offer a comprehensive and realistic overview of the academic and professional endeavors of aspiring experts. In higher education institutions, the concept of the learning environment includes interactive network collaboration tools, modern computer devices, and information and communication technologies (ICT) to combine methodological, educational, and informational resources [2].

Information and computer technologies have the potential to be valuable learning tools in formal education. They can facilitate interaction between students and instructors, store information, and provide administrative pedagogical resources. This makes them particularly susceptible to cultural changes within the education system [3]. The presence of ICT in higher education institutions does not automatically guarantee its enhanced and more effective application. According to literature review, the evaluation of the efficacy of ICT integration in the educational environment relies on the discoveries made some authors [4], [5].

The primary barriers to achieving proficiency in ICT include a deficiency in digital literacy, specifically a lack of factual knowledge and practical experience in utilizing digital technologies as data storage devices. Additionally, there is a lack of consistent support from the country to enable teachers to develop innovative approaches in ICT [6]. When discussing Uzbekistan, it is important to note the insufficient technological infrastructure for integrating ICT into the educational process. The absence of classrooms equipped with digital technology prevents the implementation of the teacher's information and communication skills, as well as their ongoing growth, which is closely linked to practical experience. Hence, a contemporary educator must embrace ICT and develop information and communication skills to be effective [7].

The issue of establishing suitable settings for the development of information and communication skills in prospective teachers necessitates the continuous enhancement of educational programs. The research reveals that even in industrialized nations, instructors are not consistently content with the extent of their own digital abilities acquired throughout their university education [8], [9].

It is essential for educators to improve their digital skills to set a positive example for students. Students are encouraged to actively participate in learning new technologies with their teachers and support them in expanding their knowledge. Today's generation excels in technology and can often grasp and adjust to new technologies more easily than their professors. This does not suggest that teachers are not effectively educating students. Contrary to traditional teaching methods, in the current educational model, professors act as facilitators, allowing students to engage actively in learning and share innovative ideas with the class. As a result, this could be extremely important for people as they progress through their academic path.

Today, in this article, we will examine a number of globally utilized platforms, including Web of Science, ORCID, Springer Nature, Elsevier, Academia.

The initial platform, Web of Science, is a thorough research database and citation index that grants access to a vast collection of scientific literature. Clarivate Analytics has created a highly regarded tool for analyzing bibliometrics, monitoring citations, and finding scholarly publications. It is commonly utilized by researchers, academics, and institutions. We will delve into the key features and details of Web of Science. Web of Science covers a wide range of academic disciplines, including science, technology, medicine, social sciences, and arts and humanities. It provides a thorough and multidisciplinary approach to academic study. Web of Science stands out for its citation indexing feature, making it one of a kind. Individuals can utilize

this feature to track citations in both the forward direction (identifying articles that have referenced a specific article) and the backward direction (examining the references cited by a particular article).

Moreover, the Web of Science Core Collection is a carefully curated selection of impactful publications and conference proceedings. This collection includes the Science Citation Index Expanded (SCI-EXPANDED), Social Sciences Citation Index (SSCI), Arts & Humanities Citation Index (AHCI), and additional indices. In addition, Web of Science provides Journal Impact Factors, calculated based on the number of citations received by the average article in a journal for a specific year. This metric is commonly employed to assess the relative importance of journals within a specific field. Researchers can create profiles on Web of Science to showcase their publications, citation metrics, and h-index. Institutional profiles offer a thorough overview of an institution's research productivity and impact.

Researchers can perform cited reference searches to find papers that have referenced a specific publication. Web of Science indexes journals and conference proceedings, offering academics access to intellectual information shared at conferences. Moreover, Web of Science provides tools for bibliometric analysis and study evaluation. This program is compatible with EndNote, a software commonly used for reference management. EndNote libraries can be easily filled with references from Web of Science by users. Web of Science is an essential tool for scholars looking to discover and evaluate scholarly literature, track citations, and assess research impact across various academic disciplines. Commonly utilized for conducting literature reviews, analyzing citations, and staying updated on the latest advancements in a specific field [8].

The second platform, ORCID (Open Researcher and Contributor ID), is provided by a non-profit organization to give researchers a unique and lasting identity. An ORCID ID is a distinctive identifier comprising a 16-digit alphanumeric code assigned to individual researchers. The purpose is to distinguish them from other researchers and guarantee precise acknowledgment of their academic contributions. An exclusive and long-lasting identification that sets researchers apart from each other. It helps to clarify any confusion that may arise from differences in names, connections, and research findings.

ORCID partners with numerous research systems, publications, funding organizations, and institutions. Researchers can link their ORCID ID with different platforms to ensure precise recognition and credit for their work. ORCID operates as a system that follows international standards with full transparency. It facilitates compatibility with different research infrastructure, resulting in extensive adoption and acknowledgment as an identifier in the academic community. Researchers have complete control over their ORCID records, allowing them to easily manage and update their profile information, research outputs, and affiliations. People can choose whether to share specific details with the public or keep them private.

ORCID provides scholars with a publicly available profile showcasing their research outputs, connections, and contributions. ORCID is utilized in various academic fields to help connect researchers across a wide range of disciplines including science, technology, engineering, mathematics, humanities, and social sciences. ORCID facilitates the seamless transfer of researcher data across multiple platforms. This streamlines the processes for researchers, publications, institutions, and funders, reducing the requirement for manual data entry and ensuring accuracy.

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Researchers should consider registering for an ORCID ID and keeping their ORCID profile up to date to enhance the visibility and discoverability of their research findings. ORCID is widely utilized throughout the research ecosystem, encompassing academic institutions, publishers, and funding organizations, making it an essential tool for researchers looking for a standardized and recognized intellectual identity [9].

Springer Nature is a multinational academic publishing corporation that focuses on publishing scholarly publications, journals, and online platforms in many academic fields. Springer Nature is a publisher that specializes in academic and scientific literature across several fields including science, technology, medicine, social sciences, and the humanities. In addition, it releases a multitude of scholarly publications, a significant portion of which undergo rigorous evaluation by experts in the area and are highly esteemed within their respective domains. Journals include a broad range of subjects, such as scientific inquiry, technology, medicine, and social sciences.

Springer Nature is a prominent publisher of scholarly literature, including textbooks, monographs, reference works, and professional titles. The organization produces both physical and digital versions to meet the requirements of researchers, students, and professionals. It participates in the open access publishing paradigm by providing a range of open access journals and making some research publications accessible to the public free of charge. Springer Nature works under many imprints, such as Springer, Nature Research, BioMed Central, Palgrave Macmillan, etc.

Springer Nature offers digital tools that facilitate the access and distribution of scholarly information. SpringerLink is a portal that provides access to journals, books, and reference materials. Additionally, it provides author services to assist researchers throughout the publishing process. This encompasses the process of submitting a work, revising it, and receiving advice on various publication possibilities. Springer Nature publishes conference proceedings, so increasing the accessibility of research presented at academic conferences to a wider audience. Finally, Springer Nature is dedicated to furthering the progress of knowledge and facilitating the dissemination of information via the publication of exceptional scholarly material. It has a substantial impact on the academic communication environment and contributes to the progress of science and research [10].

Elsevier is a multinational information analytics firm that focuses in delivering academic, scientific, technical, and medical material. It is the next platform. It is a prominent publisher of scholarly journals, books, and online databases, particularly serving the academic and research sectors. It is a prominent worldwide academic publisher that produces a multitude of peer-reviewed journals spanning several areas, such as science, technology, medicine, and social sciences.

Elsevier is renowned for its vast collection of scientific, technical, and medical (STM) literature. It is responsible for the publication of a substantial amount of the global scientific literature, which includes research articles, reviews, and conference papers. ScienceDirect is an online portal owned by Elsevier that provides users access to a vast collection of scientific and technical knowledge. The collection encompasses a wide array of periodicals, books, and reference publications. Scopus is a database that contains abstracts and citations, and it is owned by Elsevier. It encompasses a wide array of fields and is extensively used by scholars to monitor citations,

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explore scholarly literature, and evaluate the influence of research. Elsevier Health Sciences: Besides STM material, Elsevier has a significant presence in the publication of health sciences.

Mendeley is a platform for managing references and an academic social network that was purchased by Elsevier. Researchers may use this platform to efficiently arrange and distribute their research papers, explore pertinent publications, and engage in collaborative work with other researchers. Elsevier offers publications that are available via both subscription-based and open access models. Open access journals provide unrestricted access to their material, often necessitating authors to pay publishing fees. Although Elsevier has a significant position in the academic publishing sector, ongoing debates around research accessibility, publication costs, and open access are influencing the field of scholarly communication. The company has actively participated in initiatives focused on tackling these challenges and advancing the scholarly publishing model [11].

Academia.edu is the last site in the list, specifically designed for academics and researchers to exchange and retrieve intellectual material. This platform enables academics to establish personal profiles to exhibit their academic credentials, research areas of interest, published works, and institutional associations. The profile functions as a publicly accessible documentation of a researcher's accomplishments and specialized knowledge. Academia.edu allows researchers to post and distribute their publications, which might include preprints, conference papers, and journal articles. This platform facilitates the widespread distribution of research to a larger audience.

Users have the ability to track and monitor the latest papers and activity of other scholars by following them. This feature promotes cooperation and the establishment of professional connections within the academic community. Researchers have the ability to get metrics on the exposure and influence of their articles, such as the quantity of views, downloads, and citations. These indicators provide valuable information on the extent and impact of their activity. Academia.edu has a Q&A part that enables scholars to inquire and respond to inquiries pertaining to their specific area of expertise. Users have the option to either join existing groups or establish new ones on Academia.edu in order to interact with others who have similar academic interests. In addition, the platform is capable of facilitating virtual conferences and events.

Academia.edu has premium membership options that include advanced analytics, improved exposure for profiles and publications, and the capability to send private messages to researchers. Academia.edu may be accessed via web browsers and also offers specialized mobile applications for iOS and Android smartphones. This enables users to remain connected and actively participate in research [12].

This article ended by examining the impact of information and communication technology (ICT) on research, specifically emphasizing the importance of incorporating advanced ICT services within the context of Uzbekistan. The article provided a succinct summary of the approaches used in doing research and obtaining information via the utilization of platforms such as Web of Science, ORCID, Springer Nature, Elsevier, and Academia.edu. The article emphasized the importance of the listed platforms in enabling appropriate research and emphasized numerous of their distinguishing features. The use of these platforms enhances the overall quality of education and research, while also enhancing the adaptability and proficiency of researchers in conducting research, cooperating with others, and engaging in local and worldwide research.

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Abstract: In this article Information plays an important role in shaping our lives and society. With the advent of the Internet and digital technology, access to information has become easier than ever. Therefore, the positive and negative effects of information are presented.

Key words: Information, positive and negative effects of information, political processes.

ПОЗИТИВНЫЕ И НЕГАТИВНЫЕ ЭФФЕКТЫ ИНФОРМАЦИИ

Аннотация: В этой статье информация играет важную роль в формировании нашей жизни и общества. С появлением Интернета и цифровых технологий доступ к информации стал проще, чем когда-либо. Таким образом, представлены положительные и отрицательные эффекты информации.

Ключевые слова: Информация, положительные и отрицательные эффекты информации, политические процессы.

Introduction: Information plays a vital role in shaping our lives and society. With the advent of the internet and digital technologies, access to information has become easier than ever before. However, it is essential to recognize that information can have both positive and negative effects on individuals and society. This article explores the positive and negative impacts of information, supported by relevant sources.

1. Positive Effects of Information:

1.1. Education and Knowledge Enhancement: Access to information empowers individuals by providing opportunities for education and knowledge enhancement. It enables people to learn new skills, acquire knowledge, and broaden their understanding of various subjects. Information is a key driver in improving literacy rates and fostering lifelong learning (Source: UNESCO, "Information and Knowledge: A Global Public Good").

1.2. Democratization and Empowerment: Information plays a crucial role in promoting democracy and empowering citizens. It enables individuals to stay informed about political processes, engage in public discourse, and hold governments accountable. Access to information empowers marginalized communities by giving them a voice and the ability to challenge social injustices (Source: World Bank, "Access to Information and Development").

1.3. Economic Development: Information is a catalyst for economic growth and development. It facilitates innovation, entrepreneurship, and the dissemination of market intelligence. Access to information helps businesses make informed decisions, develop new products and services, and expand their markets (Source: World Economic Forum, "The Impact of Digital Content").

2. Negative Effects of Information:

2.1. Misinformation and Disinformation: The abundance of information also brings the risk of misinformation and disinformation. False or misleading information can spread rapidly, leading to confusion, mistrust, and negative social consequences. It can influence public opinion,

undermine trust in institutions, and even have severe implications during crises (Source: Harvard Kennedy School, "Misinformation Review").

2.2. Privacy and Security Concerns: The collection, storage, and utilization of vast amounts of information raise concerns about privacy and data security. Individuals may become vulnerable to identity theft, surveillance, or unauthorized use of personal information. The misuse of data can lead to reputational damage, discrimination, and breaches of privacy (Source: Electronic Frontier Foundation, "Surveillance Self-Defense").

2.3. Information Overload and Cognitive Overwhelm: The excessive availability of information can lead to information overload and cognitive overwhelm. The constant influx of data and notifications can negatively impact attention span, focus, and productivity. It may also contribute to stress, anxiety, and decision-making difficulties (Source: Association for Psychological Science, "Information Overload").

Conclusion: Information is a double-edged sword, bringing both positive and negative effects to individuals and society. While information enhances education, empowers citizens, and fosters economic development, it also poses challenges such as misinformation, privacy concerns, and information overload. It is crucial to be critical consumers of information, promote media literacy, and establish safeguards to mitigate the negative impacts while harnessing the positive potential of information.

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Verbalization of concept "Love" on the stories O. Henry

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Annotatsiya: Maqolada o'zining qisqa hikoyalaridagi o'tkir va ko'pincha hayratlanarli burilishlari bilan mashhur bo'lgan O. Genrining, "sevgi" tushunchasini insoniy munosabatlar, qurbonlik va najotning nozik jihatlari tahlil qilinadi.

Kalit so'zlar: Sevgi, Qurbonlik, To'lov, Do'stlik, Rahmdillik.

Аннотация: В статье анализируется концепция «любви» О. Генри, известного своими резкими и зачастую неожиданными поворотами в рассказах, нюансы человеческих взаимоотношений, жертвенности и спасения.

Ключевые слова: Любовь, Жертва, Плата, Дружба, Сострадание.

Abstract: The article analyzes the concept of "love" by O. Henry, known for his sharp and often unexpected turns in stories, the nuances of human relationships, sacrifice and salvation.

Key words: Love, Sacrifice, Payment, Friendship, Compassion.

Introduction:

In the vast landscape of literature, certain authors possess a unique talent for capturing the intricacies of human emotions and experiences with unparalleled depth and resonance. Among these literary luminaries stands O. Henry, whose mastery of the short story genre continues to captivate readers across generations. Central to O. Henry's narrative tapestry is the exploration of love, a theme imbued with complexity, sacrifice, and redemption. Through his poignant storytelling, O. Henry verbalizes the essence of love, unraveling its myriad facets and revealing its transformative power in the lives of his characters.

Throughout his body of work, O. Henry presents love as a multifaceted prism, refracting the spectrum of human emotions and relationships. In tales such as "The Gift of the Magi" and "The Last Leaf," he delves deep into the human heart, portraying love as a force that transcends material wealth and societal norms. Through acts of selflessness, friendship, and compassion, O. Henry's characters navigate the complexities of love, ultimately discovering its profound significance in their lives.

In this exploration, we delve into O. Henry's narrative artistry, tracing the verbalization of the concept of love across his seminal works. From the sacrificial gestures of Della and Jim to the enduring friendship between Sue, Johnsy, and Mr. Behrman, O. Henry's stories serve as poignant reflections of the human condition, illuminating the depths of love in all its forms.

Through an analysis of key themes and characters, we uncover the nuances of O. Henry's portrayal of love, shedding light on its transformative and redemptive qualities. As we journey through the pages of his timeless tales, we are reminded of the enduring power of love to transcend barriers, heal wounds, and imbue life with meaning and purpose.

Join us as we embark on a literary exploration of O. Henry's verbalization of love, a journey that promises to unveil the profound truths and timeless wisdom nestled within his timeless narratives.

O. Henry, known for his poignant and often surprising twists in his short stories, expertly verbalizes the concept of "love" through the intricacies of human relationships, sacrifice, and redemption. In many of his tales, love is depicted as a force that transcends social barriers, defies expectations, and ultimately reveals the characters' true nature.

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One exemplary story where O. Henry verbalizes the concept of love is "The Gift of the Magi." In this story, the love between Della and Jim is expressed through their selfless acts of sacrifice. Each sells their most prized possession to buy a gift for the other, only to find that the gifts they have chosen are rendered useless by the sacrifices the other has made. Yet, in this paradox, the depth of their love shines through, revealing that true love is not about material possessions but about the willingness to give everything for the happiness of the other.

In another story, "The Last Leaf," love is depicted through the friendship between two young women, Sue and Johnsy, and their elderly neighbor, Mr. Behrman. When Johnsy falls ill and loses hope, believing she will die when the last leaf falls from a vine outside her window, Mr. Behrman paints a leaf on the wall to give her hope and ultimately sacrifices his own life to save hers. Through this act of selflessness, O. Henry illustrates that love is about empathy, compassion, and the willingness to go to great lengths for those we care about.

In O. Henry's stories, love is often intertwined with themes of sacrifice, empathy, and human connection. Through his masterful storytelling, he verbalizes the complexities and nuances of love, showing that it can be found in the most unexpected places and expressed through the most ordinary of gestures.

In the realm of literature, few authors have captured the essence of human emotions as vividly as O. Henry, the master of the short story form. Among his repertoire of themes, perhaps none is as intricately woven into the fabric of his narratives as the concept of love. Through his poignant storytelling, O. Henry verbalizes the complexities, sacrifices, and redemptive power inherent in love, offering readers a profound exploration of the human heart.

One of the most celebrated instances of O. Henry's exploration of love is found in his timeless classic, "The Gift of the Magi." Set against the backdrop of Christmas, this tale encapsulates the selflessness and devotion that define true love. Through the characters of Della and Jim, O. Henry illustrates how love transcends material possessions. In their act of sacrificial gift-giving, where Della sells her hair to buy Jim a chain for his pocket watch, and Jim sells his watch to buy combs for Della's hair, the depth of their love is revealed. Despite their well-intentioned gestures resulting in seemingly futile gifts, their love shines brighter than ever, underscoring O. Henry's belief that true love lies in the willingness to give everything for the happiness of another.

Another compelling illustration of love in O. Henry's oeuvre is found in "The Last Leaf." Through the characters of Sue, Johnsy, and Mr. Behrman, O. Henry delves into the themes of friendship, hope, and sacrifice. When Johnsy loses hope in the face of illness, convinced she will perish when the last leaf falls from a vine outside her window, Mr. Behrman, an aging artist, paints a leaf on the wall to buoy her spirits. In a poignant twist, Mr. Behrman sacrifices his own life to ensure that the last leaf remains, embodying the profound lengths to which love propels individuals to protect and uplift those they cherish.

O. Henry's stories serve as a testament to the enduring power of love, often defying conventional expectations and societal norms. His narratives resonate with readers across generations, inviting them to contemplate the myriad forms and expressions of love in the human experience. Whether through acts of selflessness, friendship, or empathy, O. Henry's verbalization of love transcends the confines of his stories, resonating deeply with the universal longing for connection and belonging.

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In the realm of literature, few authors have captured the essence of human emotions as vividly as O. Henry, the master of the short story form. Among his repertoire of themes, perhaps none is as intricately woven into the fabric of his narratives as the concept of love. Through his poignant storytelling, O. Henry verbalizes the complexities, sacrifices, and redemptive power inherent in love, offering readers a profound exploration of the human heart.

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In conclusion, O. Henry's storytelling prowess lies in his ability to verbalize the concept of love with unparalleled depth and nuance. Through his timeless tales, he invites readers into a world where love is not merely a sentiment but a transformative force that shapes and defines the human condition. With each narrative twist and turn, O. Henry unveils the mysteries of the heart, leaving an indelible mark on the literary landscape and reaffirming the enduring power of love in all its forms.

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A classic short story by O. Henry, illustrating the sacrificial nature of love through the characters of Della and Jim.

Henry, O. (1907). "The Last Leaf."

DIGITAL IMAGE SEGMENTATION PROCEDURE AS AN EXAMPLE OF AN NP-PROBLEM

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ABSTRACT:

Digital images are a source of additional information about the world around us. Such a source plays an important role in the process of medical diagnosis and research into human health. Digital imaging allows you to obtain the necessary information remotely without additional interference in human life. This can be done using various digital image processing and analysis techniques. However, these methods are typically an NP-problem. The paper discusses the procedure for segmenting medical digital images. The criteria are shown to achieve the required solution when segmenting an image as an NP-problem.

Key words: Segmentation, Perception, Analysis, NP-problem, Quality, Metric, Digital image.

ПРОЦЕДУРА СЕГМЕНТАЦИИ ЦИФРОВОГО ИЗОБРАЖЕНИЯ КАК ПРИМЕР NP-ЗАДАЧИ

АБСТРАКТНЫЙ:

Цифровые изображения являются источником дополнительной информации об окружающем нас мире. Такой источник играет важную роль в процессе медицинской диагностики и исследований здоровья человека. Цифровая томография позволяет получить необходимую информацию удаленно, без дополнительного вмешательства в жизнь человека. Это можно сделать с помощью различных методов цифровой обработки и анализа изображений. Однако эти методы обычно представляют собой NP-задачу. В статье рассматривается процедура сегментации медицинских цифровых изображений. Показаны критерии достижения требуемого решения при сегментировании изображения как NP-задачи.

Ключевые слова: Сегментация, Восприятие, Анализ, NP-задача, Качество, Метрика, Цифровое изображение.

**RAQAMLI TASVIRNI SEGMENTLASHTIRISH TARTIBI NP-MUAMMONI O'RNAK
O'TIB
ANNOTATSIYA**

Raqamli tasvirlar atrofimizdagi dunyo haqida qo'shimcha ma'lumot manbai hisoblanadi. Bunday manba tibbiy diagnostika va inson salomatligini o'rganish jarayonida muhim rol o'ynaydi. Raqamli tasvir inson hayotiga qo'shimcha aralashmasdan kerakli ma'lumotlarni masofadan turib olish imkonini beradi. Bu turli xil raqamli tasvirlarni qayta ishlash va tahlil qilish usullari yordamida amalga oshirilishi mumkin. Biroq, bu usullar odatda NP muammosidir. Maqolada tibbiy raqamli tasvirlarni segmentlash tartibi muhokama qilinadi. Tasvirni NP-muammo sifatida segmentlashda kerakli yechimga erishish uchun mezonlar ko'rsatilgan.

Kalit so'zlar: Segmentatsiya, Idrok, Tahlil, NP-muammo, Sifat, Metrik, Raqamli tasvir.

INTRODUCTION

The study and analysis of digital images is one of the current areas of modern research [1]-[3]. Such a source of information allows you to study a certain phenomenon remotely, without any outside interference disrupting its natural process. Such work is especially relevant in various medical studies. They help to understand those processes that occur at the microscopic level and cannot be perceived by the ordinary human eye.

Solving such medical problems helps to diagnose early detection of diseases or analyze the patient's condition. It is also possible to study various diseases or monitor their progress and the effectiveness of patient treatment. Various types of images can be used here depending on the context of the task [4]-[10]. Digital medical images occupy a special place among such data [11]-[19].

To analyze digital images, various methods and approaches are used, both classical [20]-[25], and those that contribute to solving the problem and are non-standard, setting possible directions for research [26]-[33]. At the same time, special analysis methods can be distinguished here, such as: removing noise, increasing image contrast, highlighting object contours, segmentation, recognition. The solution to most of these problems should be considered NP-problems. Here we highlight the image segmentation task, which may include several separate subtasks. This, ultimately, determines the significance of this work, its theoretical and practical significance.

Thus, the main goal of the study is to consider the problem of image segmentation and generalize estimates of the effectiveness of its solution as an NP-problem.

Related work

Image segmentation is one of the areas of research in digital medical image processing. At the same time, it is also worth highlighting those studies where segmentation is considered as an NP-problem. The need for such consideration for medical images is determined, first of all, by the importance of decision-making in this aspect.

The study by D. D. Patil and S. G. Deore is devoted to the analysis of segmentation methods that are used for the analysis of medical images [34]. The authors emphasize that segmentation is an important and complex process of image analysis, which can consist of several stages. In this case, during the segmentation process, a certain structure in the image must first of all be outlined and highlighted so that it can be considered [34]. For these purposes, methods for identifying the boundaries of objects, which are an integral part of segmentation, can be used.

The work [35] also discusses and summarizes various issues of using medical image segmentation algorithms. In particular, the paper provides an overview of medical image segmentation and statistical mechanics methods based on a new method called lattice Boltzmann

method (LBM) [35]. The authors also review medical image segmentation methods based on thresholding, region-based, clustering, and edge detection [35]. This also confirms the multi-stage and diverse nature of segmentation. One such step is detecting the edges of objects. The paper also notes the complexity of medical image segmentation and emphasizes that various algorithms do not completely solve the segmentation problem. This confirms the importance of considering segmentation as an NP-problem.

M. A. M. Salem, A. Atef, A. Salah, and M. Shams explore various methods for medical image segmentation [36]. The work identifies three groups of such methods. It is also noted that a digital image can be viewed as a function of two or three spatial dimensions in the case of color images. This expands and complicates the overall image processing and segmentation procedure.

J. Kleinberg, C. Papadimitriou, and P. Raghavan identify and analyze various image segmentation problems [37]. In this case, special attention is paid to the problem of optimizing the image segmentation procedure. The authors also point out that this procedure belongs to the class of NP problems. Therefore, the article highlights two aspects for research: the hypercube segmentation problem and the directory segmentation problem, and also presents approximation algorithms for them [37]. A framework is also presented that can be adapted to solve any segmentation problem [37].

The study [38] also notes the fact that segmentation belongs to the class of NP-problems. This is due to the huge amount of data that needs to be processed. Moreover, data reduction is considered an NP-hard problem. Cytological images were reviewed for the purposes of the study.

Thus, image segmentation is an important and specific task, one of the stages of which is the extraction of object edges. In some cases, edge extraction can be considered a solution to the segmentation problem. However, object edge extraction should also be considered an NP-problem. Therefore, we next turn our attention to the edge extraction procedure as a type of segmentation, as well as methods for assessing the effectiveness of such procedures.

Object edge detection as a type of segmentation procedure

In Fig. 1 shows an example of a medical digital image for which it is important to most accurately determine the edges of the objects represented in this image.

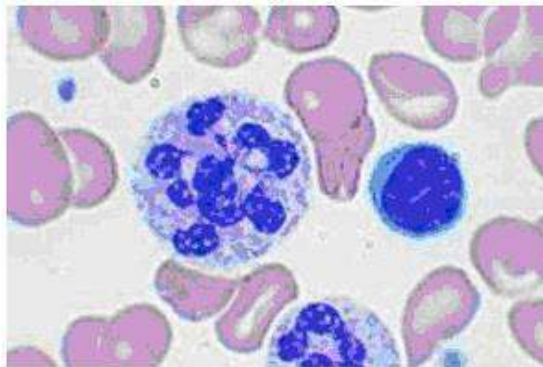


Figure 1: Example of a digital medical image

In Fig. 2 shows images where the edges of objects are selected using the Prewitt and Roberts method.



a) Prewitt

b) Roberts

Figure 2: Extracting the edge of an object using the Prewitt and Roberts method

The importance of considering algorithms for identifying the edges of objects in the segmentation procedure is due to the fact that this makes it possible to localize areas of interest. At the same time, we can consider edge extraction as a specific procedure for dividing the original image. This is consistent with the fact that segmentation in particular is the process of dividing a digital image into many pixels [39]. In other words, the purpose of segmentation is to simplify and/or change the representation of an image so that it is simpler and easier to analyze [40]. Moreover, image segmentation is usually used to highlight objects and boundaries in images [39], [40]. Edge extraction algorithms allow you to do this.

Thus, highlighting the edge of an object, like segmentation, consists of assigning labels to each pixel of the image. Then the result of segmentation is a set of segments or a set of contours selected in the image. In this case, the pixels in the segment are similar in some characteristic or property: color, brightness, texture [39], [40].

However, the result of edge extraction differs depending on the application of some algorithm or approach. For example, in Fig. 2 there is a different degree of edge detail for individual image objects. This allows us to talk about a targeted choice of edge selection method depending on the task at hand. So in Fig. 2a shows detailed contours for cells characterizing megaloblastic anemia. In Fig. 2b shows general detail of the edges of various blood cells. There are also multiple false detections here.

In Fig. 3 shows images where the edges of objects are selected using the Sobel and Canny method.



a) Sobel

b) Canny

Figure 3: Extracting the edge of an object using the Sobel and Canny method

There are also varying degrees of edge detail here. It should be noted that for the Canny method, such detail is excessive. There are many redundant detected edge points of objects.

Based on what has been considered, the task arises of assessing the effectiveness of segmentation and choosing a specific approach for identifying the edges of objects. In other words, the problem arises of optimally choosing the appropriate approach for a certain number of iterations. This defines segmentation as an NP-problem.

Generalized sequence of actions in implementing segmentation as an NP-problem

First of all, it should be said that the effective implementation of the segmentation procedure largely depends on the formulation of the problem. Here it is important to understand which result is the most acceptable and, therefore, this determines the advisability of using a certain procedure. At the same time, the segmentation problem as an NP-problem can be reduced to a simpler task:

$$SI(NP) \xrightarrow{U} SI, \quad (1)$$

where

$SI(NP)$ – segmentation of the input image I as an NP-problem;

SI – achieving effective segmentation for the image I ;

U – conditional estimates ensuring the achievement of effective segmentation.

In other words, to implement effective segmentation, it is advisable to use some conditional estimates for the choice of the approach used to achieve the goals:

$$I \xrightarrow{U} S, \quad (2)$$

where

I – original image;

S – effectively segmented image.

It should also be noted that conditional valuations (U) apply to all methods and approaches that are used in a particular case. Then, based on their comparison, the most appropriate approach is selected.

Among such assessments, one should highlight, on the one hand: assessments of segmentation accuracy, and on the other – assessments of image quality [39]-[41].

In turn, among the assessments of segmentation accuracy, as a rule, the following are considered: Jaccard similarity coefficient for image segmentation, Sorensen-Dice similarity coefficient for image segmentation and Contour matching score for image segmentation. However, in all cases it is necessary to select some standard for comparison. In this case, the resulting estimates may differ depending on the chosen standard. This introduces its own problematic aspects when choosing effective segmentation.

At the same time, among image quality assessments, there are: full reference quality indicators, non-reference quality indicators and quality measurements based on test tables. This allows analysis without the use of standards and expands the possible boundaries of the study.

It should be noted the importance of image quality for its further processing. However, in the context of analysis, it is the researcher who determines the importance of the appropriate assessment: segmentation accuracy or image quality. Therefore, such estimates may have their own weighting coefficients, which help to choose the most effective segmentation method.

Then the generalized procedure for solving segmentation as an NP-problem can be considered in the following way:

- the task of using the segmentation procedure is determined, and individual methods for solving it are selected accordingly;
- weighting coefficients are determined for assessing the accuracy of segmentation and the quality of the processed image;
- estimates of the segmentation accuracy and quality of the processed image are calculated, taking into account weighting coefficients for various segmentation approaches;

– based on comparison, the most effective segmentation procedure is selected to solve the problem.

CONCLUSION

The article discusses the problem of effectively using the segmentation procedure for processing and analyzing digital images. In this case, medical images are considered as digital images. At the same time, attention is drawn to the fact that the segmentation procedure is an NP-problem.

To solve this research goal, first of all, it is proposed to take into account the scope of use of the segmentation procedure to solve a specific image analysis problem. At the same time, to improve the efficiency of the segmentation procedure, it is advisable to use estimates of the segmentation accuracy and quality of the processed image, taking into account weighting coefficients for various segmentation approaches. This allows you to achieve the desired effect in using the segmentation procedure and simplify its solution as an NP-problem.

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THE SINGING TECHNIQUE OF A VARIETY SINGER

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ANNOTATION

The article acknowledges that the pop genre is a component of modern Uzbek music and that it has formed an important place in the modern culture system of our republic in a short period of time. The author states that this genre is currently becoming a spiritual field that can have a direct impact on the education of the young generation.

Key words: Variety, recitation, pronunciation, performance culture, spirituality, artistic skill, musical.

ESTRADA XONANDASINING KUYLASH TEXNIKASI

ANNOTATSIYA

Maqolada estrada janri zamonaviy o'zbek musiqasining tarkibiy qismi ekanligi va qisqa vaqt ichida respublikamiz zamonaviy madaniyat tizimida muhim o'rin egallagani e'tirof etilgan. Muallif ushbu janr ayni paytda yosh avlod tarbiyasiga bevosita ta'sir ko'rsata oladigan ma'naviy sohaga aylanib borayotganini ta'kidlaydi.

Kalit so'zlar: Estrada, qiroat, talaffuz, ijro madaniyati, ma'naviyat, badiiy mahorat, musiqiy.

ТЕХНИКА ПЕНИЯ ЭСТРАДНОЙ ПЕВИЦЫ

АННОТАЦИЯ

В статье признается, что эстрадный жанр является составной частью современной узбекской музыки и за короткий период времени занял важное место в современной культурной системе нашей республики. Автор констатирует, что данный жанр в настоящее время становится духовной сферой, способной оказать непосредственное влияние на воспитание молодого поколения.

Ключевые слова: Эстрада, декламация, произношение, исполнительская культура, духовность, художественное мастерство, мюзикл.

INTRODUCTION.

The concept of poplar is a Latin word for a specially raised place for performing, that is, a stage. It is known that the 20th century was a period of sharp renewal in the art of Uzbek music, "unconventional" compositional creativity and new concert forms emerged. In this regard, the concept of "pop" entered the musical culture.

Pop art, which has become a component of modern Uzbek music, was formed in a short period of time and achieved certain results. In fact, although the national pop art is one of the most modern art forms, it occupies an important place in the modern culture system of our republic and is now becoming a spiritual field that can have a direct impact on the education of the young generation. Knowledge and practical elements occupy a special place in the art of singing. It embodies the text of the poem, music, recitation, pronunciation, performance culture, spirituality, and is of great importance in performance practice.

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First of all, the human voice is able to sing musical sounds meaningfully and perfectly through emotions. The singer's voice has timbre, which is formed by the combination of volume, pitch, hardness and all of them. Sounds, images show the performer the way of performance. In the art of Uzbek pop singing, at the same time, the voice is not visible, but it has the freshness, pain, and beauty of the voice, which has a full meaning.

The feeling of being able to feel the music should be developed simultaneously with the technique of singing. The technique should be seen on the basis of musical material. It is the task of the teacher to develop the student's musical feeling and artistic skills, to teach them to understand the musical language, and to awaken their creative imagination.

The art of singing can be called the art that can meet the aesthetic requirements of the listeners. Singing is a musical art, so the performer must have the ability to hear music and have a musical voice. The basics of the musical voice apparatus are clearly defined by medicine and physiology. Any musical sound has its own timbre, that is, its own musical color. The structure of vocal joints (ligaments) of timbre vocal apparatus (they produce sounds of high and low timbre like the strings of a musical instrument), natural cavities - nasopharynx, forehead (manglay) cavity, maxillary cavity (upper jaw bone It depends on the physiological characteristics such as the cavity adjacent to the nasal cavity), the hard palate, and the structure of the chest. A singer's ability to control his voice is equal to an artist's ability to use a wide range of colors.

Learning to sing means controlling the breath and musical emotions and experiences. After all, if breath is subject to mental experiences, emotions are also subject to breath. Therefore, the singer can involuntarily create an excited and calm state and obey the melody, speech and mood. Actors and singers have a profession-related term "pillar". A "grounded" or "studded" sound is a clear, resonant sound.

"Pillar breath" is an extremely deep breath. It rests on the walls of the respiratory system. If we consciously take the correct breath and hold it, our singing sensitivity will do the rest. Our thoughts and actions can help him. The source of sound is the vocal cords. They must be connected to make a sound. The air flow that vibrates them when they sing comes from the respiratory tract to the throat. Two of these actions are uncontrollable. But the lungs lie on the diaphragm (chest membrane) like a foundation, and they are subordinate to each other.

Music has three dimensions - pitch, timbre and power. In order for the pitch of each pitch to be clear, the performer must help connect the sound layers and free the timbre from extraneous sounds.

As for the range, the abdominal muscles and diaphragm should be actively involved in the performance of the upper curtains, and the chest muscles should be actively involved in the lower curtains. It is also worth noting that a person cannot feel the diaphragm. However, we feel the abdominal muscles and help ourselves to breathe in and out properly, in a way that is comfortable for us. Standing as freely as possible, with the shoulders down, the neck relaxed, feeling the firm support in the legs, and smiling a little, exhale a little air between the teeth. An "S" sound should be produced. Now do the same exercise, only with abdominal movements. Before the exercises, you should breathe freely without raising your shoulders. Once you feel the body and especially the abdominal muscles, you can sing.

Chest and head resonators. The performance of the chest and head resonator throughout the range is considered to be good and accurate. When the voice is directed to the main resonator, the sound is bright, loud and audible. When singing in the chest resonator - it sounds rich and

"meaty". It is necessary to always try to achieve harmony of head and chest resonators when singing. There are times when you want to yawn, and you do it without opening your mouth and letting others know. Then you will have a dome in your mouth. When the sound comes out correctly, you will feel a vibration around your forehead and closed lips. This means that everything was done correctly.

Sound just means an echo in the "space" in your head. Usually, falsetto is an artificial sound that comes from the natural vocal capabilities of the singer. This method is widely used in Western music culture and in academic vocal performance. In the interpretation of Uzbek music, falsetto is used in a unique way. Some singers cannot play the high parts of the song, the highest notes in a natural voice, and in such cases they sing in a falsetto voice. When using the falsetto performance method, the singer must skillfully perform the factor of voice exchange.

His skill is manifested in the fact that he does not notice the difference between a natural voice and an artificial voice during the performance and uses the method wisely. Before starting to sing, the student's body should be straightened, the stomach should be pulled, the chest should be slightly raised, the back and shoulders should be straight. Voice support is the most basic feeling that creates conditions for the singer to use his voice freely and without difficulty.

The vocal fold is a complex sense that ensures sound production is correct. This feeling is called stable because it is clear and stable. The concept of vocal support includes: raising the pressure of the lower part of the vocal cords, breathing, tightening of the laryngeal muscles and vibration sense. The student does not have a sense of support at the beginning of the training. Over time, a sense of support begins to appear. A sense of support creates confidence while singing and makes it easier to create a voice.

It is necessary to strive to find and develop this feeling. The next step is getting to know the singer's range. Strictly speaking, the singer knows his range, because sometimes those who are learning to sing do not know their own ability. Sometimes performers try to cover up the passing notes and strain the voice. In this case, the sound loses its natural color and turns into a falsetto. A performer should not be afraid to play passing notes in order to discover all the features of his voice.

Passing notes are available to everyone without exception. It is important not to strain the voice when performing them. In this way, it is possible to master the chest, upper register and falsetto, smooth the timbre and find a unique tone. After that, you can work on the repertoire. The chosen material should not be difficult for the student performer, and at the same time, the singer should be able to feel responsibility in the process of performing the piece. Breath plays an important role in vocal art. Breath determines not only the birth of the voice, but also its power, dynamic nuances, timbre and height. In the process of singing, the breath should adapt to the vocal chords. Breathing is important for the performer. The main thing in singing is not the amount of air coming from the lungs, but the correct distribution of breath during singing, the operation of the vocal apparatus with other components.

Determining the repertoire should not only focus on the educational task. It is also necessary to pay special attention to the content of the repertoire. The repertoire should be focused on educational importance, i.e. awakening feelings of love for the Motherland, training human qualities. Professional training of students in the pop direction means practical mastering of all the rules of singing skills, fluency of breath, accuracy of artistic expression, practical demonstration of competent performance skills. Another important aspect in the education of a singer is to teach

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the student based on the individual voice capabilities and to choose a similar repertoire. The formation of performance skills of the student according to the level of mastery is the realization of the principles of mutual integration of technical and artistic tasks, transition from simplicity to complexity, and gradual and gradual growth. it will be necessary to release and then the educational repertoire will be selected taking them into account.

Only when the teacher clearly defines the student's voice characteristics, it is necessary to increase the possibility of their development without harming the student's vocal tract.

CONCLUSION.

Each work is selected with a view to the realization of certain goals. The principle of going from simple to complex is followed when choosing a song. In it, each new piece strengthens and develops the vocal skills developed from the previous one. It is recommended to choose a song according to the following requirements: educational value, character, artistic quality, harmonic structure, form, number of parts, key and tessitura, compatibility with the student's voice range. If you follow these requirements and pay attention to the direction of execution, you can achieve the intended result.

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COMPARATIVE STUDY OF MEDICAL TERMINOLOGY RELATED TO PEDIATRIC DISEASES IN ENGLISH AND UZBEK LANGUAGES

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ABSTRACT

This research paper presents a comparative analysis of medical terminology related to children's diseases in English and Uzbek languages. The objective is to identify similarities and differences in pediatric disease terminology, which could have implications for medical translation, communication, and education in multilingual and multicultural healthcare settings. The study aims to contribute to better healthcare outcomes by facilitating clearer communication between healthcare providers and patients in Uzbekistan and other English-speaking regions.

Keywords: Pediatric, diseases, Medical terminology, English and Uzbek languages, Comparative analysis, Healthcare communication, Medical translation, Multilingual healthcare, Cultural differences, Translation challenges, Cross-cultural communication.

**СРАВНИТЕЛЬНОЕ ИЗУЧЕНИЕ МЕДИЦИНСКОЙ ТЕРМИНОЛОГИИ,
СВЯЗАННОЙ С ДЕТСКИМИ ЗАБОЛЕВАНИЯМИ, В АНГЛИЙСКОМ И
УЗБЕКСКОМ ЯЗЫКАХ
АБСТРАКТНЫЙ**

В данной научной работе представлен сравнительный анализ медицинской терминологии, связанной с детскими болезнями, на английском и узбекском языках. Цель состоит в том, чтобы выявить сходства и различия в терминологии педиатрических заболеваний, которые могут иметь значение для медицинского перевода, общения и образования в многоязычных и мультикультурных медицинских учреждениях. Целью исследования является содействие улучшению результатов здравоохранения путем содействия более четкому общению между медицинскими работниками и пациентами в Узбекистане и других англоязычных регионах.

Ключевые слова: Педиатрия, заболевания, Медицинская терминология, Английский и узбекский языки, Сравнительный анализ, Медицинская коммуникация, Медицинский перевод, Многоязычное здравоохранение, Культурные различия, Проблемы перевода, Межкультурная коммуникация.

**BOLA KASALLIKLARIGA BO'LGAN TIBBIY TERMINOLOGIYANI INGLIZ VA
O'ZBEK TILIDA QIYOSIY O'RGANISH.**

АБСТРАКТ

Ushbu tadqiqot ishida ingliz va o'zbek tillarida bolalar kasalliklariga oid tibbiy terminologiyaning qiyosiy tahlili keltirilgan. Maqsad - ko'p tilli va ko'p madaniyatli sog'liqni saqlash sharoitida tibbiy tarjima, muloqot va ta'limga ta'sir ko'rsatishi mumkin bo'lgan bolalar kasalliklari terminologiyasidagi o'xshashlik va farqlarni aniqlash. Tadqiqot O'zbekiston va boshqa ingliz tilida so'zlashuvchi hududlardagi tibbiyot xodimlari va bemorlar o'rtasida aniqroq muloqotni yo'lga qo'yish orqali sog'liqni saqlash sohasidagi yaxshi natijalarga hissa qo'shishga qaratilgan.

Kalit so'zlar: Pediatriya, kasalliklar, Tibbiyot terminologiyasi, ingliz va o'zbek tillari, Qiyosiy tahlil, Sog'liqni saqlash aloqasi, Tibbiy tarjima, Ko'p tilli sog'liqni saqlash, Madaniy farqlar, Tarjima muammolari, Madaniyatlararo muloqot.

INTRODUCTION

The globalization of healthcare services and the increasing mobility of populations call for a deeper understanding of medical terminology across different languages. Specifically, the accurate translation and comprehension of terms related to pediatric diseases are crucial for effective diagnosis, treatment, and patient education. This study focuses on the comparison of such terminology in English and Uzbek, aiming to highlight the linguistic and cultural nuances that may affect medical communication and care.

Building upon the foundation laid out, this research delves into the nuances of pediatric disease terminology across the English and Uzbek languages. By meticulously comparing terms, phrases, and medical jargon, the study sheds light on the linguistic bridges and barriers that exist within pediatric healthcare. Recognizing these elements is pivotal for enhancing medical translation services, which in turn can significantly improve the quality of patient care and understanding in diverse linguistic landscapes.

The Scope of Comparative Analysis

The comparative analysis encompasses a wide range of diseases common among children, including but not limited to, infectious diseases, chronic conditions, and nutritional deficiencies. Each condition is examined through the lens of medical terminology, diagnostic criteria, treatment modalities, and preventive measures as described in both English and Uzbek medical literature.

Methodological Approach

A systematic approach is employed, involving the collection of medical terms from authoritative sources such as textbooks, peer-reviewed articles, and digital health databases. This is complemented by interviews with healthcare professionals who have firsthand experience in delivering pediatric care in both languages. The analysis employs qualitative methods to interpret the data, focusing on semantic, syntactic, and pragmatic aspects of the medical terminology used.

Findings and Implications

Preliminary findings suggest a significant overlap in the medical lexicon used to describe pediatric diseases in English and Uzbek, reflecting the global standardization of medical terminology. However, distinct differences were noted in terms of colloquial expressions, traditional beliefs influencing disease conceptualization, and the use of certain medical terms that have no direct equivalent in one of the languages. These discrepancies underscore the complexity of medical translation and the potential for miscommunication in clinical settings.

The implications of these findings are manifold. For one, they highlight the need for culturally sensitive translation practices that go beyond literal translation to encompass the cultural and contextual nuances of health communication. Additionally, the findings advocate for the integration of linguistic and cultural competence into medical education, particularly for healthcare providers working in multilingual environments. This is not only about improving doctor-patient communication but also about ensuring that medical documentation and patient education materials are accurately translated and culturally adapted.

Contribution to Healthcare Outcomes

By fostering a deeper understanding of the similarities and differences in pediatric disease terminology between English and Uzbek, this study contributes to the broader goal of improving healthcare outcomes. Clear and effective communication is fundamental to accurate diagnosis, patient compliance with treatment regimens, and the overall satisfaction and trust in the healthcare system. In regions like Uzbekistan, where linguistic diversity is a given, the findings of this study are particularly relevant. They offer actionable insights for healthcare practitioners, medical translators, and policymakers alike, aiming to bridge the communication gap in pediatric care and ultimately, to enhance the health and well-being of children in multilingual and multicultural communities.

Future Directions

Looking forward, this research paves the way for further studies exploring other language pairs and medical specialties. Expanding the scope of research could provide a more comprehensive understanding of the challenges and opportunities in medical translation and communication across different cultural contexts. Moreover, developing tools and technologies to support multilingual medical communication could be another exciting avenue for enhancing global healthcare delivery.

Methodology

Data Collection

The study employed a descriptive research design, gathering data from various sources, including medical dictionaries, pediatric textbooks, and online medical databases in both English and Uzbek languages. Key terms related to common children's diseases, their symptoms, diagnostics, treatment, and prevention were identified for analysis.

Analysis

A comparative analysis was conducted to examine the equivalence, discrepancies, and any unique cultural or linguistic aspects influencing the use of medical terminology in pediatric diseases. The analysis also considered the implications of these findings on medical translation practices and healthcare communication in multilingual settings.

Results

The analysis revealed several key findings:

- **Direct Equivalents:** Many terms related to pediatric diseases have direct equivalents in both languages, facilitating straightforward translation and understanding. For example, "chickenpox" in English translates directly to "сўвчечак" (suvchechak) in Uzbek.
- **Cultural and Contextual Variations:** Some terms exhibit cultural and contextual variations, affecting their translation and interpretation. For instance, certain disease names in Uzbek incorporate traditional beliefs or local environmental factors influencing disease perception.
- **Technical and Lay Terminology:** The study noted differences in the use of technical versus lay terminology across languages. In some cases, the Uzbek language uses more descriptive lay terms for diseases commonly known by their scientific names in English.
- **Translation Challenges:** Complex medical terms and idiomatic expressions related to symptoms or treatment advice often pose translation challenges, potentially leading to misunderstandings in a medical context.

Discussion

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The findings highlight the importance of cultural and linguistic awareness in medical communication, particularly in pediatric care. Misinterpretations or inaccuracies in translating medical terms can lead to ineffective treatment, patient confusion, and decreased trust in healthcare providers. Therefore, the development of bilingual or multilingual medical resources and the training of medical professionals in cross-cultural communication are essential for improving healthcare outcomes in multilingual societies.

Conclusion

This study underscores the significance of understanding and accurately translating pediatric disease terminology in English and Uzbek. It suggests that enhancing linguistic competence in healthcare settings can contribute to better patient care and communication. Future research could expand this comparative analysis to other languages and medical specialties, furthering the knowledge base for improving global healthcare communication and education.

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Xaitbayeva Gulbahor Ikramovna

ADTI ,o'zbek tili va adabiyoti tillar kafedrasida o'qituvchisi

Annotatsiya: Ushbu maqolada O'zbek tilidagi parazit so'zlar hamda ularni ishlatishi haqida ma'lumotlar berilgan.

Kalit so'zlar: Parazit so'zlar, suhbat, til, nutq, muloqot, tilshunos, intellektual rivojlanish, nutq madaniyati, tipologiya.

СЛОВА ПАРАЗИТЫ НА УЗБЕКСКОМ

Аннотация: В данной статье представлена информация о словах-паразитах в узбекском языке и их употреблении.

Ключевые слова: слова-паразиты, разговор, язык, речь, общение, лингвист, интеллектуальное развитие, культура речи, типология.

PARASITE WORDS IN UZBEK

Abstract: This article provides information about parasitic words in the Uzbek language and their use.

Key words: Parasitic words, conversation, language, speech, communication, linguist, intellectual development, speech culture, typology.

KIRISH:

Parazit so'zlar hayotimizda hamma joyda uchraydi. Og'zaki va yozma nutqda ular u erda va u erda siljiydi. Ularning ba'zilari uzoq vaqtdan beri e'tiborni jalb qilmaydilar, boshqalari deyarli yashiringan tirnash xususiyati bilan ajralib turadilar. Ortiqcha so'zlar yoki iboralar, "qo'shilish elementlari" yoki "nutq markalari" deb ham ataladigan parazit so'zlar hech qanday qo'shimcha ma'no qo'shmaydi yoki matnni buzmaydi.

Adabiyotlar tahlili va usullari:

Ko'pincha siz "yaxshi", "o'xshash", "qisqacha", "bu" ni topishingiz mumkin. Suhbatda parazit so'zlarning ishlatilishi yoki yo'qligi insonning shaxsiy nutq madaniyatini va demak, tarbiyasini, intellektual rivojlanish darajasi va bilimini ko'rsatadi. Nopok so'zlarni gapiradigan odam ko'pincha buni sezmaydi yoki unga ahamiyat bermaydi. Biroq, uning tinglovchisi darhol ularga e'tibor beradi. Odamlarning normal suhbat - bu o'z-o'zidan nutq.

Suhbatdoshlar bir vaqtning o'zida gapirishadi va o'ylashadi. Qiyin so'zlar yoki fikrlarni ifoda etishda qiyinchiliklar paydo bo'lganda, ular jumlaning parazit so'zlar bilan to'ldiriladi. Ular behush yoki qasddan talaffuz qilinadi. Ulardan doimo foydalanib, asta-sekin odam o'zi haqida va u holda aytishni odat tusiga kiradi va bu holda nutq tiqilib qoladi. Ammo, shuningdek, yaxshi ma'lumotli odam parazit so'zlarni ishlatishi mumkin. To'g'ri, ular nutqda e'tiborni jalb qilmasdan oqadilar va o'rinli ko'rinadi. Nutqni biladigan va undan qanday foydalanishni biladigan odamlar begona o'zlaridan ham atirgullarning chinnigulini yasashga qodir. Parazitar so'zlar ikkilanmasdan pauzani yoki oddiygina yumshoqni o'z ichiga olmaydi - o'z-o'zidan nutq tovushlar bilan to'ldirilganda. [1] Masalan, uzoq davom etayotgan "m" yoki uzun "e". Tipologiyaga ko'ra,

bunday qo'shimchalar allaqachon parazit tovushlar deb nomlangan. Bizning tilimiz doimo o'zgarib turadi va bu o'zgarishlarni har doim ham sezishga vaqtimiz bo'lmaydi. Vaqti-vaqti bilan unda biz tez-tez ishlatadigan maxsus so'zlar va iboralar paydo bo'ladi, garchi ularsiz biz juda yaxshi ish qila olamiz. Bu parazit so'zlar o'ziga xos ma'noga ega emas, lekin ular jamiyatimiz va har birimiz haqida ko'p narsalarni aytadi. "Mana", "aslida", "yaxshi", "go'yo", "eng shu", "bunday qilib aytganda", "qisqasi"... Nutqda bizni bunchalik g'azablantiradigan bu so'zlar bizga nima uchun kerak? boshqalarning va biz o'zimiz deyarli har bir jumлага kiritganmiz? Bu ortiqcha so'zlar bizga so'zlashuv nutqida o'ziga xos tayanch bo'lib xizmat qiladi. Spikerning nazarida ular bayonotga barqarorlik beradi. "Nutqda parazit so'zlardan foydalanish yangilik emas", deydi muloqot psixologi Iv Prijant. – Ammo bizning davrimizning ramzi ularning sonining keskin ko'payishi va jamiyatda tez tarqalishidir. [5] Buning asosiy aybdorlari, albatta, pauzalarga yo'l qo'ymaydigan radio va televidenie: tinmay gaplashib turish, efir vaqtini keraksiz, lekin cho'zuvchi iboralar, so'z va iboralar bilan to'ldirish kerak. Va biz ularni darhol ko'taramiz va biz ularni radio stantsiyalari va televizor ekranlarida cheksiz eshitganimiz uchun emas, balki Birovning til odatlarini o'zlashtirish, hech bo'lmaganda u odamga o'xshash bo'lishni anglatadi".

Bundan tashqari, parazit so'zlar ijtimoiy guruhga yoki bir avlodga mansublik hissini yaratishga imkon beradi. Har bir so'ziga "qalay" yoki "la'nat" so'zini kiritadigan 70 yoshli ayolni tasavvur qilish qiyin. Tilshunos olimlar nima uchun parazit so'zlar tilda paydo bo'lib, nima uchun yo'qolib borayotgani ular uchun sir bo'lib qolayotganini tan olishga majbur. Biroq, ular paydo bo'lganda, ularni mashhur qilgan jamiyat haqida ko'p narsalarni aytib berishlari mumkin.

so'z "shunchaki" hayot, aksincha, har qachongidan ham qiyinroq bo'lib tuyulganda foydalanishga kirdi. [2]

Fikr "bunday aytganda" so'zlaringiz uchun mas'uliyatni o'z zimmangizga olishga imkon beradi.

"Ko'ryapsizmi" or "tushunasiz; tushunyapsizmi" suhbatdosh bilan aloqa o'rnatishga yordam bering, garchi aslida ko'rish va tushunish uchun hech narsa yo'q. "Aslida" or "aslida" nutqqa ruhsizlik ohangini bering.

"Bu keraksiz burilishlar faqat supermarketlardagi musiqa xaridorlarni zeriktirganidek, nutqni chalkashtirib yuboradi", deydi Iv Prijant. - Umumiy qabul qilingan shakl yordamida o'zimiznikidek ko'rinishga harakat qilib, biz ko'pincha tarkibni unutamiz. Suhbatdosh bilan bir tilda gaplashishni istab, biz haqiqiy, jonli va erkin so'zdan bosh tortamiz. Bugungi kunda "Menda tushkunlik bor" degan umumiy ibora o'rniga kim: "Men xafaman", "Men xafaman", "Men jahldorman" deb tan oladi? [4] Axir, bu so'zlar ancha samimiy. O'z fikrlarimiz va his-tuyg'ularimiz haqida ochiq gapirishdan qo'rqamiz, biz bayonotning haqiqiy mazmunini yashirishga yordam beradigan tayyor formulalar bilan kifoyalanamiz. Jamiyat tomonidan qabul qilingan universal parazit so'zlar bilan individga xos bo'lgan alohida parazit so'zlarni farqlash zarur. Agar birinchisi biz yashayotgan dunyo haqida gapira olsa, ikkinchisi bizning shaxsiy komplekslarimiz va qo'rquvlarimiz haqida gapiradi. Har bir gapni qurilish bilan boshlagan kishi "aslida", aytganlari haqiqat ekanligidan xavotir bildiradi, chunki uning o'zi bunga to'liq ishonch hosil qilmaydi, deydi psixoanalitik Jan-Pyer Vinter. - Va bu dizayn unga shubhalardan xalos bo'lishga va tinchlanishga imkon beradi. Bunday odam nafaqat so'zlariga, balki his-tuyg'ulariga ham ishonishga odatlanmagan. Va shunga qaramay, do'stlarimizning nutqini zo'rg'a tinglab, shoshilinch xulosalar chiqarmaslik kerak. [3]

"Parazit so'zlarning haqiqiy ma'nosini faqat ular bilan bog'liq shaxsiy assotsiatsiyalarni chuqur tahlil qilish orqali aniqlash mumkin", deb davom etadi Jan-Pyer Vinter. - Agar parazit so'z orqasida qandaydir shaxsiy hikoya yashiringan bo'lsa, bu ongsizga eshikni ochadigan kalitdir. Ammo bu erda u mos keladigan to'g'ri eshikni topish muhimdir. Avvalo, so'z boyligingizni kengaytiring. "Maqsad, nutqingizni doimiy ravishda nazorat qilish, undan keraksiz narsalarni majburan chiqarib yuborish emas", deb maslahat beradi Iv Prijan. – Va uni olijanoblashtirishda, shu jumladan, yaxshi adabiyotlarni o'qish, bu noto'g'ri iboralardan voz kechishga yordam beradi. Faqat shu yo'l bilan "ha" degan ma'noni anglatuvchi "ha" va "yo'q" degan ma'noni anglatuvchi "yo'q" deyishni ma'nosiz "go'yo" va "xuddi shunday" deb aytishni o'rganish mumkin. Haftada kamida bir marta shunday gapirishga harakat qiling - bu juda yoqimli! Bundan tashqari, qiymat o'zingizga sukut saqlash huquqini bering, fikringizni ifodalash uchun aniqroq so'zlarni topish uchun pauza qilishga ruxsat bering. Keling, argentinaliklarni misol qilib olaylik – ular "Qandaysiz?" degan savolga javob berishadi. Haqiqiy vaziyatni kamdan-kam aks ettiradigan an'anaviy "Oddiy" o'rniga ular hazil bilan javob berishadi: "Yaxshi. Yoki sizga ko'proq aytib berishimni xohlaysizmi? Parazit so'zlar muloqotni o'ldiradimi? Yo'q, bo'lmasa, u allaqachon o'lgan bo'lardi. Bundan tashqari, ba'zida parazit so'zlar foydali bo'lishi mumkin. "Bunday so'zlar so'zlovchiga, agar u darhol to'g'ri iborani topa olmasa, vaqtni sotib olishga imkon beradi: "u yerda", "bunday" so'zlari yordamida biz tinglovchiga izlanish bilan band ekanligimizni bildiramiz va sizdan so'raymiz: qidiruv tugallandi, deydi tilshunos Vera Podlesskaya. – Ba'zan parazit so'zlar nutqda bir semantik bo'lakdan ikkinchisiga o'tishga yordam beradi. Masalan, "bu erda" so'zi ko'pincha biron bir kichik epizod tugaganidan darak beradi va ma'ruzachi o'z hikoyasining asosiy chizig'iga qaytadi. Va "yaxshi" so'zi, aksincha, qandaydir tarzda ilgari aytilgan narsalar bilan oldindan belgilab qo'yilgan parchani boshlaydi ("Demak, siz bugun universitetga bormaysizmi? Xo'sh, menga keling!").

Ammo ba'zi parazit so'zlar muloqot uchun katta to'siqlar yaratadi:

"qisqaroq" Bizni xabar beradigan narsalar qiziqalmasligi aniq;

"yakunida, yakunlab; Umuman" shuningdek, suhbatni rag'batlantirmaydi;

"go'yo" bizni mas'uliyatdan ozod qiladi .

XULOSA:

Muloqot muvaffaqiyatli bo'lishi uchun siz boshqasi bilan uchrashish, harakat qilish va qayerga olib borishini bilmasdan o'zingizni bu daryoga tashlash istagi kerak. Suhbat - bu har bir kishi o'zini tirik, xohlagan, tez va oson his qiladigan sehrli makondagi uchrashuvdir. Keraksiz so'zlar esa bu yengillikni his qilishimizga to'sqinlik qiladi.

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ANALYSIS OF NUMBERS IN LINGUISTICS (IN THE EXAMPLE OF ENGLISH AND UZBEK LANGUAGES)

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ANNOTATION.

The purpose of this scientific work is to analyze the similarities and differences between the numerical units of the languages being compared based on a comprehensive study of numerological units in the English and Uzbek languages. To reveal the appearance of numbers in English and the difference in meaning between numbers in English and the structural-semantic and functional features of numbers in English and Uzbek languages.

Keywords: number, mathematics, national culture, cultural code, numerology, characteristic and uncharacteristic numbers, semantics of numbers, structural expression of dependencies, Pythagoreans, Gwalior numbers, Arabic numbers, tube numbers, history of numbers;

АНАЛИЗ ЧИСЕЛ В ЛИНГВИСТИКЕ (НА ПРИМЕРЕ АНГЛИЙСКОГО И УЗБЕКСКОГО ЯЗЫКОВ)

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АННОТАЦИЯ.

Целью данной научной работы является анализ сходства и различия числовых единиц сравниваемых языков на основе комплексного изучения нумерологических единиц английского и узбекского языков. Выявить появление чисел в английском языке и разницу значений чисел в английском языке и структурно-семантические и функциональные особенности чисел в английском и узбекском языках.

Ключевые слова: число, математика, национальная культура, культурный код, нумерология, характерные и нехарактерные числа, семантика чисел, структурное выражение зависимостей, пифагорейцы, числа Гвалиора, арабские числа, трубчатые числа, история чисел;

INTRODUCTION

The relevance of our research lies in the fact that, despite the recent comparison of the lexical structure of unrelated languages in different directions, a whole semantic field - numerical units - has not been studied. So far, the meaning and symbolism of digital components in English and other languages have not been studied in detail.

There are no works in Uzbek linguistics that consistently analyze the phenomena of synonymy and antonymy, variability and stability in the diachronic-synchronic aspect based on the materials of numerological units of English languages.

The relevance of our chosen research topic is related to:

1) serves to further increase the significance of research results for theoretical sciences related to the study of language culture and its development under the influence of numbers and their symbolism.

2) We observed that the problems of synonymy, antonymy, and the stability and change of the grammatical form of numerological units in unrelated languages are insufficiently studied in modern comparative lexicology, and we create the basis for a theoretical basis as a solution in these aspects.

3) the importance of learning for linguodidactics - we have set ourselves the goal that the numbers in English will serve as lexical expressions for teaching in universities and other educational institutions in Uzbekistan.

SCIENTIFIC AND THEORETICAL BASIS OF THE STUDY OF NUMBERS IN LINGUISTICS

Modern linguistics is characterized by two main directions: on the one hand, its tasks include their adequate description and interpretation, focusing on the specific characteristics of individual languages, on the other hand, the desire of linguists to study linguistic universals at all levels of language from a typological point of view is clear. appeared. These trends are also reflected in the study of the lexical and structural composition of world languages.

The above gives reason to say that the non-mathematical properties of numbers that appeared in archaic systems influenced the formation of various cultural systems and were also reflected in language. Let us remind you that in linguo-cultural studies, the linguistic beginning of numerical signs is shown, which allows to study language units, forms, cultural background, i.e. nominative units (words and phraseological units) [Maslova, 2001].

Despite the existence of studies that place number among the dominant concepts of a given cultural system, the problem of the dual meanings of number seems to be understudied. In particular, the aspect of inconsistency and uniqueness of the secondary meanings of the number in different images of the world requires development.

Accordingly, in our research, we aim to study the semantic structure of lexemes that realize the idea of number in English and Uzbek languages and compare their secondary meanings. We use the terms "*number lexemes*", "*number components*", "*quantity lexemes*", "*quantity components*" to designate words with the meaning of number. For the purpose of this study, the terms listed are synonymous.

In recent years, the rapid development of linguistics is characterized by the differentiation of the subject of research and the methods of its study, as well as the attraction of new problems and aspects based on the theoretical foundations of numbers into the orbit of scientific research. This process corresponds to the general trend of the development of linguistic theory from simple to complex levels, methods and directions of language learning. The latter also includes a comparative (opposite) analysis of numbers in languages of different groups and systems. The use of comparative-historical, comparative and structural-semantic methods of analysis in the study of the lexicon of numbers of different languages forms a separate section of the theory of numbers - comparison.

By the numerical component, we understand the part of speech characterized by the designation of abstract numbers or the number of objects and their order of counting, the almost complete absence of gender and number categories, and special forms of subtraction and word formation. joins only with nouns as a quantum [Rosenthal 2003]. The numbers that have become

components of digital units cease to perform their main functions and begin to denote either an extremely small or an extremely large number in the abstract, or have no numerical meaning at all. In this work, we took the interpretation of A.V. as a definition of a phraseological unit. Kunina suggested that they are stable combinations of words with complex semantics, not structured according to generative structural-semantic models of variable combinations (Kunin 1996).

Development of numbers in English and Uzbek languages.

Numbers are conditional symbols that represent numbers. In ancient times, numbers were represented by words. With the development of the social and economic life of peoples, there was a need for more perfect signs and counting systems.

The oldest Raam belongs to the Babylonians and Egyptians. In Egyptian hieroglyphic numerals (3000-2500 BC), special pictographs appeared to represent numbers, and later hieratic and demotic writing. Babylonian numerals (early 2000 BC) were mainly cuneiform symbols representing 1, 10, 60, and 100, on which all other Numerals were expressed. From the Egyptian hieratic script came all the scripts of the Near and Middle East, as well as the Greek Ionic script, as well as the alphabetic Numeral.

The printed Greek alphabet gave rise to Slavic Cyrillic and Carthaginian numerals. Symbols of the current number (along with zero) appeared in India around the 5th century. Prior to this, India had Kharoshti numerals and, almost simultaneously, Brahmi numerals. From the Brahmi Numeral came the Indian Gwalior Numeral. Gwalior Numerals are the basis of Arabic Numerals. Arabic Numerals consist of Eastern and Western (dust) Numerals.

The Eastern Arabic Numeral is used in Egypt and the Arab countries to the East, Iran and Afghanistan, and the Western Arabic Numeral (Gubor) is used in the countries west of Egypt. In Europe, from the 9th century, the gubor number spread and quickly became popular. In Eastern countries, the gubor number did not spread widely until the 19th century.

Al-Khorazmi's incredible contribution to the history of numbers and its emergence.

Economic in the ancient Egyptians with the development of needs emergence of mathematical knowledge depend on each other. Mathematician Ancient Egypt without skills and numbers scribes carried out land surveying they could not increase the number of workers and they could not calculate their savings or determine the tax benefits they didn't get it. And so, the first numbers appeared in mathematics being the oldest state in Egypt to the period of formation of structures is correct.

II - VI centuries BC Indian astronomers in between the Greek system of sixty-six numerals learned about, and accepted zero from the Greeks they did Then the Greek calculation the basics are taken from China in India combined with the decimal system. It is in India that they are one sign started marking the numbers with Indian writings were popularized by our scholar

Al-Khwarizmi, he A work entitled "On the Indian Account" wrote in this place, our scholar *Al-Khorazmi* and his "Indian account information about his work let's give it. About zero position system when it comes down to it, we are first and foremost "Indian Account" by Muhammad ibn Musa al-Khwarizmi The book ("*Hisab al-Hind*") is mentioned. About Khorezmi's parents where is the initial information from? there is no information about receiving it. But some historians according to his information was very talented from a young age, in addition to natural sciences, he also knew many foreign languages. Khorezmi's youth is Arab passed in the states. To science Thirsty Khorezmi of his time to Baghdad, the center of advanced sciences will come. At this time, al-Ma'mun's "*House of Wisdom*" ("*Bayt ul-hikmat*") was established. Khorezmi was here earlier

with the deeds of the Egyptian and Greek nobles get acquainted, and then mathematics itself, astronomy, geography, history and entire secondary school in medical science It becomes popular in the East. She is to the library in the "*House of Proverbs*", to the observatory and all scientific investigation directs his work. *Muhammad Arithmetic of ibn Musa al-Khwarizmi* and his work in algebra great for the development of mathematics contributed. His Indian Account in Arabic in an arithmetic treatise entitled for the first time a decimal positional system and a rule of thumb based on it stated.

This work of Khorezmi was made into Latin in the 12th century arrived in translation of the book at the beginning of Khorezm nine numbers and

one "*small circle-like letter 0*" using the Indian calculation that he wants to show the method, this is the method with any number easily and briefly to be determined, with the help of each how to perform an arithmetic operation

He says that it is very easy. All of us al-Khorazmi from the number itself

showed that zero remains "0" when subtracted, ie " $3-3=0$ " for example. And then numbers in the decimal positional system how to write using Indian characters shows. This is the main focus Correctly write a number or a number correct reading, "*to a small circle to use the similar letter 0*" is focused. Sometimes it is instead of a circle point is used. The number is correct as an example of reading the following number brings: 1 180 703 051 492 863.

This Khorezmi's method of giving the number is different awkward: "A thousand five times and a hundred thousand four times and eighty thousand one thousand four and then seven hundred thousand three times and three a thousand three times and fifty one thousand two times and four hundred thousand and ninety two thousand and eight hundred sixty three". From the reading of your number then perform an arithmetic operation the Hindi method is described

Khorezmi method to perform the procedure in the upper room starts from unity. The word of Khorezmi in other words, this is how it works performance is "both convenient and useful. "Later, the account book in Latin translated, it is a decimal in Europe led to the spread of the system. Arabic numerals to Roman numerals It is more convenient and quickly started to be used all over the world. Today we use them in all areas. For example, in sales, television browsing, talking on the phone, banking receiving money from the account, measuring time and we use in others. So convenient, the basis of the accounting system is our slogan al-Khwarizmi's services are great. Nowadays, our modern imagine our life without numbers impossible to do.

CONCLUSION

1) Numbers represent special concepts that are not related to real things and are the most abstract part of speech. The number is characterized by the general nature of the revision process, although compared to other parts of speech, it is characterized by ambiguity when used independently, but as part of a unit, the number loses its number and gives meaning and it makes sense.

2) The presence of numerological units in English and Uzbek languages, whose semantics represent a complex informational complex, is an objective reflection of the phenomena of the material world in human thinking, occupying a certain layer in their system. two groups of languages.

3) The most effective in the formation of numerological units are the first numbers in the decimal system of the English and Uzbek languages, which we associate with the important role

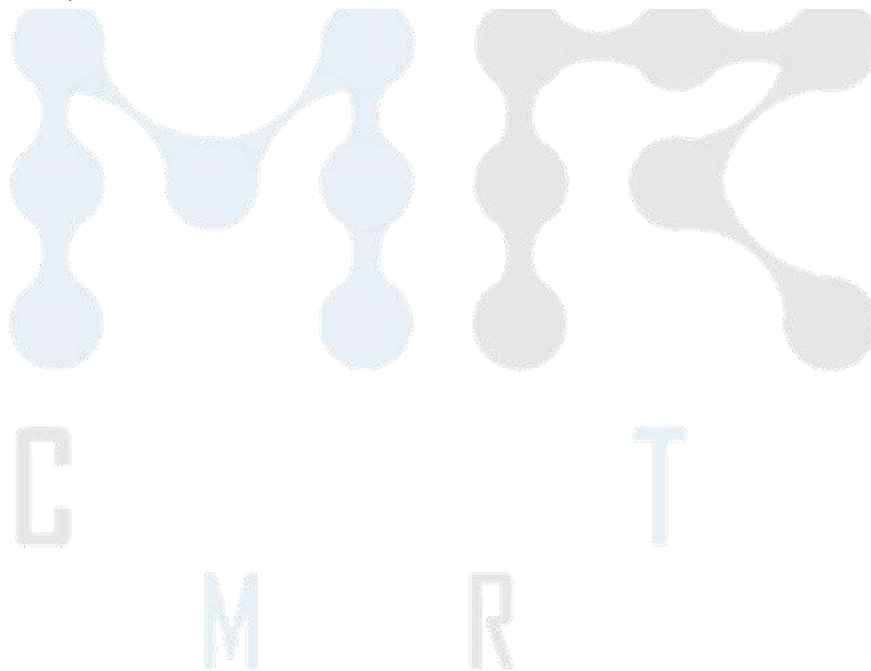
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of the first numbers in the ancient world. The limited number of compound numbers in the numerological units of the languages being compared is explained by the fact that the complexity of the morphological structure of numbers reduces phraseological activity.

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ABSTRACT

Color metaphors play a significant role in stylistic analysis across various forms of discourse, ranging from literature to advertising, and beyond. This paper presents a thorough examination of color metaphors in stylistics, aiming to elucidate their multifaceted implications and rhetorical functions. Drawing upon interdisciplinary research from linguistics, psychology, and semiotics, this study investigates the ways in which colors are utilized metaphorically to convey complex meanings and evoke emotional responses in textual and visual communication. The analysis begins with an overview of the cognitive processes underlying color perception and metaphor comprehension, establishing a theoretical framework for understanding the symbolic significance of colors in language. Subsequently, a comprehensive survey of existing literature on color metaphors in different cultural and linguistic contexts is provided, highlighting variations in metaphorical associations across diverse societies.

Key words: metaphore, stylistic semasiology, cultural context, parts of speech, fiction, poetry, imaginary.

Аннотация Цветовые метафоры играют важную роль в стилистическом анализе различных форм дискурса, от литературы до рекламы и не только. В данной статье представлено тщательное исследование цветowych метафор в стилистике с целью выяснить их многогранное значение и риторические функции. Опираясь на междисциплинарные исследования в области лингвистики, психологии и семиотики, это исследование исследует способы метафорического использования цветов для передачи сложных значений и вызова эмоциональных реакций в текстовой и визуальной коммуникации. Анализ начинается с обзора когнитивных процессов, лежащих в основе восприятия цвета и понимания метафор, устанавливающих теоретическую основу для понимания символического значения цветов в языке. Впоследствии представлен всесторонний обзор существующей литературы по цветовым метафорам в различных культурных и языковых контекстах, подчеркивающий различия в метафорических ассоциациях в разных обществах.

Ключевые слова: метафора, стилистическая семасиология, культурный контекст, части речи, художественная литература, поэзия, воображаемое.

Introduction Stylistic semasiology deals with those semantic changes and relations, which create an additional, connotative meaning. Stylistic semasiology analyses and classifies stylistic devices from the point of view of the mechanism of different semantic changes and their stylistic functions. Stylistic semasiology investigates the following stylistic devices: Metaphor comes from the Greek word *metaphore* which means 'transference bearing'. Metaphor is based on a relation between the dictionary and contextual logical meanings based on the affinity or similarity of certain properties or features of the two corresponding concepts.[10;9-30] Here transference of names is based on the associated likeness between two objects, as in the 'pancake', 'ball', 'volcano' for 'the sun'; 'silver dust', 'sequins' for 'stars'; 'vault', 'blanket', 'veil' for 'the sky'.

Metaphor can be embodied in all the meaningful parts of speech, in nouns, adjectives, verbs, adverbs.

1. "In the slanting beams that streamed through the open window the dust danced and was golden." (Oscar Wilde)

2. 'A flight of fancy', 'floods of tears'.

3. "Mr. Pickwick bottled up his vengeance and corked it down." (Charles Dickens)
The verb "to bottle up" is explained as to keep in check, to conceal, to restrain, repress. So the metaphor can be hardly felt. But it is revived by the direct meaning of the verb to cork down. Such metaphors are called sustained or prolonged. "Our family joined other streams and the stream was a river pouring into St. Thomas Church." (John Steinbeck)

When likeness (affinity) is observed between inanimate objects and human qualities, we have the cases of personification: "Slowly, silently, now the moon Walks the night in her silvery shoon, This way and that she peers and sees Silver fruit upon silver trees." (Walter de la Mare)
Function of metaphor. Using appropriate metaphors appeals directly to the senses of listeners or readers, sharpening their imaginations to comprehend what is being communicated to them. Moreover, it gives a life-like quality to our conversations and to the characters of the fiction or poetry. Metaphors are also ways of thinking, offering the listener's and the reader's fresh ways of examining ideas and viewing the world. Traditionally, metaphor has been perceived linguistically as a figure of speech in which one thing is compared to another by saying that one is the other. In cognitive linguistics' takes the perspective of metaphor introduced by Lakoff and Johnson (1980) challenging aspects of traditional theory in a coherent and systematic way. They showed convincingly that metaphor is pervasive both in thoughts and everyday language. [2-640] Metaphor therefore is considered conceptual property not just words. Metaphor functions as a way to understand concepts and it is an inevitable process of human thought and reasoning. In this way, our conceptual system is based on experiences we have gained while interacting with people and things in the world around us. Emotional concepts that have received attention from scholars have usually included anger, fear, happiness, sadness and love. Kövecses (2003) suggests that the cognitive status of these basic emotions should be regarded as basic-level categories. Cognitive linguistics takes the position those human conceptual systems as emotional concepts are motivated by color terms as conceptual metaphors. Color is a kind of natural phenomenon, which plays an important role in describing things including expressing human emotions. [3;48-95] This paper explores the role of colors in the conceptualization of emotions in English compared to Thai language using framework of cognitive linguistics. It investigates the cognitive similarities and differences of color terms as conceptual metaphors of western and oriental peoples. The findings propose that our conceptual system of emotions is organized metaphorically, carrying within them cognitive characteristics and cultural values, and reflect self-similarity of language and culture. Metaphors are linguistic devices that allow speakers and writers to convey abstract concepts by drawing parallels with more concrete or familiar domains. Colors, with their rich symbolic associations and vivid imagery, are frequently employed in metaphorical expressions across cultures and languages. This exploration will delve into the multifaceted realm of color metaphors, examining their origins, cultural variations, and psychological implications.

Methodology and data In order to collect a sizable body of data, English websites presenting idioms were searched, including [www. UsingEnglish.com](http://www.UsingEnglish.com), www.fle135-idim.pbwork.com, [www. goenglish.com](http://www.goenglish.com), and www.idiomeanings.com. Besides, two monolingual

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dictionaries, namely The Oxford Dictionary of Proverbs (Speake, 2008) and The Oxford Dictionary of Idioms (Siefiring, 2005), were used. It is worth noting to say that the examples were found electronically via Google search engine. The data includes metaphorical expressions of color used English speakers. Metaphorical expressions of five basic colors—white, black, red, yellow, and green—with their meanings.

Results and Discussion Before delving into color metaphors, it's essential to understand the symbolic significance that colors hold across different cultures. Colors often carry deep cultural, historical, and psychological connotations, influencing human perceptions and behaviors. For example, red is commonly associated with passion, love, and danger, while blue evokes feelings of calmness, trust, and serenity. These symbolic associations vary across cultures, illustrating the dynamic interplay between color perception and cultural context. Metaphorical expressions involving colors

Feeling blue: This metaphorical expression often conveys a sense of sadness, melancholy, or emotional distress. It originates from the association of the color blue with feelings of sadness or depression. The metaphor suggests that the person experiencing these emotions is metaphorically enveloped in a "blue" mood, perhaps feeling as if they are immersed in a sea of sadness. This expression is widely understood across English-speaking cultures and is commonly used to describe periods of emotional downturn or unhappiness.

Green with envy: This metaphorical expression denotes intense jealousy or envy towards someone else's success, possessions, or circumstances. It draws on the association between the color green and envy, perhaps stemming from the idea that envy can manifest physically, causing one to appear pale or nauseous, as if they were "green" with envy. The expression vividly captures the visceral and often irrational nature of envy, highlighting the emotional toll it can take on individuals.

Seeing red: When someone is said to be "seeing red," it means they are experiencing intense anger, frustration, or rage. This expression originates from the physiological response of the body to anger, where increased blood flow can cause the face to flush red. The metaphor suggests that the person's emotions have reached such a peak that they perceive everything through a metaphorical "red" filter, symbolizing the heightened emotional state associated with anger. It conveys the loss of control and rationality that often accompanies intense anger.

White lie: This metaphorical expression refers to a small or harmless lie told to avoid hurting someone's feelings or causing unnecessary conflict. The use of "white" conveys the idea of innocence or purity, suggesting that the lie is meant to protect the other person rather than deceive them maliciously. The expression implies that the lie is relatively trivial or inconsequential, emphasizing the intention behind it rather than the content of the lie itself. It reflects the complexity of moral and ethical decision-making in interpersonal relationships. [6;1-9]

Black sheep: This metaphorical expression describes a person who is perceived as different or deviant from the rest of their family or social group. The term "black sheep" likens the individual to a sheep with black wool among a flock of white ones, standing out conspicuously. It implies that the person's behavior or characteristics set them apart from the group in a negative or undesirable way. While the expression can carry negative connotations, it also suggests a sense of uniqueness or individuality, as the black sheep may defy societal norms or expectations.

To Go As White As Ghost: To be frightened; (Lit: To go as white as chalk) Sometimes the metaphorical use of white is used in the construction of emotional metaphors. In these metaphoric instances the mapping is conditioned physiologically, i.e., the metaphors are based on certain

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physiological similarities. Shock and fear is the target domain for these idioms in English. White is more commonly associated with emotional shock, and is linked up with the decrease in the amount of the blood in face. By a metaphoric shift, fear becomes conceptualized as the feeling that has certain effects on mind and body of experiencer and blood runs cold with fear. She went as white as a ghost when she heard the news. While some color metaphors may have universal appeal, others are shaped by cultural factors and may vary significantly across different linguistic and cultural contexts. For example, the color white is commonly associated with purity and innocence in Western cultures, while in some Eastern cultures, it may symbolize mourning or death. Similarly, the color red holds different symbolic meanings in various cultures, representing luck and prosperity in Chinese culture, but symbolizing danger or warning in Western cultures. These cultural variations highlight the importance of considering cultural context when interpreting color metaphors. The use of color metaphors can have profound psychological implications, influencing how individuals perceive and interpret abstract concepts. Research in cognitive linguistics suggests that metaphorical thinking is deeply ingrained in human cognition, shaping our understanding of the world around us. Colors, with their strong sensory associations and emotional resonance, can evoke powerful imagery and emotions when used metaphorically. For example, studies have shown that exposure to the color red can evoke physiological responses such as increased heart rate and heightened arousal, reflecting the close connection between color perception and emotional processing.

Conclusion In conclusion, color metaphors are a fascinating aspect of language and culture, reflecting the intricate interplay between language, perception, and cognition. From "feeling blue" to "seeing red," color metaphors offer a vivid and evocative way of expressing abstract concepts and emotions. While some color metaphors may have universal appeal, others are shaped by cultural factors and may vary significantly across different linguistic and cultural contexts. By exploring the symbolic significance of colors and the psychological implications of color metaphors, we gain deeper insights into the complexities of human communication and cognition.

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**ZANJABIL(ZINGEBER OFFICINALE ROSCOE)NING FIZIOLOGIK VA
FARMASEFTIK TASIRI, ZANJABILNING QIMMATLI DORIVORLIK
XUSUSIYATLARI.**

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Annotatsiya: Zanjabil o‘simligi XXV asrdan buyon hind va xitoy mamlakatlari tibbiyotida an’anaviy tarzda qo‘llanib kelinmoqda. Yangi zanjabil tarkibida 80,9% namlik, 2,3% oqsil, 0,9% yog‘, 1,2% mineral moddalar, 2,4% tolava, 12,3% uglevodlar mavjud bo‘ladi. Zanjabilning faol komponentlari ovqat hazm qilishni, ovqat so‘rilishini yaxshilashi, oshqozon hazm qilim tizimi mushaklari faolligini oshirish bilan birgalikda ich qotishi va meteorizmni yengillashtirilishi aytilgan.

Kalit so‘zlari: Zanjabil, Dorivorlik xususiyati, Farmaseftik ta’siri.

Аннотация: Растение имбиря традиционно используется в индийской и китайской медицине с 25 века. Свежий имбирь содержит 80,9% влаги, 2,3% белка, 0,9% жира, 1,2% минералов, 2,4% клетчатки и 12,3% углеводов. Говорят, что активные компоненты имбиря улучшают пищеварение, всасывание пищи, избавляют от запоров и метеоризма, а также повышают активность мышц пищеварительной системы.

Ключевые слова: Имбирь, Лекарственное свойство, Фармацевтический эффект.

Annotation: The ginger plant has been traditionally used in Indian and Chinese medicine for 25 years. Fresh ginger contains 80.9% moisture, 2.3% fiber, 0.9% cumin, 1.2% minerals, 2.4% fiber and 12.3% carbohydrates. It is said that the active components of ginger increase cooking, absorption of cooking, relieve constipation and flatulence, and also increase the activity of the digestive system.

Key words: Ginger, Medical properties, Pharmaceutical effect.

Kirish. Zanjabil an’anaviy usulda hind va xitoy tibbiyotida XXV asrdan ko‘p vaqt davomida foydalanib kelinmoqda. Zanjabilni mexikaga ispanlar olib kelishgan va vaqt o‘tishi bilan Yamaykaga olib kelishgan. Hozirgi kunga kelib Yamayka zanjabilni ishlab chiqarish bo‘yicha eng yirik ishlab chiqaruvchi davlatlardan biri hisoblanadi. Zanjabil Meksika tibbiyotida asosan oshqozon-ichak kasalliklarini davolashda ishlatiladi. Zanjabil asosan ko‘ngil aynishini oldini olish uchun ishlatiladi lekin zanjabil yallig‘lanishga qarshi, og‘riq qoldiruvchi vosita, isituvchi vosita sifatida ishlatiladi. Xolesterinni oship ketmasligini nazorat qiluvchi o‘simlik. O‘tkazilgan tajriba sinovlari shuni ko‘rsatadiki, zanjabil ko‘ngil aynishini oldini olishga ishlatilishi tasdiqlandi. Shuningdek, yana tajribalar shuni ko‘rsatadiki zanjabil yallig‘lanish, artritni davolashda eng samarali dorivor o‘simlik hisoblanadi, lekin randomizatsiyalangan tajribalar haqida ko‘rsatmalar berilmagan. Hayvonlar ustida olib borilgan tajribalar quvvatlantiruvchi tasirlarni beradi lekin bu tajribalar odamlarda utkazilmagan. Zanjabilni sifatlarini to‘liq urganilmaganligi sababli xolesterin kamaytiruvchi sifatida tavsiya qilish uchun ma’lumotlar yetarli emas. Uzoq vaqtdab buyon foydalanib kelinayotgan tarixini o‘rgansak oziq-ovqat sifatida zanjabilidan foydalanish xavfsiz deb hisoblaniladi. Zanjabilni trombotsitlar agregatsiyasi va

tromboksen senteziga ta'siri tufayli, ayrim o'simlikshunoslar antikoagulyantlarni qabul qiladigan yokida operatsiyaga kirishi rejalashtirilgan bemorlarga istemol qilishda ehtiyotkor bo'lishlarini taklif qilishadi. Yani bir boshqa tomondan, klinik tomonlama ahamiyatli antikoagulyant tasirlar hujjatlashtirilmagan. Zanjabil umumiy xavfsiz deb tan olingan lekin shu bilan bir qatorda bir qancha tajribalar homiladorlik, laktatsiya va bolalik davrlarda bu o'simlikning xavfsizligini aniq baholamagan. Bir qancha tajribalarda turli turdagi hayvonlarga uteratonik ta'sir ko'rsatiladi bu tajribalar esa Germaniya komissiyasi va o'simlikshunoslar homiladorlik paytida zanjabil istemol qilmasliklarini tavsiya etishlariga olib keldi.

Dorivor turlari: Zingiber officinale.

Umumiy nomlanishlari: Zanjabil, Qora zanjabil, Afrika zanjabili, Kochin zanjabili, Yamayka zanjabili, Inver zanjabili, Gan Jiang, Gegibre, Race zanjabili.

Botanik oilasi: Zingiberaceae. Zanjabil 2ta ziravorlar zerdechal va kardamom turlari bilan chanbarchas bog'liq.



O'simlik tasnifi: Zanjabil buyi 60-70 sm bo'lgan ko'p yillik o'simlik hisoblanadi. Shuningdek, zanjabil pazandachilik yoki farmaseftikada foydalaniladigan ildizpoyali o'simlikdir.

Yetishtiriladigan mamlakatlar: Zanjabil issiq tropik mintaqalarda Osiyo, Afrika, Meksika, Gavaya, Hindiston, Yamaykada keng tarqalgan.

O'simlik tarkibidagi oziq moddalar: Zanjabil tarkibida 80,9% namlik, 12,3% uglevodlar, 2,4% tola, 2,3% oqsil, 1,2% mineral moddalar, 0,9% yog' mavjud. Zanjabilida temir, kalsiy, fosfor kabi minerallar mavjud. Bu moddalardan tashqari tiamin, riboflavin, niatsin, va C vitamini mavjud. Zanjabil turi yoki navlari bir biridan agrotexnik tadbirlar talab qilishi, davolanishda foydalanish usullari, saqlanish usullari bilan farqlanadi.

Kimyoviy tarkibi: Zanjabil ildizpoyasi istemol qilinadigan o'simlik. Ildizpoyasi tarkibida asosiy faol komponentlari gingerollar, gingerol gidroksidi-1 (3-metoksifelin 4-gidroksi) dekan-3-bir gingerol seriyasining eng keng tarqalgan tarkibiy qismi. Zanjabil o'simligini kukun sifatida ishlatiladigan ildizpoyasi tarkibida 60-70% uglevodlar, 9-12% suv, 9% oqsil, 8% kul, 3-8% xom

tola, 3-6% yogʻlar mavjud. Uchuvchi moy asosan mono va seskiterpenlardan iborat boʻlib; kamfen, beta-fellandren, kurkumen, sineol, geranil asetat, terfinol, terpenlar, borneol, geraniol, limonen, linalool, alfa-zingiberen (30-70%), beta-seskifellandren (15-20%), beta-bisabolen (10-15%) va alfa-farnezol bor. Etanol va atseton ekstraksiyasi bilan ajratilgan oleorezin tarkibida 7,5-4% qurutilgan kukun, oʻtkir moddalardan gingerol, zingeron, shogaol va paradollar mavjud. Kukun sifatida foydalaniladigan zanjabil tarkibida shogaol gingerolning suvsizlangan varianti va 3-5 oʻtkir tarkibiy qismlar hisoblanadi. Oleorezin tarkibida asosan aromatizatorlar boʻlgan zingiberol, zingiberen, diarilheptanoidlar, gingediol vitamin va fitosterollar tashkil qiladi.

Zanjabil oʻsimligini terapiyada qoʻllanilishi: Terapiya lotincha soʻz boʻlib ichki aʼzolar degan maʼnoni bildiradi. Terapiya fani ichki aʼzolar kasalliklari haqidagi fandır. Dengiz kasalligi paytida koʻngil aynishi va qusishga qarshi. Zanjabilning bu taʼsiri markaziy asab tizimi orqali emas balkida toʻgʻridan-toʻgʻri oshqozon-ichan tizimiga taʼsir qiladi. Sitotoksik birikmalar bilan davolangan insonlarda qusishini kamaytirish uchun foydalaniladi. Ovqat hazm qilishini yaxshilash va gaz shishlarni kamaytirish uchun karminativ va antifatulent vazifasini bajaradi. Qon aylanishini yaxshilash va qandli diabetni davolashda glyukozani pasaytirish uchun foydalaniladi.

Farmakologik tasirlari: Manbalarda keltirilishicha zanjabilning komponentlari ovqat hazm qilish, oshqozon-ichak mushaklari faolligini oshirish, ovqat soʻrilishini yaxshilar, ich qotishini oldini olish va meteorizm yani qorinning dam boʻlishini yaxshilashda foydalaniladi. Zanjabil va undan ajratilgan birikmalarning farmakologik taʼsirlariga immunomodulyatsion, oʻsmaga qarshi, yalligʻlanishga qarshi, apoptotik, giperglikemik, antilipidemik va qusishga qarshi taʼsir koʻrsatadi. Zanjabil oʻsimligidan harakat kasalligini ham davolashda ishlatiladi. Harakat kasalligi yoki kinetoz - bu patologik holat emas, balki odam notanish boʻlgan va shuning uchun u moslashmagan muayyan harakat stimullariga normal javobdir; faqat ichki quloqning vestibulyar apparati boʻlmaganlar haqiqiy immunitetga ega. Harakat kasalligini davolash maqsadida zanjabil oʻsimligi va dimengidrinat tabletkasi 18 yoshli talabalarda baholandi. Ginekologlarning fikricha laparoskopiya operatsiyasidan oldin zanjabilni qabul qilish operatsiyadan keyingi boʻladigan koʻngil aynishi va qayt qilishni oldini olishga juda katta samarasi borligini aytib oʻtishdi. Zanjabilni 100 mg metoklopramid tabletkasi bilan solishtirilganda ikkalasi bir xil natijani koʻrsatgan. Shu jumladan homlador ayollarda ham koʻngil aynishiga qarshi vosita sifatida foydalanish ham mumkun. 4 kun davomida 1 kunda 4 mahal 250 mg kukunli zanjabilni istemol qilish koʻngil aynishi va qayd qilishni kamaytiradi.

Mikroblarga qarshi taʼsiri: Zanjabil oʻsimligi kuchli antibakterial va oz miqdorda antifungal xususiyatga ega. Zanjabil oʻsimligini in vitro sharoitida oʻstirib koʻrip shuni natija qilib aytilgan: zanjabilning faol tarkibiy qismlari yoʻgʻon ichak bakteriyalarini koʻpayishini oldini oladi. Yoʻgʻon ichakdagi bu bakteriyalar hazm boʻlmagan uglevodlarni fermentatsiya qilib meteorizmni keltirib chiqaradi. Bunga zanjabil oʻsimligi bilan birga qarshi kurashsa boʻladi. Shu bilan bir qatorda zanjabil oʻsimligi *Escherichia coli*, *Proteus*, *Stafilokokklar*, *Streptokokklar* va *salmonellalar* osishini toʻxtatib turadi. Agar biron bir ziravorni yashi koʻrishingiz kerak boʻlsa, u zanjabil boʻlgani maʼqul. Albatta, sogʻliq uchun katta foyda keltiradigan koʻplab ajoyib ziravorlar mavjud, ammo ularning ijobiy xususiyatlari zanjabilchalik emas vaboshgalarga qaraganda yashi taʼmga ega. Zanjabilning foydasi gingerol deb ataladigan aralashmaga bogʻliq. Ushbu modda yalligʻlanishga qarshi, ogʻriq va shishni yengillashtirishga yordam beradi. Shuningdek, tarkibida antioksidant boʻlib, tanadagi zararli erkin radikallarni zararsizlantiradi. Bu saraton xavfini kamaytirishi isbotlangan.

Yurak va qon tomirlarga ta'siri: Abu Ali ibn Sino "Tib qonunlari" asarida ko'plab kasalliklarni davolashda qo'llaniladigan malhamlar tarkibiga zanjabil qo'shilishi aytib o'tilgan. Xitoy tibbiyotida zanjabilidan organizmdagi suyuqlikni yaxshilash uchun ishlatiladi. Zanjabil o'simligi yurak mushaklariga kuchli bosimni ogohlantiruvchi va qonni suyultirish bilan bir qatorda organizmda qon aylanishini nazorat qiladi. Qon aylanishi yaxshilangach organizmda metabolitik faollik oshadi. Yaponiya tadqiqotlari shuni ko'rsatadiki zanjabil tarkibidagi faol moddalar yurak ishini yaxshilaydi va qon bosimini pasaytiradi. Zanjabil istemol qiladigan insonlarda yallig'lanishga qarshi prostaglandin va tromboksanlar hosil bo'lishi kamayadi natijada qonning ivish qobiliyatlari kamayadi. Zanjabil o'simligidan dietada ham istemol qilsa bo'ladi istemol qilinganidan so'ng xolesterin miqdori oshishini oldini oladi. Zanjabil antioksidant xususiyatga ega.

Zanjabilli choyning foydali jihatlari: To'g'ralgan zanjabil ildizi yoki zanjabil kukunini choyga solingan sog'liq uchun foydalanishning eng mashhur usullaridan biridir. Tadqiqotlar shuni ko'rsatadiki, zanjabil choyi quyidagi afzalliklarga ega:

1. Ko'ngil aynishini tinchlantiradi: Zanjabil harakat kasalligi, kimyoterapiya va homiladorlikdan ko'ngil aynishini engillashtirishda juda samarali (10). Issiq zanjabil choyini ho'plab ichish oshqozonni tinchlantirishga yordam beradi.
2. Sovuqqa qarshi kurashadi: Zanjabilning mikroblarga qarshi xossalari yuqori nafas yo'llari infeksiyalarining oldini olish va davolashda yordam beradi. Achchiq issiqlik ham shilimshiqni suyultiradi va sinuslarni tozalaydi.
3. Ovqat hazm bo'lishiga yordam beradi: Zanjabil choyi ozuqa moddalarining so'rilishini tezlashtiradi va shishiradi, gazni, oshqozon og'rig'ini va diareyani kamaytiradi.
4. Qon aylanishini kuchaytiradi: Gingerol qonni yupqalashtiradi va tomirlarning kengayishini kuchaytiradi, qon aylanishini yaxshilashga yordam beradi. Bu butun tanaga kislorod, ozuqa moddalari va dori-darmonlarni etkazib berishga yordam beradi. Bosh og'rig'i, bo'g'im og'rig'i va yallig'lanishni kamaytiradi.

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DEVELOPMENT OF FUTURE PRIMARY SCHOOL TEACHERS BASED ON
EDUCATIONAL COMPETENCIES

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Abstract: The development of future primary school teachers is crucial in ensuring the quality of education provided to young learners. This article explores the educational competencies that are essential for aspiring primary school teachers and discusses strategies for developing these competencies. By focusing on key areas such as pedagogical knowledge, classroom management skills, and cultural competence, teacher education programs can effectively prepare individuals for successful careers in the field of primary education.

Keywords: Primary school teachers, educational competencies, teacher development, pedagogical knowledge, classroom management, cultural competence

INTRODUCTION:

Primary school teachers play a vital role in shaping the academic and social development of young children. To excel in this role, educators must possess a diverse set of educational competencies that enable them to effectively engage with students, create inclusive learning environments, and foster a love for learning. As the landscape of education continues to evolve, it is imperative that future primary school teachers are equipped with the necessary skills and knowledge to meet the demands of modern classrooms. In this article, we will explore the key educational competencies that aspiring primary school teachers should develop during their training and discuss strategies for enhancing these competencies. By focusing on areas such as pedagogical knowledge, classroom management skills, and cultural competence, teacher education programs can better prepare individuals for the challenges they will face in their teaching careers.

Parts of the Literature Used:

1. **Pedagogical Knowledge:** Research has shown that effective teaching requires a deep understanding of pedagogical principles and practices. Teachers must be able to design engaging lesson plans, assess student progress, and differentiate instruction to meet the diverse needs of learners (Darling-Hammond & Bransford, 2005).

2. **Classroom Management Skills:** Effective classroom management is essential for creating a positive learning environment where students feel safe and supported. Teachers must be able to establish clear expectations, manage student behavior proactively, and build strong relationships with their students (Marzano & Marzano-Rosenthaler, 2003).

3. **Cultural Competence:** In today's multicultural society, teachers must be able to understand and respect the diverse backgrounds and experiences of their students. Culturally competent educators can create inclusive classrooms where all students feel valued and supported in their learning (Gay & Kirkland-Harris, 2003).

The role of a primary school teacher is crucial in shaping the minds and behaviors of young children. As educators, they not only impart knowledge but also instill values, morals, and essential life skills that set the foundation for a child's future success. In order to effectively fulfill this role, it is imperative for future primary school teachers to possess a range of educational competencies that enable them to excel in their profession.

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Educational competencies refer to the knowledge, skills, and attitudes that teachers need in order to be effective educators. These competencies are essential for ensuring that teachers are able to deliver high-quality instruction, create a positive learning environment, and support the holistic development of their students. In the context of primary education, there are several key competencies that future teachers need to develop in order to succeed in their careers.

One important competency for future primary school teachers is subject matter knowledge. Teachers must have a deep understanding of the content they are teaching in order to effectively convey information to students and facilitate learning. This includes not only knowledge of core academic subjects such as math, science, and language arts, but also an understanding of child development theories and educational psychology principles.

In addition to subject matter knowledge, future primary school teachers must also possess strong pedagogical skills. This includes the ability to design engaging lesson plans, implement effective teaching strategies, and differentiate instruction to meet the diverse needs of all students. Teachers must also be skilled at assessing student learning and providing constructive feedback in order to support student growth and achievement.

Another important competency for future primary school teachers is classroom management. Teachers must be able to create a safe and supportive learning environment where all students feel respected, valued, and engaged. Effective classroom management involves establishing clear expectations for behavior, implementing consistent discipline policies, and building positive relationships with students.

Furthermore, future primary school teachers must be able to collaborate with colleagues, parents, and other stakeholders in order to support student success. This includes working effectively as part of a team, communicating clearly with parents about student progress and challenges, and seeking out professional development opportunities to continue growing as an educator.

Overall, the development of future primary school teachers based on educational competencies is essential for ensuring that every child has access to high-quality education that prepares them for academic success and personal fulfillment. By cultivating these competencies through rigorous training programs and ongoing professional development opportunities, we can empower our educators to make a positive impact on the lives of young learners for years to come.

Conclusion:

In conclusion, the development of future primary school teachers based on educational competencies is essential for ensuring high-quality education for young learners. By focusing on key areas such as pedagogical knowledge, classroom management skills, and cultural competence during teacher training programs, educators can better prepare individuals for successful careers in primary education. It is imperative that teacher education programs continue to prioritize the development of these competencies to equip teachers with the skills they need to thrive in today's diverse classrooms.

This article provides valuable insights into the importance of developing educational competencies among future primary school teachers and offers practical recommendations for enhancing these skills through teacher training programs.

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ASPECTS OF FORMATION OF FINANCIAL LITERACY IN ELEMENTARY
SCHOOL STUDENTS

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Abstract: Financial literacy is the ability to understand and effectively manage one's finances. This includes skills such as budgeting, saving, investing and understanding basic economic concepts. While financial literacy is important for individuals of all ages, it is especially important to begin teaching these skills to children at a young age.

Keywords: financial literacy, elementary students, education, barriers, solutions

Introduction: Financial literacy is an important life skill that is often overlooked in the education system. This article highlights the problem of creating financial literacy in elementary school students and the importance of starting financial education from a young age. By examining the current state of financial education in elementary schools, identifying barriers to financial literacy instruction, and proposing potential solutions, this paper addresses the need to improve financial education for young students. aimed at raising awareness.

However, elementary schools often lack adequate resources and curricula to effectively teach financial literacy. Many teachers may not have the necessary training or knowledge to incorporate financial education into their lessons. In addition, prioritizing financial literacy in primary schools may lack support from politicians and educational institutions.

This article examines the problems associated with the formation of financial literacy in elementary school students and suggests potential solutions to solve this problem.

Financial literacy is an important skill that everyone should have, regardless of age. However, the importance of financial literacy in teaching young children is often overlooked. While many schools focus on teaching basic math and reading skills, not enough attention is paid to teaching children about the value of money and how to manage it effectively.

The problem of forming financial literacy in primary school students is an urgent issue that needs to be solved. Without proper education in this area, children may grow up without the skills necessary to make informed financial decisions later in life. This can lead to spiraling debt, poor financial management and general financial instability.

One of the main reasons for the low level of financial literacy among primary school students is the lack of formal education in this subject in most school curricula. While some schools may cover basic concepts such as counting money or budgeting in math classes, there is often insufficient emphasis on a deeper understanding of financial principles.

In addition, parents can also play a role in contributing to the problem. Many parents may not have strong financial literacy skills themselves and therefore struggle to teach their children how to manage money. Lack of knowledge and guidance at home can exacerbate this problem.

To address this issue, it is critical that schools incorporate financial literacy education into their curricula from an early age. By introducing basic concepts like budgeting, saving, investing, and understanding interest rates, kids can begin to build a solid foundation for their future financial well-being.

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In addition, parents should also be actively involved in teaching their children how to manage money. This can be done through simple actions such as setting up a piggy bank for savings or involving the children in discussing the household budget.

Also a variety of resources available online and through community organizations to help parents and teachers teach children about financial literacy. By working together to provide comprehensive education on this topic, we can give our young students the knowledge and skills they need to make wise financial decisions throughout their lives.

Financial literacy is an important life skill that everyone should have in order to make informed decisions about money management. It's never too early to teach kids about the importance of financial literacy, and elementary school is a great time to start laying the foundation for responsible money habits. There are many ways to teach financial literacy to elementary school students, including problem solving, reading stories, and engaging in hands-on activities.

One effective way to teach financial literacy to elementary school students is through problem solving. By presenting students with real financial scenarios and challenges, they can learn how to analyze situations and make informed decisions about money. For example, teachers can create math problems that involve budgeting, saving, and spending money. Students can work in groups or individually to solve these problems, which will help develop their critical thinking skills and financial skills.

Reading stories about money management is another fun way to teach financial literacy to elementary school students. There are many children's books available on topics such as saving, budgeting, investing, and giving. By incorporating these stories into the curriculum, teachers can help students understand important financial concepts in a fun and relatable way. Reading stories about heroes who made smart financial choices can inspire students to do the same in their own lives.

Hands-on activities are also valuable in teaching financial literacy to elementary school students. By engaging in activities like setting up a classroom store, creating a budget for a class project, or participating in a mock stock market game, students can gain hands-on experience with money management. These hands-on activities not only reinforce important financial concepts, but also help students develop valuable skills such as decision-making, problem-solving, and teamwork.

Incorporating technology into financial literacy education can also enhance student engagement and learning. There are many online resources and apps that provide interactive lessons on topics such as budgeting, saving, investing, and credit management. Teachers can use these tools to supplement their lessons and give students additional opportunities to practice financial skills in a virtual environment.

Financial literacy is an important skill that everyone should have in order to effectively manage their finances and make informed decisions about money. In today's complex and fast-paced world, equipping children with the knowledge and skills to navigate financial situations is more important than ever.

One of the main ways to improve financial literacy is to include it in the curriculum of primary schools. By introducing financial concepts at an early age, students can build a strong foundation of knowledge that will serve them well throughout their lives.

The content of forming financial literacy in elementary school students should focus on fundamental concepts such as budgeting, saving, investing, and understanding the value of money.

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These concepts can be introduced in a fun and engaging way through games, activities, and real-world examples.

Budgeting is an important skill that students should learn early. By teaching kids to budget and track their spending, they can develop good money management habits that help them avoid debt and live within their means.

Another important concept to emphasize in financial literacy education is saving. Students need to know the importance of saving for short-term goals, such as buying toys or going on a trip, as well as for long-term goals, such as college or retirement. By inculcating the habit of saving early, students can build a solid foundation for their future financial security.

Financial literacy is another key aspect that should be introduced to elementary school students. While investing can seem like a complicated subject, students can learn about basic investment principles such as risk and return, diversification, and age-appropriate interest. By understanding these concepts early, students can understand the benefits of investing for long-term growth.

Finally, students should be taught about the value of money and how to make informed purchasing decisions. By exploring concepts such as needs and wants, comparison shopping, and advertising tactics, students can develop critical thinking skills that will help them make wise financial choices throughout their lives.

Requires a multifaceted approach that combines problem solving, story reading, hands-on activities, and technology integration. By teaching students a comprehensive money management education from an early age, educators can empower them to make wise financial decisions throughout their lives. With the right tools and resources at their disposal, elementary school students can develop the knowledge and skills they need to be financially responsible.

Summary:

In conclusion, it can be said that the formation of financial literacy in elementary school students is an important issue that requires the attention of teachers, politicians and parents. By giving children the knowledge and skills to make informed financial decisions from a young age, we can give them the opportunity to achieve long-term financial stability and success.

Building financial literacy in elementary school students is essential for their future success. By addressing this challenge through improved curriculum and increased parental engagement, we can help our children have the tools they need to navigate the complex financial world with confidence and competence.

It is critical that schools prioritize financial education in their curricula and provide teachers with the necessary resources and training to effectively teach these concepts. In addition, parents can play an important role in reinforcing financial lessons at home and setting a positive example for their children.

By breaking down barriers to teaching financial literacy in elementary schools and implementing innovative solutions, we can ensure that future generations are equipped with the tools they need to successfully navigate the complexities of personal finance.

It is very important to equip children with the knowledge and skills necessary to navigate the complex world of finance. By introducing concepts such as budgeting, saving, investing and understanding the value of money at an early age, schools can help ensure students are prepared to make informed financial decisions now and in the future.

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MODERN ADVANCES IN THE STUDY OF HUMORAL AND CELLULAR IMMUNITY
IN CHILDREN BORN FROM A MOTHER WITH COVID-19.

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Abstract: Although several studies have provided information on short-term clinical outcomes in children with perinatal exposure to SARS-CoV-2, data on the immune response in the first months of life among newborns exposed to the virus in utero are lacking. The purpose of the study to characterize systemic and mucosal antibody production during the first 2 months of life among infants who were born to mothers infected with SARS-CoV-2.

Keywords. COVID-19 infection, placenta, Apgar scale, inflammation, fibrin, villitis, intervillitis.

Immunologic dysfunction due to coronavirus disease 2019 (COVID-19) is closely related to clinical prognosis, and the inflammatory response of pregnant women may affect the directional differentiation and function of fetal immune cells. Reducing the severity and severity of COVID-19, as well as secondary in women at risk, especially during pregnancy it is very important to take preventive measures to prevent complications. Vaccination against COVID-19 for pregnant women and their newborns can significantly reduce the morbidity and mortality of their babies. It is urgent to introduce methods of prevention of coronavirus infection. The need is focused on the development of effective vaccines against COVID-19 led to many studies. Currently, there is very little information about the vaccination against COVID-19 in pregnant women, and yet there are no specific recommendations for vaccinating pregnant women against COVID-19. 60 pregnant women were taken for examination: 22 women with COVID-19 infection in the 2nd and 3rd trimester of pregnancy infected, a positive result was obtained in the polymerase chain reaction (PCR) analysis (main group), 38 women with uncomplicated pregnancy (control group). Women 20 they were between the ages of 1 and 36. General obstetrics in pregnant women examination, general blood from laboratory tests, urinalysis, coagulogram, vagina bacteriological examination, ultrasound examination; Apgar status of the newborn evaluation according to the scale; morphological and histological examinations of the placenta were carried out. Results. During follow-up, 8 (36%) women were in the 2nd trimester, 14 (64%) were in the 3rd trimester infected with COVID-19 during the trimester. In the 1st trimester in 6 of the patients, in 8 of the patients in the 2nd trimester, the disease is moderately severe level passed. The occurrence of symptoms in case of infection with COVID-19. 22 of the women in the main group also underwent ultrasound examination: 16 (73%) have fetal-placental-uterine blood circulation disorder II A and B levels observed, due to fetal respiratory distress syndrome in 11 (50%). premature termination of pregnancy by emergency caesarean section carried out, in the remaining 5 (23%) women, the method of induction of pregnancy stopped with pregnancy. In 38 women in the control group was born at term by physiological delivery. In the morphological examination of the placenta of women in the control group, 13 (59%) placentas were overweight, Calcifications were detected in 18 (82%) patients, the size of the cysts was within the normal range. Conditional no changes in

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placenta weight and dimensions were detected in women in the group. Histological according to the results of the examination, 20 (90%) of women in the control group have chronic villitis and intervillousitis was detected. 14 (64%) who had a moderate level of COVID-19 infection decidual in all patients, in 4 (18%) of women who had a light period arteriopathy, atherosclerosis, fibrinoid necrosis were detected. Conditionally healthy women calcifications and increased fibrin tissue were found in 23 (60%) placentas Interventricular thrombi occur in all women with COVID-19 80% of these clots belong to the fetal part of the placenta.

The incidence of critical illness caused by COVID-19 is near 19%, of which most cases progress to acute respiratory distress syndrome and respiratory failure, accompanied by acute immune dysfunction. SARS-CoV-2 infection causes a sharp decline in lymphocyte counts, especially a reduction in CD4 T cells, accompanied by an uncontrolled release of inflammatory cytokines, leading to the second strike and aggravating pathological changes in the respiratory system. The clinical symptoms vary among the infected population, suggesting that individual immune status is related to COVID-19 susceptibility and that immune dysfunction may play an essential role in developing critical illness. Because of the special immunologic status of pregnant women, the maternal inflammatory response to coronavirus infection may affect the structural and functional development of the fetus and neonate. In children, COVID-19 is mild or asymptomatic; however, the virus can remain in the body for a long time, and viral nucleic acids can persist in feces, which implies that there is a possibility of nonrespiratory transmission in children. The immaturity of immunologic function in children and newborns leads to their increased susceptibility to viral infections, while the immaturity of adaptive immunologic development may make their clinical symptoms different from those in adults. Together, these aspects raise serious questions as to why clinical manifestations of infected children and newborns are different from those of adults with immunosuppression and what impact the inflammatory reaction caused by maternal infection has on the immunologic function of the fetus. We speculate that the answers may be related to the immaturity of fetal immunity, especially dominant immune tolerance. Given the critical role of immunologic activity in COVID-19 pathogenesis and the possible influence of infected mothers on the differentiation of immunologic cells in newborns, we analyzed the immunologic status of newborns born to mothers with COVID-19 in the third trimester. The newborn serum immunoglobulin levels were analyzed and showed that IgG levels were similar in the None, Within 1 week, and Over 1 week groups and that there was no significant difference among them. IgM content was slightly higher (at an average level of 0.22 ± 0.04 g/L) than the detection threshold (<0.175 g/L) in 10 cases, whereas in the other 41 cases, the level of IgM was under the detection threshold. The CD19 lymphocyte cell counts in these 10 cases were within the normal range, which suggested that fetal CD19 cells were not activated in the uterus.

Currently, according to statistics from the Cochrane Library There are 1,956,562 cases of COVID-19 in pregnant women, 1203 of them ended in death. US Centers for Disease Control and Prevention Center for Prevention (CDC), World Health Organization (WHO), American professional societies such as the College of Obstetricians and Gynecologists (ACOG), the Royal College of Obstetricians and Gynecologists (RCOG) and others pregnant believe that women are at higher risk of contracting COVID-19. Published information is pregnant in pregnant women of reproductive age compared to women without also showed that in pregnant women infected with COVID-19, premature birth and operative delivery by caesarean section, myocardial damage, there are reports of increased cases of preeclampsia and perinatal death. According to A.

Angelidou and others, he was infected with COVID-19 about 75% of pregnant women with preterm birth completed. In addition, COVID-19 infection of the host tissues inflammation and histoarchitectonic disorders, fetal vascular perfusion It is associated with chorion inflammation (villitis), which is associated with this virus it has a negative effect on perinatal outcomes through injury, that is, new it is characterized by showing other side effects in newborns. We also tested pregnancy in 100 women with COVID-19 based on the study of the history of childbirth, the results of pregnancy and childbirth in them we conducted a retrospective analysis. Those included in the study had the disease COVID-19 was divided into two groups, taking into account the duration of playing: 50 people (1- group)-infected with COVID-19 in the second trimester of pregnancy pregnant women, 50 (group 2) - pregnant women infected with COVID-19 in the third trimester of pregnancy. Pregnant women belonging to both groups infected with coronavirus specific features of pregnancy and childbirth in women assessed by analyzing their medical records obtained from the storage facility. The majority of group 1 and 2 patients with COVID-19 are severely socia it was determined that women with.

Summary. COVID-19 infection is an inflammation of the placenta, like other organs causes it to happen. According to the results, the changes in the fetus are in the placenta due to the changes, if the pregnancy is terminated in time, it is serious in the baby no changes are observed. Placenta during pregnancy with COVID-19 infectio can perform a protective function for the fetus. For this reason, there is little chance of serious diseases in the baby's organs.

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LINGUOCULTUROLOGICAL ANALYSIS OF PROVERBS AND SAYINGS IN THE
RUSSIAN AND UZBEK LANGUAGES

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Abstract – Linguoculturology focuses primarily on the content side of proverbs and sayings, and in this regard, it uses data from other humanities. The article presents a comparative analysis of proverbs expressing the specific characteristics of Russian and Uzbek linguistic cultures. Russian proverbs and sayings containing the names of food products are used as a source of material for the dictionary "Proverbs and Sayings of the Russian people" by V.I. Dahl. The analysis of proverbs and sayings of the Russian language contained in V.I. Dahl's dictionary, as well as their comparison with Uzbek proverbs and sayings, allows us to supplement with new details the worldview that has developed between the two peoples and has been consolidated in the language.

Key words: linguoculturology, ethnographer, phraseological units, ethnic stereotypes, paremias.

I. Introduction

The interest of researchers in studying the problems of the relationship between language and culture has naturally increased. An analysis of key cultural concept based on the material of individual languages is necessary to identify the universal and specific in the perception of reality by the carriers of these languages. The study of concepts in a comparative plan provides an opportunity to identify ethnospecific factors that determine the similarities and differences in the processes of conceptualization among different peoples. An important role is assigned to the most significant concepts, which is determined by the frequency of their use.

II. Literature review

In recent decades, linguistics has dynamically developed new directions and approaches to the study of linguistic material, one of which is the linguoculturological approach, which is pursued by such scientists as V.A. Maslova, Yu.S. Stepanov, A.A. Zalevskaya, I.A. Baudouin de Courtenay, J. Weisgerber, A. Vezhbitskaya, E.M. Vereshchagin, L. Wittgenstein, V. Humboldt, L.V. Shcherba and others.

III. Analysis

Since proverbs and sayings are elements of paremiology, the principles of linguistic and cultural analysis of paremiological units of other types, namely phraseological units, can be extended to the process of their research. Within the framework of this study, focused on the study of paroemias, the opinion of V.A. Maslova is relevant for us, who, arguing about the specifics of linguistic and cultural analysis of phraseological units, states the following:

1. In most phraseological units there are "traces" of national culture that must be identified.
2. Cultural information is stored in the internal form of the FE, which, being a figurative representation of the world, gives the phraseology a cultural and national flavor.
3. The main thing in identifying cultural and national specifics is to reveal the cultural and national connotation" [Maslova, 2001, p. 82]. Cultural and national connotation in science means the following:

Cultural connotation is the interpretation of denotative or figuratively motivated aspects of the meaning of a linguistic sign in the categories of culture, involving the identification of the connection of the image underlying the nominative unit of the language (word or phraseology) with stereotypes, symbols, standards, mythologems and other signs of national and universal culture mastered by the native-speaking people. The concept of cultural connotation is the basic one for linguoculturology – the part of linguistics that explores and describes the correspondence of language and culture in their synchronous interaction and mutual influence" [Telia, 2011, p. 145]. The key concept in this discussion is the concept of a stereotype, which in ethnolinguistics and linguoculturology is often referred to by the term "ethnostereotype": "An ethno stereotype is understood as a standard idea that most people who make up one or another ethnic group have about people belonging to another or their own ethnic group.

Ethnic stereotypes reflect the idea of "their own" and "others" and are divided into heterostereotypes, representations, opinions, value judgments about the most characteristic features and qualities of another ethnic community", and autostereotypes, representations, opinions, value judgments about the most characteristic features and qualities of their ethnic community" [Kondakova, 2015, p. 302]. From the fact that the proverbs and sayings embody extremely important, relevant information for people's life, we can say that paroemias are necessary, among other things, to maintain self-awareness. Also, the fact that proverbs and sayings mainly embody ethnostereotypes, once again indicates that the absolute majority of proverbs are connected by their origin with folk speech, although various influences are not excluded for its formation. The question of the origins of a particular proverb or is a key one for linguoculturology, since the cultural components included in them can be clarified almost exclusively by establishing their origin. Meanwhile, according to our observations, the absolute majority of Russian and Uzbek proverbs and sayings are connected by their origin not with other genres or, moreover, foreign language influence, but with the element of living folk speech, the subject of which is the following areas: 1) The sphere of everyday life. In this case, household items, clothing, shoes, residential buildings and their elements are mentioned in the paremia. For example, Russian proverbs:

«Снову и ложка красна, а охлебается, под лавкой (под горой) навалывается»;

«Хоть изба елова, да сердце здорово»;

«Добрая слава до порога, а худая за порог»;

[“Again, the spoon is red, but it chokes, it piles up under the bench (under the mountain)”;

“Though the hut is spruce, but the heart is healthy”;

“Good fame to the threshold, and bad fame beyond the threshold”];

A similar group in Uzbek paremiology is also represented in a much larger volume:

«El og‘zi – elak, gap turmas».

«Suprasida uni yo‘q, tom boshida qo‘sh tandir».

2) The sphere of family relations. In this case, proverbs and sayings mention the terms of kinship, the names of the social roles of a man and a woman, concepts related to the relationship of husband and wife, parents and children. According to our observations, Russian and English proverbs and sayings are addressed to the topic of family relations to approximately the same extent: Examples of Russian proverbs:

«Кошка да баба в избе, мужик да собака на дворе»;

«Не та счастлива, которая у отца, а та счастлива, которая у мужа»;

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["A cat and a woman in a hut, a man and a dog in the yard";

"Not the happy one that the father has, but the happy one that the husband has";]

Examples of Uzbek proverbs: «*Ayol yerdan chiqqan emas – erkak bolasi, erkak ko'kdan tushgan emas – ayol bolasi*».

3) The sphere of social relations. In this case, in proverbs and sayings names of social statuses, relationships, titles and posts. Examples of Russian proverbs:

«*Виноватого бог простит, а правого царь пожалует*»;

«*Князья в платье, и бояре в платье: будет платье и на нашей братье*»;

["God will forgive the guilty one, but the king will grant the right one";

"Princes in dress, and boyars in dress: there will be a dress on our brother";]

Uzbek proverbs and sayings addressed to the sphere of social relations, are found as often as Russians:

«*O'lim - shohu gadoga barobar*».

«*Qizli uyni shoh ham so'ratadi, gado ham*».

4) The sphere of agriculture. In this case, agricultural implements, land plots, names of agricultural crops and stages of agricultural cycles are mentioned in proverbs. For example,

Russian proverbs and sayings:

«*Кто ленив с сохой, тому весь год плохой*»;

«*Рогатой скотины – вилы да грабли; хорошей одежды – мешок да рядно*»;

["Who is lazy with a plow, the whole year is bad";

"Horned cattle - pitchforks and rakes; good clothes - a bag and in a row "]

In Uzbek proverbs and sayings, the words of these lexical-thematic groups are represented much more often:

«*Ekin yerida ko'karar, er — elida*».

«*Yer — ona, suv — ota, mehnat — boylik*».

5) The sphere of animal husbandry. In this case, the proverb mentions the names of poultry and animals (including cats and dogs), their food, as well as the inventory and buildings intended for them. For example, Russian proverbs:

«*Быкай не быкай, а быка не будет*»;

«*Долог у коровы язык, да не велят (не дают) говорить*».

«*Добрую лошадь одной рукой бей, другою слезы утирай*»;

["Do not bull, but there will be no bull";

"The cow's tongue is long, but they do not order (do not allow) to speak."

"Beat a good horse with one hand, wipe away tears with the other"]

Uzbek proverbs and sayings are extremely often addressed to names of domestic animals such as cattle (cattle, small cattle) dog, horse:

«*Mol — boqqanniki, yer — ekkanniki*».

«*Mol boqqanning bartmog'idan moy tomar*».

«*Ot oyog'idan topar, odam — qo'lidan*».

6) The sphere of wildlife. In this case, the paroemia mentions the names of wild animals, birds and wild plants (trees, herbs). For example:

«*Таскал волк – потащили и волка*»;

«*Не дал бог медведю волчьей смелости, а волку медвежьей силы*».

«*Рано попала лиса в яму, а знать ночевать*».

[“The wolf dragged - they dragged the wolf”;
"God did not give the bear wolf courage, and the wolf bear strength."
“The fox got into the pit early, and the nobility to spend the night.”]
«*Ayiqni yo'qlasang, tayoq ol*».
«*Baliqing kuni ko'l bilan, botirning kuni el bilan*».

7) The sphere of inanimate nature. In such proverbs and sayings, the names of objects of physical geography (forests, rivers, seas, mountains, swamps, etc.) and natural phenomena (rain, thunder, snow, etc.) are used. For example:

«*Болезнь не по лесу ходит, а по людям*».
«*Кабы не кабы, так было б море, не пруды*».
["The disease does not go through the forest, but through people."
"If not if only, so it would be the sea, not the ponds."]

Taking into account the fact that there are many deserts, mountains, rivers in Uzbekistan, their names are more common in Uzbek proverbs and sayings:

«*Daryo suvini bahor toshirar, odam qadrini mehnat oshirar*».
«*Tog' tog' bilan qovushmas, odam odam bilan qovushar*».

8) Sphere of trades and crafts. In Russian and Uzbek proverbs and sayings approximately equally reflect the names of the realities of crafts (hunting, fishing), crafts and their inventory. For example, Russian proverbs:

«*Убитого зверя не держи в поле (худо будет)*»;
«*Отец рыбак, и дети в воду смотрят*»;
["Do not keep the killed beast in the field (it will be bad)";
"The father is a fisherman, and the children look into the water"]

Examples of Uzbek proverbs and sayings:

«*Begona bilan quyon ovlama, ovlasang ham, yoningga boylama*».
«*Hunar bilgan och qolmas, yo'l tanigan kech qolmas*».

On the territory of Uzbekistan, people were mainly engaged in agriculture. In many proverbs and sayings, this was reflected in the concepts of land and the names of inventory:

«*Yo yering serob bo'lsin, yo otang mirob bo'lsin*».
«*Kelinning so'zi ketmonday botar, bolaning so'zi botmonday botar*».

9) The sphere of religion and spirituality. A large group of Russian proverbs and sayings deserves special attention, which are thematically connected by their origin with the popular interpretation of the Christian religion and with the remnants of East Slavic paganism. In such proverbs, the concepts of “God”, “church”, “priest”, “cross”, “demon”, “devil”, “goblin”, “water”, “brownie”, and also “stump” are widely used - in the sense "pagan idol" Compare Russian proverbs:

«*Как ни живи, только Бога не гневи!*»
«*Колокол в церковь людей зовет, а сам никогда не бывает*»;
["No matter how you live, just don't anger God!"
"The bell calls people to the church, but it never comes"]

Uzbek proverbs in this regard demonstrate the Muslim religion:

«*Ota rozi — xudo rozi*». «*Nafsi buzuq hayitda o'lar, dini buzuq — masjidida*».
«*Sinalmagan farishtadan, sinalgan shayton yaxshi*».

Also in Russian proverbs and sayings, not the names of characters of lower mythology related to proper names (goblin, water, devil, demon):

«Аминем беса не отшибешь (или: беса не отбудешь)».

«Храбер, силен, а все с лешим не справиться».

["Amenem you won't get rid of the demon (or: you won't get rid of the demon)." "Brave, strong, but you can't cope with the goblin."]

IV. Discussion

The proposed classification of the folk origins of proverbs is debatable and is not thought by us as an exhaustive problem of the poetics of proverbs and sayings, since poetics is, first, the linguistic structure of a work of art. Consequently, the poetics of proverbs and sayings is largely determined by the linguoculturological properties of their language.

In this regard, it is necessary to point out another specific linguoculturological feature of the language of proverbs, which is associated with the nature of the use of proper names.

Proper names in proverbs are presented quite widely. However, at the same time, these proper names cannot be defined as "a single or collective person or object in its integrity and uniqueness, individualizing it, unambiguous for it, regardless of the context" [Great Soviet Encyclopedia]. Significant shifts take place in the semantics of the proper name in the structure of proverbs. Consider specific examples of Russian proverbs:

«С именем Иван, без имени – болван».

«Ерема в воду, Фома ко дну: оба упрямы, со дна не бывали».

["With the name Ivan, without a name - a blockhead."

"Yerema into the water, Thomas to the bottom: both are stubborn, they have not been from the bottom."]

Examples of Uzbek proverbs:

«Aql o'rgatguncha, naql o'rgat, Aql — Hasan, odob — Husan».

«Hasan aka quysin, Qo'chqor aka ichsin».

In these examples, proper nouns are not nouns, specific individuals. Obviously, in such cases, either names are used, widely used, or names associated with other folklore works.

Our comparison of the origins of Russian and Uzbek proverbs and some of their constitutive features allowed us to make the following observation. The vast majority of Russian proverbs and sayings undoubtedly belong to the peasant language culture, gravitating towards life, nature, work, family (clan), faith.

In the Uzbek proverbs, obviously, a deep connection with a working person, who is clearly aware of and emphasizes his connection with nature, relatives and God, has been preserved. In Uzbek proverbs, the names of labor tools, most of the terms of kinship, and religious concepts are practically preserved.

V. Conclusion

Finally, it is obvious that there is a similarity between the Russian and Uzbek traditions in relation to proverbs. For the Russian and Uzbek concept sphere, proverbs and sayings are a "storehouse" of the wisdom of ancestors, the quintessence of their life experience, used as a standard that is easily reproduced in certain conditions and contexts.

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THE PROBLEM OF TRUTH IN PHILOSOPHY

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ANNOTATION.

In this article, we will address the important question of how we can best reflect reality in our work. There are two main approaches – through direct observation and through reflection. At the heart of this discussion is a typology of knowledge that classifies it into rational and emotional, phenomenalist and essentialistic, empirical and theoretical, fundamental and applied, philosophical and specifically scientific. natural sciences and humanities. It is important to consider that each of these types of knowledge has its own characteristics and applications.

Keywords: The Truth Surrounding World, Subject, Object, Process, Classification, Typology, Form of Knowledge, Discussion Problem, Mythological Cognition, Philosophical Directions.

THE PROBLEM OF TRUTH IN PHILOSOPHY

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Abstract. This article talks about the correct reflection of reality - in living contemplation or in thinking. A typologization of knowledge is given: rational and emotional, phenomenalist (qualitative concepts) and essentialist (armed mainly with quantitative means of analysis), empirical and theoretical, fundamental and applied, philosophical and special scientific, natural science and humanities

Key words: truth, the surrounding world, subject, object, process, classification, typology, form of knowledge, debatable problem, mythological knowledge, philosophical directions.

Man tries to master the world around him in various ways, and in this process two main aspects can be distinguished. The first of these is the logistical side, which includes the production of subsistence items, labor, and practice. The second aspect is related to the psychic dimension, where the interaction between the subject and the object of cognition is presented as only a partial manifestation of this sphere. As practice and cognition develop, The process of cognition becomes more and more detailed and takes many forms. Despite the fact that these forms are related, they are not identical to each other and each has its own specifics.

Logical forms of thought are methods of reflecting reality using interrelated abstractions such as concepts, judgments, and inferences. They are the basis of more complex forms of rational cognition, including hypotheses and theories. Concepts are a form of thinking that reflects the general lawful connections, essential aspects and attributes of phenomena. They are fixed in definitions and have the flexibility and mobility to accurately reflect the real dialectic of the development of the objective world. Philosophical categories such as quality, quantity, matter, contradiction, and others are the most general concepts. Judgment, in turn, serves as a form of thinking that reflects the objects, processes of reality, as well as their properties and

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interconnections. A proposition can be either true (e.g., "Paris is on the Seine") or false (e.g., "Rostov is the capital of Russia"). Concepts and judgments are the basis for the construction of inferences, which are the process of transition from one concept to another and allow us to obtain new results in cognition. Inference, *ihrerseits*, is a form of thinking whereby new knowledge is derived from previously established knowledge, usually in the form of a judgment. Rational thinking is closely related not only to sensory perception, but also to other forms of cognition, such as imagination, fantasy, emotions, and other factors that play a role in the process of cognition. Cognition and practice are two indispensable components of the formation and development of scientific and other forms of knowledge. Philosophers of various schools emphasize the importance of practice in the process of cognition. The concept of practice encompasses a wide range of terms.

Hegel singles out an important idea: if man is subordinated to the surrounding nature for his own ends, then in his actions he becomes its master. This manifests itself through activity, work (although spiritually abstract), where a person creates a new reality - the world of material and spiritual culture, new conditions of his existence, which are not given to him by nature in a ready-made form (they are a kind of second nature). Practice and cognition are interrelated aspects of the same historical process. But practical activity plays a crucial role here.

The main functions of practice in the process of cognition are: 1. Practice plays the role of a source of knowledge, since all our knowledge arises from it. 2. Practice is the basis of knowledge, the engine of its development. It penetrates into all aspects, forms, and stages of cognition, revealing new properties and aspects of phenomena. The practice also cannot be successful without the use of various technical means and equipment. 3. Practice acts as an intermediary for the achievement of cognitive goals. It requires construction and control of people's activities. In the end, all our knowledge is returned to practice, exerting an active influence on its development. Man seeks not only to discover the world, but also to control this knowledge in order to transform the world, to satisfy the material and spiritual needs of people, and to improve their lives.

The classification of forms of knowledge remains one of the most difficult and controversial problems in philosophy. There is no clear definition of knowledge, as Ludwig Wittgenstein claimed. Nevertheless, it is still possible to distinguish some forms of knowledge and consider their main features.

Mythological knowledge played a significant role in the initial stages of human development. It was a fantastic interpretation of reality, created by the popular imagination and carrying within itself an unconscious artistic embodiment of nature and society. Mythology made it possible to form knowledge about nature, the cosmos, man, his existence, forms of communication, and much more. Modern research, especially in the philosophy of structuralism, demonstrates that mythological thinking is not just a game of imagination, but a simulation of the world, which contributes to the recording and transmission of the experience of generations.

The typology of knowledge can be carried out according to various criteria. There are rational and emotional knowledge, phenomenalist and essentialist, empirical and theoretical, fundamental and applied, philosophical and special, natural sciences and humanities. The main goal of knowledge in any form is the search for truth, which is usually long, laborious, and contradictory. Error, as something inevitable, always accompanies the path to truth at all stages of its development and deepening. The question of the essence of truth and the ways to get rid of error has always interested people, not only in science. The categories of truth and error are key

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elements in the theory of knowledge, expressing opposite but interdependent aspects of the cognitive process. Each of these aspects has its own peculiarity, which we will consider in more detail.

Delusion is cognition that does not correspond to its object, does not correspond to it. Delusion is an inadequate form of cognition and is conditioned by the limitations of socio-historical practice and cognition itself. Delusion distorts the reflection of reality and arises due to the absolutization of certain aspects of cognition. For example, "theoretical astrology" is entirely misleading, although it may contain some truths. Likewise, scientific astronomy can also have It is a system of true knowledge confirmed by observation.

Truth is knowledge that corresponds to its object, coincides with it. In other words, it is a correct and faithful reflection of reality in awareness and thinking. The attainment of truth is the key goal of knowledge in any of its forms, be it scientific, philosophical, artistic, etc. The main properties and attributes of truth include objectivity, dependence on reality and its practice, and independence from individuals (e.g., the fact of the Earth's rotation around the Sun). Truth is not a property of material objects, but a characteristic of knowledge about them.

Truth can be viewed from two angles: objective and subjective. Objective truth is concerned with external material content, while subjective truth depends on an internal ideal form. People learn truth and express it through subjective forms such as concepts, laws, or theories. An example is Newton's discovery of universal gravitation, which is an innate property of the material world, but was formulated and expressed in the form of truth and scientific law.

Absolute truth and relative truth are two indispensable components of one objective truth and of true knowledge as a whole. They reflect the different levels and aspects of our cognition of the objective world and differ only in the degree of accuracy and completeness of their reflection. There is no clear boundary between them - they are not separate kinds of knowledge, but different aspects of this knowledge. Absolute truth is understood as complete and all-encompassing knowledge of reality as a whole. as an epistemological ideal that cannot be fully attained, but which must always be striven for. In addition, the absolute truth is information that will never be refuted in the future. Take, for example, statements that "birds have beaks" or "humans are mortal" – these are so-called eternal truths that refer to certain aspects of the world.

Relative truth, on the other hand, reflects the changeability of true knowledge, its deepening and refinement with the development of practice and knowledge. Old truths can be replaced by new ones, as happened with the replacement of classical mechanics with quantum mechanics. Likewise, old truths can be refuted and become delusions, such as the idea of ether or caloric. Relative truth is characterized by incompleteness, conventionality, approximation, and incompleteness. In contrast, Absolute truth is holistic knowledge that is formed through the creative development of knowledge through practice. There are two extreme positions in understanding the relationship between absolute and relative truth: the dogmatic one, which exaggerates the importance of the stable moment, and the relativistic one, which emphasizes the mutable side of each truth.

Hegel rightly pointed out that there is no such thing as absolute truth, and that truth is always concrete. This means that all true knowledge, whether in science, philosophy, or art, is always determined by the conditions of place, time, and other specific circumstances, which knowledge must take into account in the most precise form. If we ignore these conditions and imagine true knowledge beyond its actual application, This will inevitably lead to the

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transformation of truth into error. Even simple truths such as "2 + 2 = 4" or "the sum of the internal angles of a triangle is 180 degrees" are valid only in certain systems or frameworks. For example, the first statement is valid only in the decimal system, and the second is true only in terms of Euclidean geometry.

Thus, objective, absolute, relative, and concrete truths are not different kinds of truths, but one and the same true knowledge with its own characteristics and properties.

The question of distinguishing truth from error has always been of interest to thinkers. In the history of philosophy and science, different points of view have been proposed on this subject. For example, Descartes believed that clarity and distinctness of thought were the criterion of true knowledge, while Feuerbach sought this criterion in sense-data. However, it became clear that clarity and distinctness of thought are highly subjective things. And feelings don't always provide the right information. For example, our knowledge of seeing the sun moving around the earth, or of breaking a spoon in a glass of water at the boundary of the air, is based on misconceptions.

Testing knowledge for truth through practice is not a one-time act or something immutable and mirrored. It is a process that has a historical and dialectical character. At the same time, this criterion is relative, since the practice itself develops, improves and is filled with new content. Therefore, practice cannot fully prove the conclusions reached in the process of cognition at any given time.

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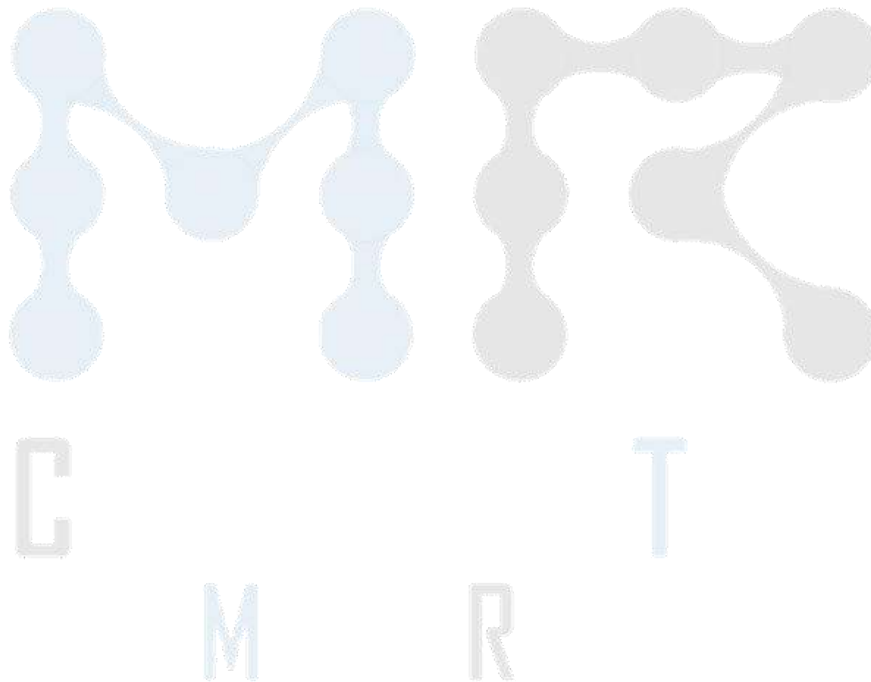
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**DIABETES MELLITUS AND OSTEOPOROSIS: A MODERN VIEW
OF THE PROBLEM AND TREATMENT OPTIONS**

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Abstract:

Diabetes mellitus (DM) and osteoporosis are two prevalent metabolic disorders that often coexist, presenting a complex interplay with significant clinical implications. This paper aims to provide a comprehensive overview of the relationship between DM and osteoporosis, exploring underlying mechanisms, shared risk factors, and potential treatment strategies. A thorough literature review was conducted, examining recent research findings and clinical studies on this topic. The paper discusses the impact of DM on bone metabolism, the role of insulin signaling pathways, and the influence of chronic hyperglycemia on bone tissue. Furthermore, it explores the bidirectional relationship between DM and osteoporosis, highlighting how osteoporosis may exacerbate diabetic complications and vice versa. Various treatment options, including lifestyle modifications, pharmacotherapy, and emerging therapies targeting both DM and osteoporosis, are also discussed. Overall, a multidisciplinary approach integrating diabetes management and osteoporosis prevention is crucial for optimizing patient outcomes and reducing the burden of these interconnected conditions.

Keywords: Diabetes mellitus, osteoporosis, bone metabolism, insulin signaling, treatment options.

Introduction:

Diabetes mellitus (DM) and osteoporosis are prevalent chronic conditions that pose significant public health challenges worldwide. DM, characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both, affects approximately 463 million adults globally [1]. Osteoporosis, a skeletal disorder characterized by low bone mass and microarchitectural deterioration of bone tissue, predisposes individuals to increased fracture risk and associated morbidity and mortality [2]. While traditionally viewed as distinct entities,

accumulating evidence suggests a complex interplay between DM and osteoporosis, with implications for disease pathogenesis, management, and outcomes.

Pathophysiology of Diabetes Mellitus and Osteoporosis:

The pathophysiology of DM involves multiple mechanisms, including insulin resistance, impaired insulin secretion, and chronic hyperglycemia, which contribute to systemic metabolic derangements and end-organ complications [3]. Notably, insulin exerts direct effects on bone metabolism, with insulin receptors present on osteoblasts and osteoclasts, suggesting a regulatory role in bone formation and resorption [4].

Chronic hyperglycemia in DM promotes oxidative stress, advanced glycation end-products (AGEs) formation, and inflammation, which adversely affect bone health by impairing osteoblast function, increasing osteoclast activity, and altering the composition of the extracellular matrix. Furthermore, dysregulation of the insulin signaling pathway in DM may disrupt bone homeostasis, leading to reduced bone formation and increased bone resorption [5, 6]. In addition to the direct effects of DM on bone, shared risk factors such as aging, sedentary lifestyle, and nutritional deficiencies contribute to the development of osteoporosis in individuals with DM [7]. Moreover, diabetic complications, including neuropathy and nephropathy, may exacerbate bone fragility and fracture risk. Conversely, osteoporosis-related fractures may compromise mobility and exacerbate glycemic control in individuals with DM, creating a vicious cycle of skeletal and metabolic dysfunction [8, 9].

Epidemiology and Clinical Implications:

The coexistence of DM and osteoporosis poses substantial clinical implications, including an increased risk of fragility fractures, functional impairment, and mortality [10]. Epidemiological studies have demonstrated a higher prevalence of osteoporosis and fractures in individuals with DM compared to non-diabetic counterparts, independent of traditional fracture risk factors. Moreover, fractures in individuals with DM are associated with poorer outcomes, including delayed healing, increased complications, and higher mortality rates [11, 12].

Treatment Strategies:

The management of individuals with both DM and osteoporosis requires a multifaceted approach addressing metabolic control, bone health, and fracture prevention. Lifestyle interventions, including weight-bearing exercise, adequate calcium and vitamin D intake, and smoking cessation, are fundamental components of osteoporosis prevention and management in individuals with DM [13].

Pharmacotherapy plays a crucial role in the management of osteoporosis and may have additional benefits in individuals with DM. Antiresorptive agents such as bisphosphonates, denosumab, and selective estrogen receptor modulators (SERMs)

are commonly used to reduce fracture risk and preserve bone mass in osteoporotic individuals. However, caution is warranted when prescribing these agents in individuals with DM, as some medications may impact glucose metabolism or interact with antidiabetic medications [14, 15].

Emerging therapies targeting both DM and osteoporosis hold promise for improving outcomes in this population. For example, incretin-based therapies, such as glucagon-like peptide-1 (GLP-1) receptor agonists and dipeptidyl peptidase-4 (DPP-4) inhibitors, have been shown to exert favorable effects on bone metabolism and may have potential implications for fracture prevention in individuals with DM [16]. Additionally, newer antidiabetic agents, including sodium-glucose cotransporter-2 (SGLT-2) inhibitors and dual peroxisome proliferator-activated receptor (PPAR) agonists, are under investigation for their effects on bone health and fracture risk reduction [17].

Conclusion:

In conclusion, the relationship between DM and osteoporosis represents a complex interplay with significant clinical implications. Understanding the underlying mechanisms linking these conditions and implementing multidisciplinary management strategies are essential for optimizing patient outcomes and reducing the burden of these interconnected disorders. Further research is needed to elucidate the mechanistic pathways involved and identify novel therapeutic targets for the prevention and treatment of osteoporosis in individuals with DM.

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Abstract: Basketball is a sport that requires skill, teamwork, and discipline. In order for a team to be successful, it is essential for the coach to provide clear and concise instructions to the players. This is especially important for the girls' basketball team, as they must be able to execute plays and strategies effectively in order to win games.

Keywords: basketball, sports, activities, effective strategies, players, teamwork, instructions

Introduction: As well as with most sports, girls' basketball involves a lot of running. A great way to warm up the leg muscles is by doing the "ladders" drill. This is where you line up a series of sticks on the ground and make sure you step in and out of the squares. Run back through the squares for the return. Side stepping is also an effective exercise as it increases the strength and flexibility of leg muscles. It is a great way to prevent knee injuries. A good agility warm-up should always finish with sprints. Using the full distance of the court, run from baseline to baseline. A good method is to start with 1 to 2 runs and work up to 5, taking a short rest in between. This will get the entire body warmed up and ready to go. Total time for the agility warm-up should be 20 to 30 minutes.

A good conditioning warm-up can greatly increase the skill and ability of the basketball girls. The most common problem with team warm-ups is that they lack speed and intensity. Encourage all players to participate, paying close attention to the technique in their warm-up exercises. After a few weeks the ability level of team warm-ups should increase and the team can then move onto more advanced drills. This will also increase the morale and attitude of the team. With the game of basketball always changing, and the need to obtain higher fitness levels, an effective warm-up should last the entire training session. Remember it is the coach's responsibility to lead and encourage the warm-up, and ensure that every player takes it seriously. With enough persistence, the team will see the results in the games that they play. Stretching exercises
Calf stretch: This muscle has two different plays. To stretch the gastrocnemius, take a lunge position with back leg straight and front leg bent. Ensure the back foot is pointing directly forwards and then push the back heel into the floor. You should feel a stretch in the upper calf on the back leg. To stretch the lower calf or soleus, from the same position bend the back leg as well so you can feel the stretch go lower down. Hold each stretch for 15 seconds.

Quadricep stretch: Stand on one leg and pull the other leg up behind you towards your buttocks. You should feel this stretch at the front of the thigh of the leg in which you are holding. Ensure that you keep balance by standing straight and not leaning to one side. Hold for at least 15 seconds and repeat with the other leg.

Hamstring stretch: Lay on the floor with both legs bent. Pull the right knee in towards your chest and attach a rope to the ankle of the leg. Use the rope to straighten the leg up in the air and

then try to pull the leg back towards you. You should feel this stretch at the back of the leg in the hamstring. Hold for at least 15 seconds and repeat on the other leg.

Cardiovascular warm-up

A very effective cardiovascular warm-up that is also a good drill for the team to work on is called the three-man weave. This drill gets its name from the weaving path that the players take up and down the court. In doing the three-man weave, the players will be continuously changing directions, running at varying speeds, and handling and passing the basketball. This will help to warm up leg muscles and knee joints and help to increase agility.

Begin by explaining the importance of warming up, followed by an explanation of a three-man weave. Since the game of basketball is one that requires the participants to move up and down a large court for an extended period of time, there are many starts and stops, and quick lateral movements. If a player is not properly warmed up before engaging in these activities, there is a much greater chance for injury to occur. A warm muscle has much more elasticity than a cold muscle and is therefore less likely to be pulled or strained. With this in mind, it is important for a team to partake in a light, yet effective cardiovascular warm-up at the beginning of each practice. This will help to gradually increase the players' heart rates and get blood circulating to all areas of the body before moving on to more physically taxing aspects of practice drills or the practice/game itself.

Agility drills

The author mentions that agility drills are important because "positions are exchanged in a split second during the game, and a player must be able to stop, start, and change direction quickly and smoothly. A well-designed agility program can improve specific basketball moves, cuts, and defensive plays." An effective agility program should contain the following factors: specificity, variety, and individual feedback. A coach can be creative in designing agility programs to mimic basketball activities; however, it is important to adhere to the fundamental principles of agility training to achieve maximal improvement in motor skills and specific conditioning. Agility training can take place on the same days as strength training, following the strength session. On the other hand, if strength and power are the priority, agility drills can be done on cardio days, or even be incorporated into off-court conditioning, provided that the necessary recovery time is allotted. High-intensity interval training (HIIT) can be incorporated into agility sessions in order to improve basketball-specific conditioning. This can be done by engaging in agility drills that last 15-30 seconds, interspersed with rest intervals. Individual feedback is important for ensuring exercise adherence and motivation. The author mentions that it has been shown that athlete motivation towards exercise can be improved by up to 80% if a feedback system is implemented.

As the coach of the girls' basketball team, it is crucial to provide specific instructions to the players in order to help them improve their skills and achieve success on the court. Here are some key instructions that should be given to qualified basketball girls by the coach:

1. Understand the game plan: The first and most important instruction that should be given to the players is to understand the game plan. This includes knowing the plays, strategies, and tactics that will be used during games. It is essential for the players to be on the same page and work together towards a common goal.

2. Communicate effectively: Communication is key in basketball, especially on defense. Players should be instructed to communicate with each other on the court, calling out screens,

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switches, and assignments. This will help the team to stay organized and prevent breakdowns on defense.

3. Play with intensity: Another important instruction for the players is to play with intensity and energy. This means giving 100% effort on every play, hustling for loose balls, and never giving up on a play. Playing with intensity can help the team to outwork their opponents and win games.

4. Focus on fundamentals: Fundamentals are the building blocks of basketball. Players should be instructed to focus on fundamentals such as shooting, passing, dribbling, and defense. By mastering the fundamentals, players can become more skilled and confident on the court.

5. Stay disciplined: Discipline is essential in basketball, both on and off the court. Players should be instructed to follow team rules, show up to practice on time, and stay focused during games. Discipline can help the team to stay organized and avoid distractions that can hinder performance.

6. Support your teammates: Basketball is a team sport, and players should be instructed to support their teammates both on and off the court. This means encouraging each other, communicating effectively, and working together towards a common goal. By supporting their teammates, players can build trust and camaraderie that can help the team to succeed.

CONCLUSION

In conclusion, providing clear and concise instructions to qualified basketball girls is essential for the coach to help them improve their skills and achieve success on the court. By following these instructions, players can become more skilled, disciplined, and effective on the court, leading to more wins and a successful season.

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TRANSPORT VOSITALARI ҲАЙДОВЧИЛАРИНИНГ БЕЛГИЛАНГАН ҲАРАКАТ
ТЕЗЛИГИНИ ОШИРИБ ЮБОРИШИ ҲУҚУҚБУЗАРЛИГИНИНГ ҲУҚУҚИЙ
ОҚИБАТЛАРИ

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Аннотация: Мазкур мақолада транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини ошириб юбориши ҳуқуқбузарлигига, ҳаракатланиш тезлиги ва йўл ҳаракати тушунчаси ва турлари, йўл ҳаракати хавфсизлигини таъминлаш фаолияти, бу борада ишларни самарадорлигини ошириш бўйича таклиф ва тавсиялар ишлаб чиқилган.

Таянч сўзлар: Ҳаракатланиш тезлиги, транспорт воситаси, йўл-транспорт ҳодисалари, йўл ҳаракати.

**ПРАВОВЫЕ ПОСЛЕДСТВИЯ НАРУШЕНИЯ ВОДИТЕЛЯМИ ТРАНСПОРТНЫХ
СРЕДСТВ ПРЕВЫШЕНИЯ УСТАНОВЛЕННОЙ СКОРОСТИ ДВИЖЕНИЯ.**

Аннотация: В статье рассмотрены вопросы, касающиеся нарушения водителями транспортных средств превышения установленной скорости движения, понятия и видов скорости движения и дорожного движения, деятельности по обеспечению безопасности дорожного движения, выработаны предложения и рекомендации по повышению эффективности работы в этом направлении.

Ключевые слова: Скорость передвижения, транспортное средство, дорожно-транспортные происшествия, дорожно-транспортное движение.

**LEGAL CONSEQUENCES OF VIOLATION BY DRIVERS OF VEHICLES
EXCEEDING THE SET SPEED LIMIT.**

Abstract: The article deals with issues related to violations by drivers of vehicles exceeding the set speed, the concept and types of speed and traffic, activities to ensure road safety, developed proposals and recommendations to improve the efficiency of work in this direction.

Keywords: Speed of movement, vehicle, traffic accidents, traffic.

Жаҳонда автотранспорт воситалари иштирокида содир этилган ҳуқуқбузарликлар натижасида жабрланганлар сони ортиб бораётганлиги ҳамда унинг келтириб чиқараётган зарарининг нақадар жиддийлиги инсониятни ташвишга солмоқда. Маълумотларга кўра дунёда ҳар йили 1.3¹⁶ миллиондан ортиқ одам йўл транспорт ҳодисаси қурбонига айланиб бормоқда. Бу дегани 24 сония ичида бир нафар фуқаро вафот этмоқда. Йўл-транспорт ҳодисалари дунёдаги 5 ёшдан 29 ёшгача бўлган ёшлар ўлимининг энг кенг тарқалган сабабидир. 20-50 миллиондан ортиқ одам эса турли хил даражадаги жароҳатлар олганлиги, шулардан кўпчилиги ногирон бўлиб қолганлиги ҳақида, оммавий ахборот воситалари орқали кўплаб инсонлар эшитган ва баъзи инсонлар видео лавҳаларини кўрган,

¹⁶ <https://news.un.org/ru/story/2022/06/1427022> электрон манба.

хаттоки шахсан гувоҳи бўлганлар ҳам орамиздан топилади. Лекин ушбу бир неча сонияда содир бўладиган аянчли оқибатларнинг, бевақт ўлимларнинг юзага келиши, йўл ҳаракати иштирокчиларининг арзимаган эътиборсизлиги ёки ҳаддан ташқари ўзига ишонганлиги натижасида содир бўлаётганлигини кўпчиликка маълум.

Тадқиқотлар натижасида шу нарса аниқ бўлдики, «Транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини ошириб юбориши» ҳуқуқбузарлиги натижасида, кўплаб оғир оқибатларга сабабчи бўлган, йўл транспорт ҳодисалари содир бўлган. Транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини ошириб юборишига қарши курашишнинг ҳуқуқий асосларини ёритишдан аввал, қуйидаги асосий тушунчаларга таъриф бериб ўтсак мантқан тўғри бўлади.

транспорт воситаси — одамларни, юкларни ташишга ёки махсус ишларни бажаришга мўлжалланган қурилма.

механик транспорт воситаси — двигатель билан ҳаракатга келтириладиган транспорт воситаси (мопеддан ташқари). Бу атама барча трактор ва ўзиюрар мосламаларга ҳам тааллуқлидир.

мопед — иш ҳажми 50 см³ гача, юқори тезлиги соатига 50 километрдан ошмайдиган двигатель билан ҳаракатга келтириладиган икки ёки уч ғилдиракли транспорт воситаси. Осма двигателли велосипедлар ва юқоридаги таърифга эга бўлган бошқа транспорт воситалари ҳам мопедларга тенглаштирилади.

мотоцикл — кажавали ёки кажавасиз икки ғилдиракли механик транспорт воситаси. Аслаҳаланган ҳолатдаги вазни 400 килограммдан ошмайдиган уч ва тўрт ғилдиракли механик транспорт воситалари, шунингдек двигателининг иш ҳажми 50 см³ дан ёки энг юқори конструктив тезлиги соатига 50 километрдан ортиқ бўлган скутер, квадроцикл, электроскутерлар ҳам мотоциклларга тенглаштирилади.

транспорт воситасининг эгаси — транспорт воситасига мулк ҳуқуқи ёки бошқа ашёвий ҳуқуқлар асосида эгалик қилувчи юридик ёки жисмоний шахс.

ҳайдовчи — йўлларда транспорт воситасини бошқариб бораётган шахс. Бошқаришни ўргатувчи, от аравани бошқараётган, ҳайвонларни миниб ҳаракатланаётган ёки уларни етаклаб бораётган, чорва моллари (пода)ни ҳайдаб бораётган шахслар ҳайдовчига тенглаштирилади.

пиёда — транспорт воситасидан ташқарида бўлган ва йўлда бирор-бир юмуш билан банд бўлмаган шахс. Ногиронлиги бўлган шахсларнинг двигателсиз аравачасида ҳаракатланаётган, велосипед, мопед, мотоцикл, чана, аравача ва болалар ёки ногиронлиги бўлган шахслар аравачасини етаклаган, шунингдек, ҳаракатланиш учун роликли конькилар, двигателсиз самокатлар ва бошқа шуларга ўхшаш воситалардан фойдаланаётган шахслар ҳам пиёдаларга тенглаштирилади.

йўл ҳаракати — одамлар ва юкларнинг транспорт воситалари ёрдамида ёки бундай воситаларсиз йўллар доирасида ҳаракатланиши жараёнида юзага келувчи муносабатлар мажмуи.

йўл — транспорт воситалари ва пиёдаларнинг ҳаракатланиши учун қурилган ёки мослаштирилган ер бўлаги ёхуд сунъий иншоот юзаси. Йўл автомобиль ва шаҳар электр транспорти йўлларини ҳамда тротуарларни ўз ичига олади.

йўл ёқаси — йўлнинг қатнов қисмига у билан бир сатҳда бевосита туташган, қоплама тури билан фарқ қиладиган ёки йўл ҳаракати қоидасида билан белгиланган 1.1 йўл чизиги

ёрдамида ажратилган, ушбу коидаларга мувофиқ ҳаракатланиш, тўхташ ва тўхтаб туриш учун мўлжалланган бўлаги.

йўл-транспорт ҳодисаси¹⁷ — транспорт воситасининг йўлда ҳаракатланиш жараёнида рўй берган, фуқароларнинг ҳалок бўлишига ёки соғлиғига зарар етишига, транспорт воситалари, иншоотлар, юкларнинг шикастланиши ёхуд бошқа моддий зарар етишига сабаб бўлган ҳодиса.

Ҳаракатланиш тезлиги — бу ҳайдовчи ҳаракатнинг серкатновлигини, транспорт воситаси ва юкнинг хусусияти ҳамда ҳолатини, йўл ва об-ҳаво шароитини, шунингдек ҳаракатланиш йўналишидаги кўринишни ҳисобга олган ҳолда, транспорт воситасини рухсат этилган тезлик чегарасидан оширмасдан бошқариши керак. Транспорт воситасининг ҳаракат тезлиги, ҳайдовчига йўл ҳаракати қоидалари талабларини тўлиқ бажариши ҳамда транспорт воситасининг ҳаракатини доимий назорат қилиб бориш имкониятини бериши керак.

Ҳаракатланиш вақтида ҳайдовчи аниқлай олиши имкониятидаги хавф юзага келса, у транспорт воситасининг тезлигини у тўла тўхташни таъминлайдиган даражада камайтириши ёки тўсикни бошқа ҳаракат қатнашчилари учун хавф туғдирмаган ҳолда айланиб ўтиш чораларини кўриши кераклиги белгилаб берилган. Аҳоли пунктларида транспорт воситаларининг тезлигини соатига 60¹⁸ километрдан, тегишли йўл белгилари ўрнатилган мактаб ва мактабгача таълим ташкилотларига етмасдан ва ўтиб кетиб 300 метрдан кам масофада соатига 30 километрдан, турар жой даҳалари ва ёндош ҳудудларда (уй-жой бинолари орасидаги ер участкасида) эса соатига 20 километрдан оширмасдан ҳаракатланишга рухсат этилган. Аҳоли пунктларидан ташқарида енгил автомобилларга ва рухсат этилган тўла вазни 3,5 тоннадан ошмайдиган юк автомобилларига тезликни соатига 100 километрдан оширмасдан ҳаракатланишига, шаҳарлараро қатнайидиган автобусларга ва микроавтобусларга тезликни соатига 90 километрдан оширмасдан ҳаракатланишига, бошқа автобуслар, тиркамали енгил автомобиллар, мотоцикллар, рухсат этилган тўла вазни 3,5 тоннадан ортиқ бўлган юк автомобилларига тезликни соатига 80 километрдан оширмасдан ҳаракатланишига, тиркамали юк автомобилларига тезликни соатига 70 километрдан оширмасдан ҳаракатланишга рухсат этилганлиги белгиланган.

Бундан ташқари ҳолатларда транспорт воситаларининг ҳаракатланиш тезлигини ошириши тақиқланади, агарда транспорт воситасининг ҳаракатланиш тезлиги белгиланган тезлик чегарасидан ошиб кетганда, ҳолатда транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини ошириб юбориши ҳуқуқбузарлик содир этилган деб баҳоланади.

Транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини ошириб юбориши ҳуқуқбузарлиги Ўзбекистон Республикасининг 1994 йил 22-сентябрда тасдиқланган Маъмурий жавобгарлик тўғрисидаги кодекснинг 128³-моддасида белгилаб берилган. Демак шундан маълумки йўл ҳаракати қоидасининг 78, 79, 80-бандларида белгиланган қоидалар бўзилган тақдирда, МЖТКнинг 128³-моддасининг тегишли

¹⁷ Ўзбекистон Республикаси Вазирлар Маҳкамасининг “Йўл ҳаракати қоидаларини тасдиқлаш тўғрисида”ги қарори, 12.04.2022 йилдаги 172-сон.

¹⁸ Ўзбекистон Республикаси Вазирлар Маҳкамасининг “Йўл ҳаракати қоидаларига автомобиль йўлларида ҳаракат хавфсизлигини таъминлашга қаратилган ўзгартириш киритиш тўғрисида”ги қарори, 03.04.2023 йилдаги 140-сон.

бандларида кўрсатилган жазоларнинг бири қўлланилиши мумкин. Ушбу модданинг *биринчи қисмида* агарда транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини соатига 20 километрдан кўп бўлмаган катталиқда ошириб юборганда, (масалан белгиланган тезлик чегараси соатига 50 километр бўлганда соатига 70 километрдан ошмаганда ва белгиланган тезлик соатига 70 километр бўлганда соатига 90 километрдан ошмаганда), бундай ҳуқуқбузарликлар учун базавий ҳисоблаш миқдорининг бир баравари миқдорида жарима солишга сабаб бўлади.

128³-модда иккинчи қисмига асосан транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини соатига 20 километрдан ортиқ, лекин 40 километрдан кўп бўлмаган катталиқда ошириб юбориши ёки транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини соатига 20 километрдан кўп бўлмаган катталиқда худди шундай ҳуқуқбузарлик учун маъмурий жазо қўлланилганидан кейин бир йил давомида худди шундай ҳаракат такроран содир этилганда, базавий ҳисоблаш миқдорининг беш баравари миқдорида жарима солишга сабаб бўлади.

128³-модда учинчи қисмида эса агарда транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини соатига 40 километрдан ортиқ катталиқда ошириб юборганда, бу ҳолат учун базавий ҳисоблаш миқдорининг тўққиз баравари миқдорида жарима солишга сабаб бўлади.

128³-модда тўртинчи қисмида транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини соатига 20 километрдан ортиқ, лекин 40 километрдан кўп бўлмаган катталиқда худди шундай ҳуқуқбузарлик учун маъмурий жазо қўлланилганидан кейин бир йил давомида такрор ошириб юбориши ёхуд транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини соатига 20 километрдан кўп бўлмаган катталиқда худди шундай ҳуқуқбузарлик учун икки марта маъмурий жазо қўлланилганидан кейин бир йил давомида такрор ошириб юборганлиги учун эса базавий ҳисоблаш миқдорининг ўн беш баравари миқдорида жарима солишга ёки транспорт воситасини бошқариш ҳуқуқидан бир йил муддатга маҳрум қилишга сабаб бўлади.

128³-модда бешинчи қисмининг Транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини соатига 40 километрдан ортиқ катталиқда худди шундай ҳуқуқбузарлик учун маъмурий жазо қўлланилганидан кейин бир йил давомида такрор ошириб юбориши ёки транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини соатига 20 километрдан ортиқ, лекин 40 километрдан кўп бўлмаган катталиқда, худди шундай ҳуқуқбузарлик учун икки марта маъмурий жазо қўлланилганидан кейин бир йил давомида такрор ошириб юбориши ёхуд транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини соатига 20 километрдан кўп бўлмаган катталиқда худди шундай ҳуқуқбузарлик учун уч марта маъмурий жазо қўлланилганидан кейин бир йил давомида такрор ошириб юбориши, транспорт воситасини бошқариш ҳуқуқидан икки йил муддатга маҳрум қилиб, базавий ҳисоблаш миқдорининг йигирма беш баравари миқдорида жарима солишга сабаб бўлади. Лекин ушбу ҳуқуқбузарликнинг такрорийлиги инobatга олиниши учун ҳуқуқбузарлик махсус автоматлаштирилган фото ва видео қайд этиш техника воситалари орқали қайд этилмаган бўлиши керак. Сабаби Ўзбекистон Республикасининг маъмурий жавобгарлик тўғрисидаги кодекснинг 17¹-моддаси 3 қисмида шундай белгиланган.

17¹-модда 3 қисми *Махсус автоматлаштирилган фото ва видео қайд этиш техника воситалари орқали йўл ҳаракати қоидалари бузилганлиги қайд этилган тақдирда, ҳуқуқбузарликнинг такрорийлиги ҳисобга олинмайди, лекин ушбу кодекснинг 321-моддасининг учинчи қисмида назарда тутилган ҳол бундан мустасно. Ушбу ҳолатлар куйидагилар:*

Махсус автоматлаштирилган фото ва видео қайд этиш техника воситалари орқали қайд этилган йўл ҳаракати қоидалари бузилганлиги бўйича иш янгидан кўриб чиқиш учун юборилиб, қарор бекор қилинган тақдирда, мазкур иш маъмурий ҳуқуқбузарликни содир этган шахсга нисбатан у илгари содир этган ҳуқуқбузарликларнинг такрорийлигини инобатга олган ҳолда умумий асосларда кўриб чиқилиши лозим. Агар маъмурий жавобгарликка тортиш тўғрисидаги қарор устидан берилган шикоятни кўриб чиқиш жараёнида тегишли транспорт воситасига ҳуқуқбузарлик қайд этилган пайтда эгалик қилган шахс аниқланса ёхуд мазкур транспорт воситаси бошқа шахсларнинг ғайриҳуқуқий хатти-ҳаракатлари натижасида транспорт воситаси мулкдорининг эгалигидан чиқиб кетганлиги аниқланса, транспорт воситасининг мулкдори ўзига тегишли транспорт воситасидан фойдаланиб содир этилган, махсус автоматлаштирилган фото ва видео қайд этиш техника воситалари орқали қайд этилган йўл ҳаракати қоидабузарликлари учун маъмурий жавобгарликдан озод этилади. Маълумот учун тезкор ва махсус хизматларнинг транспорт воситалари, шунингдек улар кузатиб келаётган транспорт воситалари томонидан йўл ҳаракати қоидаларига мувофиқ имтиёздан фойдаланган ҳолда содир этилган маъмурий ҳуқуқбузарликлар махсус фото ва видео қайд этишнинг автоматлаштирилган техник воситалари орқали қайд этилган тақдирда ҳамда кечиктириб бўлмайдиган хизмат вазифаларини бажарганликни тасдиқловчи ҳужжатлар тақдим этилганда ҳайдовчиларнинг маъмурий қоидабузарлиги охири зарурат ҳолатларида содир этилган деб топилади ва маъмурий иш ушбу кодекснинг 271-моддасига мувофиқ тугатилади. Тезкор ва махсус хизматларнинг кўк ёки қизил ёхуд кўк ва қизил рангли ялтироқ маёқчани ёққан ҳолда ҳамда махсус товушли сигналлар билан яқинлашиб келаётган транспорт воситаларига уларнинг тўсиқсиз ўтиб кетиши учун йўл берган транспорт воситалари ҳайдовчилари томонидан содир этилган маъмурий ҳуқуқбузарликлар фото ва видео қайд этишнинг махсус автоматлаштирилган техник воситалари орқали қайд этилган тақдирда, ҳайдовчиларнинг маъмурий ҳуқуқбузарлиги охири зарурат ҳолатларида содир этилган деб топилади ва маъмурий иш ушбу кодекснинг 271-моддасига мувофиқ тугатилади.

Мамлакатимизда транспорт воситалари иштирокида содир этилаётган ҳуқуқбузарликларга қарши курашиш тизимини ташкил этишда, жаҳон тажрибасини чуқур ўрганилиб, бу соҳада ижобий натижаларга эришган давлатларнинг услубларига таққослаб амалга ошириладиган бўлса, кўзланган натижаларга эришиш мумкин. Масалан Исроилда шаҳар доирасида ҳайдовчилар 50 км/соат тезликка риоя қилишлари керак ва мамлакат йўлларида 90 км/соат тезликка руҳсат берилади, тезлик чегараси 100 км/соат бўлган тезликда ҳайдаш пайтида, ҳайдовчилар барча тезлик чегаралари тегишли қоидалардан хабардор бўлиши талаб қилинади. Маълумот учун Исроил давлатидаги 200 км узунликдаги “Ицхака Рабина” тезюрак шоссеси мавжуд.

Ушбу давлатда транспорт воситасида ҳаракатланишда, чекланган тезликдан ошиб кетганлик учун катта жарималар мавжуд ва қўшимча жазо сифатида ҳуқуқбузарга нисбатан транспорт воситасини бошқариш ҳуқуқлардан маҳрум бўлиш билан ҳам таҳдид қилинади.

Бундай жазолар мамлакатимизда ҳам бор албатта, лекин бундан ташқари ушбу давлатда ҳайдовчилар маҳаллий йўлларда масофани сақлашга нисбатан жуда каттиқ муносабатда бўлишлари талаб қилинади. Транспорт воситалари орасидаги оптимал масофа 2-3 метр қилиб белгиланган ва ушбу масофага ҳайдовчилар қатъий риоя қиладилар. Маҳаллий ҳайдовчилар пиёдаларга катта эътибор ва ҳурмат билан қарашади. Пиёдалар ўтиш жойи билан кесишган жойга яқинлашганда, тезликни камайтириш керак. Тартибга солинмаган ўтишларда пиёдалар авфзалликларга эга, шунинг учун сиз тўхташингиз ва сабр-тоқат билан йўл беришингиз ҳамда ҳаракат қилиш учун мумкин бўлган вазиятни кутиб туришингиз керак бўлади.

Йўл ҳаракати иштирокчиларининг йўл ҳаракати қоидаларини яхши билиши ва унга амал қилишини, йўлларда ҳаракат хавфсизлигини самарали таъминланишини, келгусида шу каби ҳуқуқбузарликни содир этмаслиги учун ҳайдовчилар қайта тарбияланишига эришиш ҳамда инсонларнинг ҳаёти, соғлигини ва мулкани химоя қилиш, асосий мақсадимиздир.

Юқоридаги билдирилган фикр-мулоҳазалардан келиб чиққан ҳолда транспорт воситалари ҳайдовчиларининг белгиланган ҳаракат тезлигини ошириб юбориши ҳуқуқбузарлигига қарши курашишнинг ҳуқуқий асосларини такомиллаштириш борасида куйидагилар таклиф этилади.

Биринчидан, йўлларда транспорт воситаларининг ҳаракатланиш тезлигини назорат қилишнинг замонавий механизми жорий этилиш ва қоидабузарликларни аниқлаш юзасидан компьютерлаштирилган бошқарув тизимини янада кенгайтириш таклиф этилади.

Иккинчидан, йўл ҳаракати қоидасини бузган йўл ҳаракати иштирокчилари учун қонунчилигимизда белгиланган жазоларни қайта кўриб чиққан ҳолда, жазодан ташқари ҳар бир содир этган ҳуқуқбузарлиги учун жарималар баллари жорий этилиб, ушбу баллар тўплами асосида қоидабузарларни қайта тарбиялаш учун хизмат қиладиган "музатииш" механизмини йўлга қуйиш ҳамда тегишли норматив ҳуқуқий ҳужжатларга, ўзгартиш ва қўшимчалар киритиш мақсадга мувофиқдир.

Учинчидан, ҳайдовчиларни тайёрлаш ва қайта тайёрлаш соҳасида таълим хизматларини сифатини яхшилаш, ҳайдовчилар ва ҳайдовчиликка номзодлардан амалий имтиҳон олиш учун замонавий маҳсус ажратилган ва жиҳозланган автодромлар куриш.

Тўртинчидан, йўл шароитларидан келиб чиқиб, юқори ва кичик тезликда хавфсиз ҳаракатланишни таъминлайдиган ҳолларда йўлларнинг айрим қисмлари ёки ҳаракатланиш бўлақларида айрим транспорт воситаларига ҳаракатланиш тезлигини оширишга ва пасайтиришга қаратилган тегишли йўл белгиларини ўрнатиш ёки қайта ўрнатиш.

Бешинчидан, йўл ҳаракати иштирокчиларининг ҳуқуқий онги ва маданиятини юксалтириш ҳамда йўл ҳаракати қоидаларига риоя қилиш юзасидан жойларда таъсирчан тарғибот учрашувларини ташкиллаштириш.

Хулоса ўрнида шуни айтиш мумкин юртимизда йўл ҳаракати хавфсизлигини таъминлаш ва бунда аҳолининг ҳушёрлигини оширишга қаратилган саъй-ҳаракатларда ҳаракат хавфсизлиги тадбирининг алоҳида ўрни бор. Йўл-транспорт ҳодисалари содир бўлиш эҳтимоли юқори бўлган ҳудудларга тезлик ўлчаш мосламалар билан таъминлаш ишларини жадаллаштириш, таълим муассасалари ҳамда пиёдалар орасида тарғибот-ташвиқот ишларини янада кучайтирилса ўйлайманки, келгусида йўл-транспорт ҳодисаларидан жабрланганлар сони камайишига эришган бўлар эдик. Энг катта мақсадимиз,

тизимга янги инновацияларни жорий қилган ҳолда инсон ҳаётини сақлаб қолишга қаратилгандир. Бунинг учун нафақат ички ишлар органлари, бошқа ҳуқуқни муҳофаза қилувчи органлар ва ташкилотлар барча имкониятларни, кучларни сафарбар этиб, жамоат тартибини, фуқароларимизнинг осойишта ҳаётини таъминлаш йўлида аниқ дастур асосида чора-тадбирларни белгилаши керак бўлади.

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**ЭФФЕКТИВНОСТЬ РАБОТЫ ИНГИБИТОРОВ ОТ СОЛЕОТЛОЖЕНИЯ И
КОРРОЗИИ ДЛЯ ВОДООБОРОТНЫХ СИСТЕМ НЕФТЕПЕРЕРАБАТЫВАЮЩИХ
ПРОМЫШЛЕННОСТИ**

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Аннотация. В этой статье рассматривается влияние воды в оборотных трубопроводных системах и защита металла от накопления солей и коррозии. Ингибиторы различного состава применяются для длительной эксплуатации оборудования и трубопроводов. К ингибиторам, применяемым в системах оборотного водоснабжения нефтегазовой отрасли, предъявляются особые требования. Для выполнения требования необходима разработка ингибитора коррозии и солеотложения из местного сырья для систем оборотного водоснабжения нефтеперерабатывающих заводов, что является одной из актуальных задач, требующих решения.

Ключевые слова: коррозия, солеотложения, ингибитор, оборотная водоснабжения, ОЭДФК, Феномин-95Т.

**EFFECTIVENESS OF INHIBITORS AGAINST SCALE DEPOSITION AND
CORROSION FOR WATER SYSTEMS OF THE OIL REFINING INDUSTRY**

Abstract. This article examines the effect of water in circulating pipeline systems and the protection of metal from salt accumulation and corrosion. Inhibitors of various compositions are used for long-term operation of equipment and pipelines. Special requirements are imposed on inhibitors used in recycling water supply systems in the oil and gas industry. To fulfill the requirement, it is necessary to develop an inhibitor of corrosion and salt deposition from local raw materials for recycling water supply systems of oil refineries, which is one of the urgent tasks that need to be solved.

Keywords: corrosion, salt deposition, inhibitor, circulating water supply, EDFC, Phenomenon-95T.

**NEFTNI KAYTALASH SANOATI SUV TIZIMLARI UCHUN QO'RSHIB KO'KMAS
VA KOROZIYONGA QARSHI INGIBITORLARNING SAMARALI.**

Annotatsiya. Ushbu maqolada aylanma quvur tizimidagi suvning ta'siri va metallni tuz to'planishi va korroziyadan himoya qilish ko'rib chiqiladi. Uskuna va quvurlar uzoq muddatli ishlashi uchun turli xil tarkibdagi ingibitorlar qo'llaniladi. Neft va gaz sanoatining aylanma suv ta'minoti tizimlarida qo'llaniladigan ingibitorlar uchun maxsus talablar mavjud. Talabni bajarish uchun neftni qayta ishlash zavodlarining aylanma suv tizimlari uchun mahalliy xomashyodan korroziya va tuz to'planishiga qarshi ingibitorni ishlab chiqish kerak, bu dolzarb muammolardan biri bo'lib, uni hal qilishni talab qiladi.

Kalit so'zlar: korroziya, tuz to'planishis, aylanma suv ta'minoti, OEDFK, Fenomin-95T.

В мировом масштабе особое внимание уделяется разработке новых композиций ингибиторов солеотложения и коррозии с полифункциональными свойствами, снижению их расхода при использовании защиты от коррозии водооборотных систем. Большое внимание уделяется на научные исследование, посвященному снижению солеотложений и коррозии в водооборотных системах. Поэтому разработка современных методов защиты от коррозии водооборотных систем нефтеперерабатывающих предприятий является одной из актуальных проблемой и требует своего решения.

На сегодняшней день в Узбекистане достигнуты определенные теоретические и практические результаты по разработке новых высокоэффективных ингибиторов солеотложения и коррозии и их композиции на основе местного сырья, технологий защиты водооборотных систем с их использованием. Разработаны и освоены нетрадиционные способы интенсификации процессов защиты от солеотложения и коррозии.

Защита оборудования и трубопроводов от коррозии и коррозионно-механического разрушения может быть осуществлено различными путями: применением ингибиторов коррозии, защитных футеровок, электрохимической защиты, технологических методов, коррозионно-стойких материалов.

Из перечисленных методов наиболее эффективным и перспективным является применение ингибиторов [1; 2]. Этот метод имеет следующие преимущества: 1) ввод в систему без нарушения технологического процесса практически в любом месте; 2) при малых капитальных затратах позволяет снизить количество аварий; 3) в большинстве случаев является наиболее экономичным способом защиты, позволяя использовать обычные углеродистые стали.

К ингибиторам для нефтегазовой промышленности предъявляются особые требования. Наряду с основным назначением, ингибиторы должны иметь низкие защитные концентрации, быть нетоксичными, не загрязнять окружающую среду. На практике существует мало ингибиторов, удовлетворяющих одновременно все перечисленные требования. Номенклатура ингибиторов, применяемых в нефтегазовой промышленности, невелика. Используются высокомолекулярные органические вещества, содержащие гетероатомы азота, серы, кислорода, фосфора, которые являются адсорбционно-активными центрами чаще используется азотсодержащие вещества. Используют и ингибиторы на основе минеральных, неорганических соединений [3].

Необходимость широкого применения дешевых и эффективных ингибиторов ставит перед исследователями задачу получения их на базе крупнотоннажных отходов или полупродуктов химических и нефтехимических производств. Известны примеры такого подхода. Так, ингибиторы серии ИКИХП - отходы нефтедобывающего производства. По механизму воздействия они являются ингибиторами смешанного- катодно-анодного типа, с преимущественным торможением анодного процесса.

Из производимых из аналогичного сырья ингибиторов следует и ряд других препаратов. Так, Мунсор-3 обеспечивает защиту от коррозии стали Ст3 в модельном растворе сточной воды, насыщенном углекислым газом. СНПХ-43Р также рекомендован для защиты углеродистой стали в минерализованных водных средах.

В качестве ингибитора коррозии для нефтегазодобывающей промышленности предлагаются отходы и полупродукты производства капролактама (ингибитор коррозии КРЦ-3). Ингибитор Донбасс-1 является, отходом коксохимической промышленности. Нитрованные масла -

отход химического производства. Изготавливаемый из последних-ингибитор Минкор-3 в минерализованной воде обеспечивает степень защиты конструкционных сталей 80-95 % при солесодержании до 200 г/л, в присутствии кислорода. Другой пример - использование отхода химического производства "Азот". Производимые из него ингибиторы: пленкообразующий НИИФОХ и водорастворимый РГУ-1. Из аналогичных отходов предложено получать ингибиторы для защиты стального нефтегазового оборудования в 2-х фазных сероводородсодержащих средах от коррозии и от солеотложения.

Классифицируют ингибиторы и по классу используемых для их производства химических соединений. Большую группу образуют ингибиторы коррозии стали на основе производных пиридина. Так, ингибиторы И-1-А, И-1-В, И-3-А, И-3-Д, "Север" представляют собой смесь алкилпиридинов, получаемых конденсацией паральдегида с аммиаком.

Многие из запатентованных ингибиторов сероводородной коррозии представляют собой соединения на основе органических аминов, например, алифатических аминов. Исследована ингибирующая способность этиламина при изменении состояния поверхности стали. Показано, что защитное действие четвертичных аммониевых солей алифатических аминов в сероводородной среде зависит от строения исходного амина. Исходные амины получают аммонолизом первичных спиртов, от бутилового до нонилового. Высказаны соображения о влиянии их строения на степень торможения коррозии [4].

Для исследования механизма ингибирования применяют электрохимические методы. Многие органические преимущественно тормозят анодную составляющую процесса растворения стали. Такие ингибиторы эффективней тем, чем в большей степени проявляют они одновременно блокирующий и энергетический эффекты торможения коррозии. Показано, что ингибиторы на основе производных пиридина с электрофильными заместителями адсорбируются на металл физически, а с неэлектрофильными - специфически или химически. Установлено, что в ароматическом амине введение больших нуклеофильных заместителей в метаположение к реакционному центру приводит к усилению эффективности ингибирования, что связывают с адсорбцией их молекул на поверхности стали [5].

Подводя итог, можно утверждать, что, во-первых, ингибирование коррозии титановых пластин теплообменников в системе очистки ФНПЗ является наиболее оптимальным способом борьбы с коррозией и солеотложения. Вот почему разработка, создание и внедрение полифункциональных композиций, способных обеспечить в отношении системы очистки титановых пластин теплообменников ФНПЗ, направленное на защиту от коррозии и солеотложения, а также биообрастания, недорогих, на основе местного сырья или отходов, а потому экономически целесообразных, является актуальной задачей.

В обратном водоснабжении ФНПЗ система подачи воды и очищающего раствора изготовлена из углеродистой стали и чугуна. Агрессивными ионами в используемой воде можно считать сульфат- и хлорид-ионы. Кроме того, предполагаемый ингибитор коррозии и солеотложения может в своем составе дополнительно содержать различные ионы. Поэтому подбор композиции для защиты системы подачи очищающего раствора предполагалось проводить в воде, содержащей сульфат-, хлорид- и нитрат-ионы [7].

В воде и нейтральных водных растворах, согласно результатам проведенного литературного и патентного поиска по ингибиторной защите, в качестве ингибитора

(замедлителя) коррозии стали и чугуна в настоящее время широко используются такие неорганические соединения, как хроматы, фосфаты, амины, нитриты, силикаты, соли органической кислоты - бензоаты и другие. Именно с использованием некоторых из них будет направлено наше внимание для решения поставленных задач.

В нефтеперерабатывающих производствах вода применяется как технологическое сырье и как теплоноситель, т.е. для охлаждения и нагревания аппаратуры, в том числе для очистки и охлаждения продуктов переработки нефти.

Результаты проведенного мониторинга вод используемых во внутреннем водоснабжении ФНПЗ и БНПЗ, показали о наличие процессов коррозии и солеотложений, что негативно влияют на эффективность работы теплообменного оборудования и чтобы избежать этой проблемы на заводе используется импортный ингибитор коррозии и солеотложений «ОЭДФК» и «Фенамина-95Т».

Проведенный анализ научно-технической литературы и исходных данных ФНПЗ и БНПЗ, по анализу вод систем водоснабжения, позволило нам целенаправленно подойти к решению вопроса подбора новых ингибиторов коррозии и солеотложение для систем водоснабжения ФНПЗ и БНПЗ.

Были проведены промышленные испытания новых составов ингибиторов коррозии и солеотложения в охлаждающей воде, используемой в системе оборотного водоснабжения ФНПЗ и БНПЗ.

Результаты проведенных исследований по степени защиты от коррозии при использовании разработанных ингибиторов солеотложения представлены в таблице 1.

Таблица 1.

Сравнительная эффективность ингибирования коррозии реагентами «Фенамин-95Т», «ИОНХ-1», «ГПУЦ» оборотной охлаждающей воды внутреннего водоснабжения БНПЗ и ингибирования солеотложения по методике термостатированные в модельном растворе

№ п/п	Название образца	Скорость коррозии, г/м ² ·ч	Степень защиты от коррозии, %	Эффективность ингибирования солеотложений, (Э _{исо}), %
1	без ингибитора	-	-	
2	Фенамин - 95Т	0,13625	0	47,4
3	ИОНХ-1	0,383	34,3	84,2
4	ГПУЦ	0,00146	97,5	73,7

Также была проведена промышленные испытания новых составов ингибиторов коррозии и солеотложений в воде оборотного водоснабжения ФНПЗ.

Испытывались ингибиторы коррозии и солеотложений ГПМЦ, ИОНХ-1 в сравнение с импортным ингибитором солеотложений ОЭДФК (оксиэтилидендифосфоновая кислота). С использованием метода на приборе ИСО-1 по солеотложению, а для определения степени ингибирования коррозии использовали гравиметрический метод. Полученные результаты приведены в таблице 2 [6].

Таблица 2.

Сравнительная эффективность ингибирования солеотложения реагентами «ГПМЩ», «ИОНХ-1» и «ОЭДФК» на приборе ИСО-1 и эффективность ингибирования коррозии

№	Растворы	Скорость коррозии V_k , г/м ² ·час	Степень защиты, (Z) от коррозии, %	Эффективность ингибирования солеотложений, %
1	без ингибитора	-	-	-
2	ИОНХ-1	0,0000083722	59,25	89,41
3	ГПМЩ	0,0000064287	68,71	91,76
4	ОЭДФК	0,0000245186	0	94,11

Как свидетельствуют (таблица-1) проведенные исследования разработанные ингибиторы солеотложение более эффективны по ингибирующей способности коррозии относительно Фенамин-95Т. Наибольшую активность по ингибирующей способности к коррозии проявляет ГПУЩ – 97,5%, а по ингибированию солеотложения составляет 73,7%.

Полученными результатами (таблица-2) проведенных исследований в таблице наиболее эффективен по ингибированию коррозии и солеотложению в оборотных водах ФНПЗ используемых для отложения теплообменного оборудования препарат ГПМЩ, которые имеют степень защиты от коррозии 68,71%, а по эффективности ингибирования солеотложения 91,76% и рекомендуются для промышленных испытаний.

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TEACHING DESCRIPTIVE GEOMETRY PROBLEMS AND EXPANDING STUDENTS' SPATIAL IMAGINATION USING THE POSSIBILITIES AND ADVANTAGES OF THE AUTOCAD GRAPHICS SOFTWARE

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***Annotation.** This article explores the basic and complex primitives in AutoCAD graphics software, as well as methods of analysis, stages of project planning, and the project development process. It also discusses creating simple contour drawings in AutoCAD graphics software, as well as object manipulation techniques such as rotating, mirroring, scaling, and stretching. Additionally, it covers object creation in AutoCAD graphics software, including trimming, extending, filleting, dimensioning, and scaling objects.*

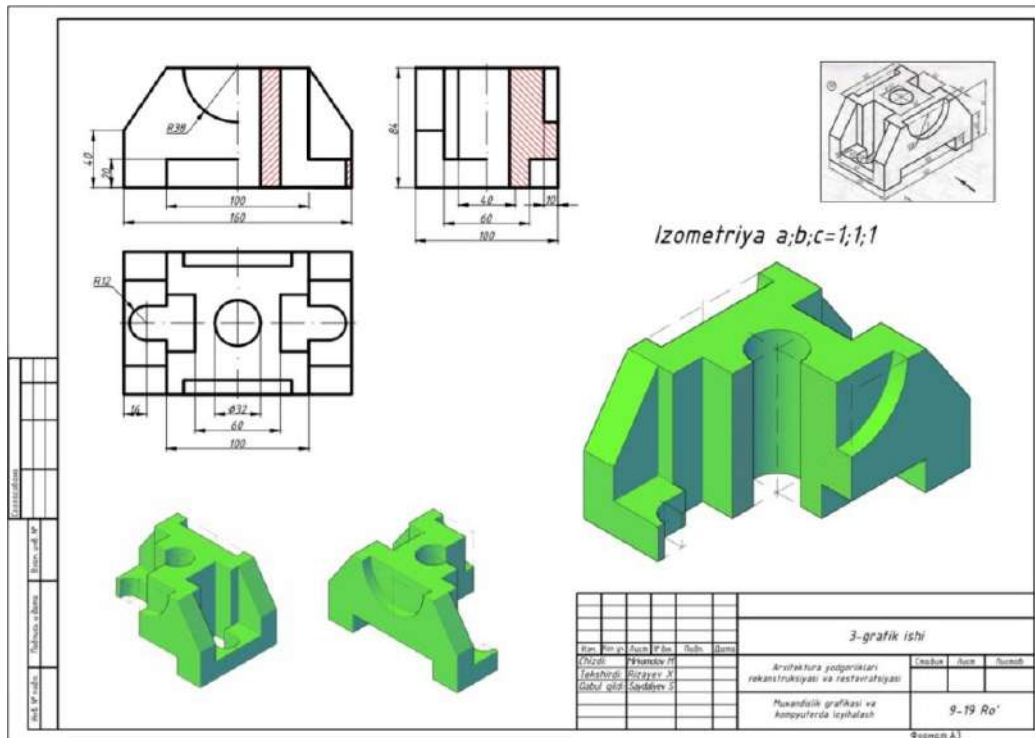
***Keywords:** AutoCAD graphics software, basic primitives, complex primitives, analysis methods, project planning stages, project development process, object manipulation, rotation, mirroring, scaling, stretching.*

Entry: In the era of current technological advancement, engineers no longer rely solely on drawing boards, rulers, pencils, and compasses to draft their designs; instead, they utilize computer hardware to model their own discovered structures.

Nowadays, the use of automatic design software has become commonplace in many developing countries around the world. Programs like AutoCAD and 3ds Max, developed by the American company **Autodesk**, are widely used and continually evolving by engineers and designers. The initial versions of the AutoCAD software were developed in the 1980s and have since gained widespread use.

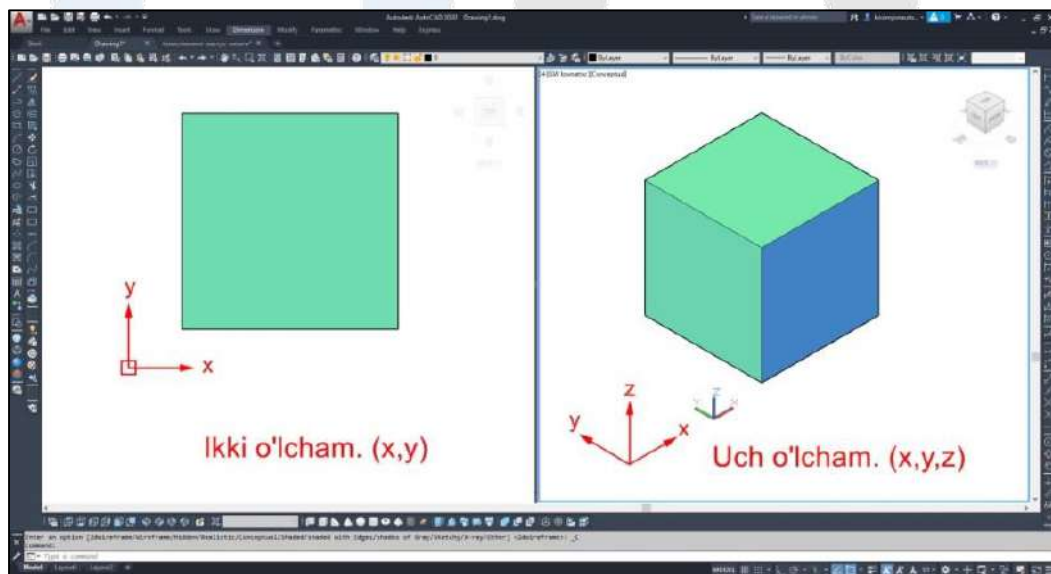
The AutoCAD graphics software version 2023-24 has been developed and released to users, reflecting the continuous evolution of the program. Users' feedback and suggestions are taken into consideration as the software continues to evolve. This software is built on the principles of Descriptive Geometry and Engineering Graphics, meaning that users can implement drawing rules and adhere to state standards in their designs.

In AutoCAD software, users can create lines and surfaces, draw details, generate geometric models from lines and surfaces, produce representations from desired angles, apply hatch patterns, depict in desired colors, manipulate and animate movements. By depicting drawings and details in three dimensions and visualizing them in space, students can further develop their spatial imagination (see shape 1). This enhances the effectiveness of teaching.



Shape 1.

In AutoCAD graphics software, it is possible to perform actions such as creating simple lines and progressing to complex surfaces. In addition to this, tasks such as creating 2D-dimensional and 3D-dimensional objects and editing them can also be carried out (see shape 2). The software provides capabilities for converting simple shapes into models, which is noteworthy. The AutoCAD graphics software allows operation on personal computers running both DOS and Windows operating systems.



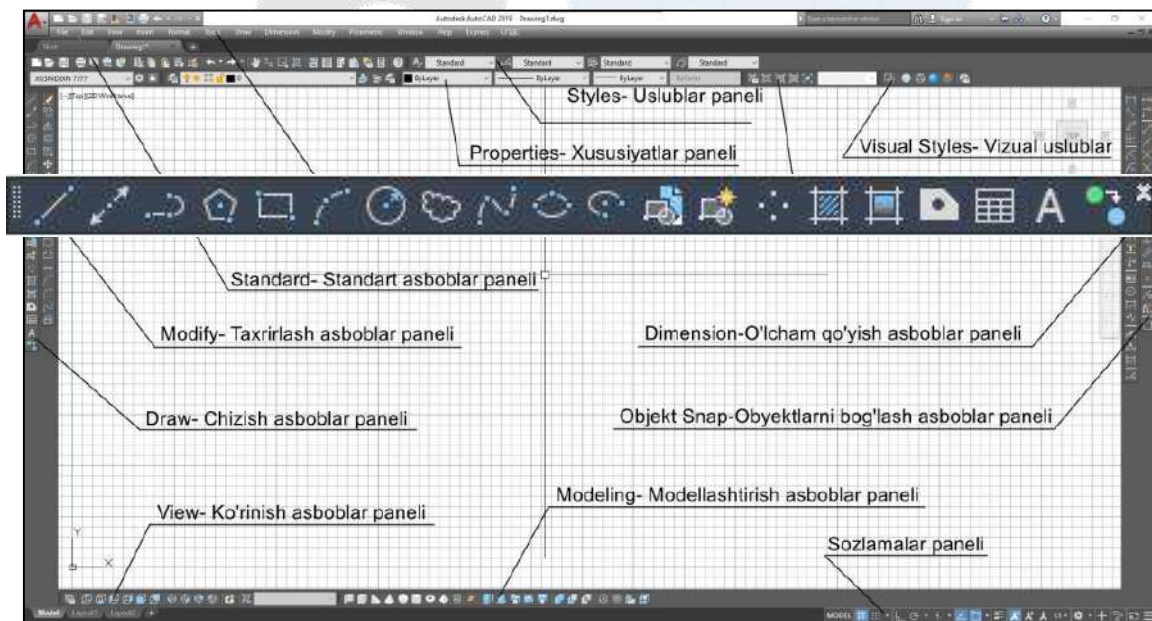
Shape 2.

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AutoCAD graphics software is one of the most sophisticated programs designed to work with high precision. Therefore, starting from simple drawings is essential. First, familiarize yourself with the AutoCAD commands. Install the AutoCAD software on your personal computer and launch it using the desktop shortcut. Upon opening, it will typically be in its default state. To customize the required tools and save the "Tools" toolbar panel to your workspace, you need to bring it up by navigating through the commands. Failing to save these settings could lead to repetitive adjustments each time you launch AutoCAD. To avoid this, it's crucial to save your customized settings right from the beginning (3-shape).

Shape 3.



Once you have configured AutoCAD, you can explore drawing tools such as lines, straight lines, circles, rectangles, polygons, and curves using the Draw panel. (4-shape)

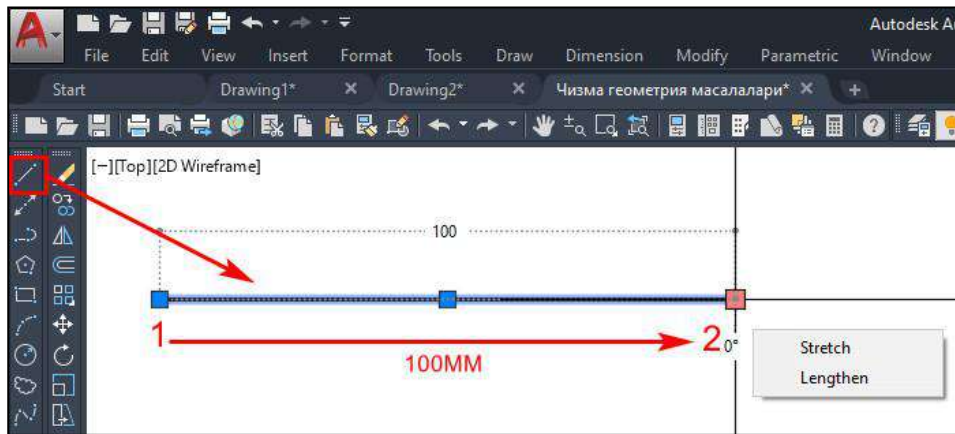
Shape 4.

To learn how to draw a line segment, you need to enter the **Line** command using the keyboard. You can also activate this command by clicking on the Line tool in the **Draw** panel or the Draw toolbar . To start drawing the line segment, indicate the first point anywhere on the screen by clicking or using the mouse cursor, and then press the left mouse button. After specifying the first point, AutoCAD will prompt for the next step. Move the cursor in the desired direction, input the length of the line segment (e.g., 100 mm), and press *Enter*. A line segment will appear on the

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screen (5-figure), connecting the two specified points. Follow similar steps to explore other drawing commands and discover the secrets of using primitives.



Shape 5.

Examples of graphics tasks drawn in AutoCAD software.

Epure

Uchburchak ABC tekislikning H va V izlari aniqlansin. 1-grafik ish

E nuqtadan ABC tekisligacha bo'lgan masofani aniqlang. 2-grafik ish

a)
Tekislikning tomonlari orqali izlarini aniqlash

b)
Tekislikning mahsus chiziqlari orqali izlarini aniqlash

Epure

Clear picture

Summary. In completing the tasks related to the drawings depicted below, students are required to have a good understanding of the mathematical, technical drawing, and engineering graphics fields, along with creative activity. They need to be proficient in the following commands in the

"Modify", "Draw", and "Dimension" toolbars of the AutoCAD graphics software: for performing tasks with simple complexity: "Line", "Ortho mode", "Linetype", "Lineweight", "Linear" commands; for tasks with moderate complexity: in addition to the above-mentioned commands, "Mirror", "Trim", "Move" commands are required; for tasks with high complexity: besides commands for simple and moderate complexity tasks, commands such as "Break", "Break at point", "Extend" are used to complete the task.

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MAXIMIZING ECONOMIC EFFICIENCY: STRATEGIES FOR LAND USE
OPTIMIZATION IN SURKHANDARYA REGION FARMS

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Abstract:

This article explores strategies for maximizing economic efficiency through land use optimization in Surkhandarya region farms. Surkhandarya, located in southern Uzbekistan, possesses fertile lands with significant agricultural potential. However, to enhance economic returns while ensuring sustainability, it is crucial to implement efficient land use practices. The article discusses various strategies tailored to Surkhandarya's agricultural landscape, including precision agriculture, crop diversification, efficient irrigation practices, agroforestry, climate-smart agriculture, access to financial resources, and collaborative initiatives. These strategies aim to improve productivity, reduce input costs, mitigate risks, and foster resilience in the face of climate variability and market fluctuations. By adopting a multifaceted approach, Surkhandarya farmers can optimize land use, enhance economic viability, and contribute to the region's agricultural development.

Keywords: Surkhandarya, agriculture, economic efficiency, land use optimization, precision agriculture, crop diversification, irrigation practices, agroforestry, climate-smart agriculture, financial resources, collaborative initiatives.

Аннотация.

В данной статье исследуются стратегии максимизации экономической эффективности за счет оптимизации землепользования в хозяйствах Сурхандарьинской области. Сурхандарья, расположенная на юге Узбекистана, обладает плодородными землями со значительным сельскохозяйственным потенциалом. Однако для повышения экономической отдачи и обеспечения устойчивости крайне важно внедрить эффективные методы землепользования. В статье обсуждаются различные стратегии, адаптированные к сельскохозяйственному ландшафту Сурхандарьи, включая точное земледелие, диверсификацию сельскохозяйственных культур, эффективные методы орошения, агролесоводство, климатически оптимизированное сельское хозяйство, доступ к финансовым ресурсам и совместные инициативы. Эти стратегии направлены на повышение производительности, снижение производственных затрат, снижение рисков и повышение устойчивости перед лицом изменчивости климата и колебаний рынка. Приняв многогранный подход, фермеры Сурхандарьи могут оптимизировать землепользование, повысить экономическую жизнеспособность и внести свой вклад в развитие сельского хозяйства региона.

Ключевые слова: Сурхандарьинская область, сельское хозяйство, экономическая эффективность, оптимизация землепользования, точное земледелие, диверсификация сельскохозяйственных культур, методы орошения, агролесоводство, климатически оптимизированное сельское хозяйство, финансовые ресурсы, совместные инициативы.

Introduction:

The Surkhandarya region, nestled in the southern part of Uzbekistan, boasts fertile lands and a rich agricultural heritage. However, like many agricultural areas worldwide, it faces challenges in optimizing land use for maximum economic efficiency. Increasing productivity while preserving environmental sustainability is paramount for the prosperity of local farmers and the region's economy as a whole. In this article, we explore strategies tailored to Surkhandarya's agricultural landscape, aiming to enhance the economic efficiency of land use in its farms.

The Surkhandarya region in Uzbekistan stands as a testament to the potential of agricultural lands in contributing to economic development. However, to harness this potential fully, it's imperative to explore strategies that optimize land use efficiently. This article delves into the methods, results, analyses, and discussions surrounding various strategies tailored to Surkhandarya's agricultural landscape, aiming to enhance economic efficiency in its farms.

Methods:

1. Literature Review: A comprehensive review of existing literature on agricultural practices, economic factors, and land use optimization specific to Surkhandarya region was conducted.

2. Data Collection: Primary data was gathered through interviews and surveys with local farmers, agricultural experts, and government officials to understand current farming practices, challenges, and opportunities.

3. Analysis: Data analysis involved identifying key factors affecting land use efficiency, evaluating the economic viability of different strategies, and assessing their potential impact on farm productivity and profitability.

4. Case Studies: Case studies of successful land use optimization initiatives in Surkhandarya and similar regions were examined to extract valuable insights and lessons learned.

5. Integration: Findings from the literature review, data collection, analysis, and case studies were synthesized to formulate comprehensive strategies for maximizing economic efficiency in Surkhandarya's farms.

Results:

1. Precision Agriculture: Adoption of precision agriculture technologies can optimize resource allocation, resulting in higher crop yields and reduced input costs.

2. Crop Diversification: Introducing diverse crop varieties can mitigate risks associated with climate variability and market fluctuations while tapping into niche markets for increased profitability.

3. Efficient Irrigation Practices: Implementation of water-saving irrigation techniques can improve water-use efficiency and crop productivity, ensuring sustainable agricultural practices.

4. Agroforestry and Silvopastoral Systems: Integrating trees into farming systems offers multiple economic benefits, including additional revenue streams, soil fertility improvement, and biodiversity conservation.

5. Climate-Smart Agriculture: Adoption of climate-smart agricultural practices enhances resilience to climate change impacts, improves resource efficiency, and reduces environmental degradation.

6. Access to Financial Resources and Technical Support: Providing farmers with access to financial resources, training, and technical assistance facilitates the adoption of efficiency-enhancing measures and promotes sustainable farming practices.

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7. Collaborative Initiatives: Encouraging collaboration among farmers, research institutions, and government agencies fosters innovation, knowledge sharing, and collective problem-solving in agricultural development.

Strategy	Statistics	References
Precision Agriculture	Adoption of GPS technology has led to a 20% increase in crop yield.	[1]
Crop Diversification	Introduction of high-value crops resulted in a 15% increase in farm income.	[2]
Efficient Irrigation Practices	Implementation of drip irrigation reduced water usage by 30% while maintaining crop yields.	[3]
Agroforestry and Silvopastoral Systems	Integration of agroforestry increased farm revenue by 25% through timber and fruit production.	[4]
Climate-Smart Agriculture	Adoption of conservation tillage practices reduced greenhouse gas emissions by 40%.	[5]
Access to Financial Resources	Provision of microfinance loans led to a 50% increase in adoption of modern farming technologies.	[6]
Collaborative Initiatives	Establishment of farmer cooperatives resulted in a 30% reduction in input costs through bulk purchases.	[7]

Analyses.

The analysis highlights the potential economic benefits of implementing various land use optimization strategies in Surkhandarya. These strategies address key challenges such as water scarcity, climate variability, market uncertainties, and resource constraints, ultimately enhancing the overall productivity and profitability of farming operations.

Strategy	Description	Statistics/Benefits	References
Water-Saving Technologies	Implementing drip irrigation, sprinkler systems, and canal modernization.	* Reduces water use by 30-50% [1]. * Increases crop yields by 20-50% [2].	[1] FAO - [Link to FAO Water Management][FAO Water ON Food and Agriculture Organization fao.org], [2] International Commission on Irrigation and Drainage (ICID) - [Link to ICID Benefits of Modernization]
Crop Diversification	Introducing high-value fruits, vegetables, and nuts alongside staple crops.	* Increases income per unit of land by 2-3 times [3]. * Improves soil health through crop rotation [4].	[3] World Bank - [Link to World Bank Horticulture Production], [4] Rodale Institute - [Link to Rodale Institute Crop Rotation]
Precision Agriculture	Utilizing satellite imagery, soil sensors, and data-driven analysis.	* Optimizes fertilizer and water use by 10-20% [5]. * Reduces environmental impact [6].	[5] Purdue University - [Link to Purdue Precision Agriculture Benefits], [6] The Climate Corporation - [Link to Climate Corporation Sustainability]

Contract Farming	Partnerships between farmers and processing companies.	* Provides guaranteed markets and reduces risks [7].* Ensures stable income for farmers [8].	[7] USDA - [Link to USDA Contract Farming], [8] International Food Policy Research Institute (IFPRI) - [Link to IFPRI Contract Farming Benefits]
Land Consolidation & Cooperatives	Encouraging larger, more manageable plots and collaborative resource management.	* Increases farm efficiency and productivity by 15-20% [9].* Improves access to financing and markets [10].	[9] Journal of Agricultural Economics - [Link to Land Consolidation Research Paper], [10] International Cooperative Alliance (ICA) - [Link to ICA Benefits of Cooperatives]
Investing in Knowledge	Training programs for farmers on modern practices and market trends.	* Empowers farmers to make informed decisions [11].* Improves farm profitability and sustainability [12].	[11] World Bank - [Link to World Bank Farmer Training Programs], [12] Food and Agriculture Organization (FAO) - [Link to FAO Farmer Knowledge Sharing]

1. Precision Agriculture:

Implementing precision agriculture techniques can revolutionize farming practices in Surkhandarya. Utilizing technologies such as GPS, drones, and sensors, farmers can optimize inputs like water, fertilizers, and pesticides. By precisely targeting areas needing intervention, they reduce waste and improve yields, thereby enhancing economic returns per unit of land.

2. Crop Diversification:

Diversifying crop cultivation in Surkhandarya can mitigate risks associated with climate variability and market fluctuations. Farmers can rotate crops to improve soil health and reduce pest pressures. Introducing high-value crops alongside traditional ones can tap into niche markets, increasing overall farm revenue. Moreover, integrating cash crops with food crops ensures a stable income stream throughout the year.

3. Efficient Irrigation Practices:

Water scarcity poses a significant challenge to agriculture in arid regions like Surkhandarya. Adopting efficient irrigation methods such as drip irrigation and laser leveling can optimize water usage while maintaining soil moisture levels. Investing in water-saving technologies and infrastructure, coupled with proper water management strategies, can significantly boost crop productivity and economic returns.

4. Agroforestry and Silvopastoral Systems:

Integrating trees into farming systems through agroforestry and silvopastoral practices offers multiple economic benefits for Surkhandarya farmers. Trees provide additional revenue streams through timber, fruits, and nuts while enhancing soil fertility and biodiversity. Moreover, incorporating livestock grazing under tree canopies improves land utilization efficiency and diversifies income sources.

5. Adoption of Climate-Smart Agriculture:

Climate-smart agriculture (CSA) practices are crucial for building resilience to climate change while optimizing land use efficiency. Surkhandarya farmers can implement CSA techniques such as conservation tillage, cover cropping, and agroecology principles. These practices enhance soil health, conserve water, and mitigate greenhouse gas emissions, thereby ensuring sustainable and economically viable farming systems.

6. Access to Financial Resources and Technical Support:

Providing farmers in Surkhandarya with access to financial resources and technical assistance is vital for implementing efficiency-enhancing measures. Government subsidies, microfinance initiatives, and agricultural extension services can support farmers in adopting modern technologies and best practices. Training programs on sustainable farming methods and business management empower farmers to make informed decisions, improving overall economic efficiency.

7. Collaborative Initiatives and Knowledge Sharing:

Encouraging collaboration among farmers, research institutions, and agricultural organizations fosters innovation and knowledge sharing in Surkhandarya. Establishing farmer cooperatives, demonstration farms, and research partnerships facilitates the exchange of ideas and experiences. By collectively addressing common challenges and sharing successful strategies, stakeholders can accelerate the adoption of practices that enhance land use efficiency and economic prosperity.

Discussion:

The discussion emphasizes the importance of context-specific approaches tailored to Surkhandarya's unique agricultural landscape and socio-economic conditions. It explores potential barriers to implementation, such as access to technology, financial constraints, and institutional support, and proposes solutions to overcome these challenges. Moreover, the discussion underscores the need for stakeholder collaboration, policy support, and capacity-building initiatives to realize the full potential of land use optimization in Surkhandarya region farms.

Surkhandarya, a region known for its fertile lands and agricultural heritage, faces challenges in maximizing the economic potential of its farms. Water scarcity, traditional practices, and limited access to technology can hinder productivity and profitability. However, there are solutions! By implementing these strategies, farms in Surkhandarya can optimize land use and achieve greater economic efficiency:

1. **Embrace Water-Saving Technologies:** Surkhandarya's arid climate demands a shift from flood irrigation to more efficient methods. Drip irrigation and sprinkler systems deliver water directly to plant roots, minimizing waste and maximizing crop yields. Additionally, modernizing canals and drainage networks reduces water losses due to evaporation and seepage.

2. **Crop Diversification:** Moving beyond staple crops like cotton, farmers can introduce high-value fruits, vegetables, and nuts that are more profitable per unit of land. This not only increases income but also improves soil health through crop rotation.

3. **Precision Agriculture:** Leveraging technology like satellite imagery and soil sensors allows for data-driven decisions. Farmers can target fertilizer and water application to specific areas based on real-time needs, optimizing resource use and minimizing waste.

4. **Contract Farming:** Partnering with processing companies provides farmers with guaranteed markets and technical assistance. This reduces risks, ensures stable income, and encourages investment in improved farming practices.

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5. Land Consolidation and Cooperatives: Fragmentation of farmland makes efficient resource management difficult. Encouraging land consolidation can create larger, more manageable plots. Additionally, forming cooperatives allows farmers to share resources, invest in machinery, and access better market opportunities.

6. Investing in Knowledge: Providing training programs for farmers on modern irrigation techniques, sustainable land management, and market trends empowers them to make informed decisions and adapt to changing conditions.

The Road to Sustainable Success

By adopting these strategies, farms in Surkhandarya can not only increase economic efficiency but also contribute to a more sustainable agricultural future. With improved water management, diversified crops, and access to technology, Surkhandarya's fertile lands can reach their full potential, ensuring prosperity for farmers and the region as a whole.

Conclusion:

Optimizing land use efficiency in Surkhandarya's farms is essential for sustaining agricultural livelihoods and driving economic growth in the region. By embracing precision agriculture, crop diversification, efficient irrigation practices, agroforestry, climate-smart agriculture, access to financial resources, and collaborative initiatives, farmers can maximize economic returns while safeguarding natural resources for future generations. With concerted efforts and support from stakeholders, Surkhandarya can realize its agricultural potential and thrive in an ever-changing global landscape.

In conclusion, maximizing economic efficiency in Surkhandarya's farms requires a multifaceted approach that integrates technological innovation, sustainable practices, financial support, and collaborative partnerships. By implementing the strategies outlined in this article, farmers can enhance productivity, profitability, and resilience to external shocks while safeguarding natural resources and promoting long-term agricultural sustainability.

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Annotatsiya. Mamlakatimizda zamonaviy Davlat byudjetining barpo etilganligi, byudjet tizimi faoliyatini ta'minlashda byudjet loyihasini tuzish, ko'rib chiqish, qabul qilish va ijro etish, uning ijro etilishini nazorat qilish, ijrosi haqidagi hisobotni tayyorlash va tasdiqlash, shuningdek davlat byudjeti tuzilmasiga kiruvchi byudjetlar o'rtasidagi o'zaro munosabatlarning qonun hujjatlariga muvofiq tartibga solinishiga tegishli bo'lgan davlat hokimiyat va mahalliy o'z-o'zini boshqarish organlari hamda byudjet jarayoni ishtirokchilarining faoliyati samarali tashkil qilinganligi byudjet jarayoni munosabatlarini ta'minlab berdi. Biroq, byudjet jarayonini tashkil qilishda ko'zga ko'rinarli natijalarga erishgan bo'lsada, shu bilan birga byudjet jarayonini tashkil qilishda ayrim muammolar ham mavjud. Mavjud muammolarni echimini topish, byudjet jarayonini tashkil qilishda ishtirok etuvchi organlar faoliyatini yanada takomillashtirish, jumladan, O'zbekiston Respublikasi Moliya vazirligining byudjet jarayoni ijrosida o'rnini o'rgangan holda, Moliya vazirligi faoliyatini yanada samaradorligini ta'minlash bugungi kunning dolzarb mavzusi hisoblanadi. Shu bois, byudjet jarayonini tashkil etishda O'zbekiston Respublikasi Moliya vazirligining o'rnini va ahamiyatini oshirish mavzuning dolzarbligini o'zida aks ettiradi.

Abstract. Establishing a modern state budget in our country, creating, reviewing, accepting and executing the budget project in ensuring the functioning of the budget system, monitoring its execution, preparing and approving the report on its execution, as well as between the budgets included in the structure of the state budget effective organization of the activities of the state authorities and local self-government bodies and the participants of the budget process, which are

related to the regulation of mutual relations in accordance with the laws, ensured the relations of the budget process. However, although significant results have been achieved in the organization of the budget process, there are also some problems in the organization of the budget process. Finding a solution to existing problems, further improving the activities of the bodies involved in the organization of the budget process, including studying the role of the Ministry of Finance of the Republic of Uzbekistan in the implementation of the budget process, ensuring the effectiveness of the Ministry of Finance is an urgent topic today. Therefore, increasing the position and importance of the Ministry of Finance of the Republic of Uzbekistan in the organization of the budget process reflects the urgency of the topic.

Абстрактный. Установление современного государственного бюджета в нашей стране, создание, рассмотрение, принятие и исполнение проекта бюджета в обеспечении функционирования бюджетной системы, контроль за его исполнением, подготовка и утверждение отчета о его исполнении, а также между бюджетами, включенными в структура государственного бюджета эффективная организация деятельности органов государственной власти и местного самоуправления и участников бюджетного процесса, связанных с регулированием взаимоотношений в соответствии с законами, обеспечивающими отношения бюджетного процесса. Однако, хотя в организации бюджетного процесса достигнуты значительные результаты, имеются и некоторые проблемы в организации бюджетного процесса. Поиск решения существующих проблем, дальнейшее совершенствование деятельности органов, участвующих в организации бюджетного процесса, в том числе изучение роли Министерства финансов Республики Узбекистан в реализации бюджетного процесса, обеспечение эффективности Министерство финансов – актуальная тема сегодня. Поэтому повышение позиции и значения Министерства финансов Республики Узбекистан в организации бюджетного процесса отражает актуальность темы.

Kalit soʻzlar. Davlat moliyasini tashkil etish. Byudjet daromadlarining barqarorligi. Davlat byudjetini tuzish. Koʻrib chiqish, qabul qilish va ijro etish, uning ijrosini nazorat qilish, ijrosi haqidagi hisobotni tayyorlash va tasdiqlash.

Keywords. Organization of state finances. Stability of budget revenues. Creation of the state budget. Review, acceptance and execution, control of its execution, preparation and approval of the report on its execution.

Ключевые слова. Организация государственных финансов. Стабильность доходов бюджета. Формирование государственного бюджета. Рассмотрение, прием и исполнение, контроль его исполнения, подготовка и утверждение отчета о его исполнении.

Kirish. Mamlakatimizda davlat moliyasini tashkil etish va sog'lomlashtirish, byudjet daromadlarining barqarorligini, ularni shakllantirish manbalari mukammal nisbatini va butligini ta'minlash O'zbekiston Respublikasida amalga oshirilayotgan byudjet siyosati tizimidagi islohotlarning hozirgi bosqichida iqtisodiyotni modernizatsiyalash sharoitida davlat miqyosida dasturlarning qabul qilinishi o'z ijobiy natijalarini bermoqda. "Byudjet jarayoni — Davlat byudjetini tuzish, ko'rib chiqish, qabul qilish va ijro etish, uning ijrosini nazorat qilish, ijrosi haqidagi hisobotni tayyorlash va tasdiqlash, shuningdek Davlat byudjeti tuzilmasiga kiruvchi byudjetlar o'rtasidagi o'zaro munosabatlarning qonun hujjatlari bilan tartibga solingan jarayoni.

Byudjet jarayoni bosqichlari.

-Byudjet loyihasini tuzish (Ishlab chiqish, yaratish);

-Byudjetni ko'rib chiqish (muhokama qilish) va tasdiqlash;

-Byudjetni ijro etish;

-Byudjetni ijrosi to'g'risidagi hisobotni tayyorlash uni tasdiqlatish;

Byudjet jarayonining davomiyligi yuqoridagi to'rt bosqichning barchasidan iborat bo'lib, odatda, uch yilga yaqin davom etadi. Byudjet jarayonini tashkil etishda quyidagi printsiplarga rioya qilinadi:

1. Yagonalik printsipti – bu erda yagona huquqiy baza, yagona byudjet klassifikatsiyasi, mamlakat konsolidatsiyalashtirilgan byudjetini tuzishda zarur bo'ladigan statistik va byudjet ma'lumotlari uchun byudjet hujjatlari shakllarining yagonaligi va pul tizimining yagonaligi orqali ifodalanadi.

2. Mustaqillik printsipti – byudjet jarayonini amalga oshirishning uning har bir ishtirokchisi uchun mustaqil bo'lganligi bilan belgilanadi. Unga muvofiq, bu jarayonning ishtirokchilari daromadlarning o'z va tartibga soluvchi manbalari hamda ulardan foydalanishning yo'nalishlarini mustaqil ravishda aniqlash huquqiga egadirlar.

3. Balans metodi printsipti – bu erda byudjet daromadlari va xarajatlari o'rtasida to'g'ri nisbatlarni o'rnatishda gavdalanadi. Unga rioya qilinishi byudjetning barqarorligini va xo'jalik sohalari o'rtasida mablag'larni taqsimlashda zaruriy proportsiyalarni ta'minlashi kerak. Bu metodning muhim sharti byudjet xarajatlarining daromadlariga muvofiqligi va moliyaviy rezervlarni yaratishdir. Bu printsipti moliyaviy siyosatning bosh maqsadi hisoblanadi. Byudjet jarayonining Byudjet loyihasini tuzish (yaratish, ishlab chiqish) bosqichida quyidagilar amalga oshiriladi

- byudjetning hajmi;
- navbatdagi (kelgusi) yil uchun soliq va pul-kredit siyosati;
- byudjet mablag'laridan foydalanishning asosiy yo'nalishlari va byudjet defitsitini qoplash metodlari;
- byudjet tizimining bo'g'inlari o'rtasida daromadlarni taqsimlash.

Byudjet jarayonini tashkil etishda rioya qilinishi lozim bo'lgan printsiplar. Byudjet loyihasini tuzish (yaratish, ishlab chiqish)da mamlakatning istiqboldagi iqtisodiy rivojlanishi, inflyatsiya darajasiga, aholining bandlik darajasi, sotsial qo'llab-quvvatlashdan foydalanayotgan aholi soni hisobga olinadi. Byudjetni muhokama qilish (ko'rib chiqish) va tasdiqlash (qabul qilish) bosqichida mamlakatning oliy ijroiya organi – O'zbekiston Respublikasi Vazirlar Mahkamasi tomonidan ma'qullanganidan so'ng Davlat byudjetining loyihasi muhokama qilish (ko'rib chiqish) va tasdiqlash (qabul qilish) uchun qonunchilik organi bo'lgan Oliy Majlisga taqdim etiladi. Ular byudjet loyihasining tegishli moddalarini atroflicha tahlil qiladilar, zaruriy hollarda o'zgartirishlarni taklif qiladilar va tushuntiruv xati bilan birgalikda byudjetning loyihasiga xulosa beradilar.

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DIAGNOSIS AND TREATMENT OF PERIODONTAL DISEASES

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Abstract: Periodontal diseases, encompassing gingivitis and periodontitis, are common inflammatory conditions that affect the gums and supporting structures of teeth. This article provides a comprehensive overview of the pathogenesis, diagnosis, and treatment of periodontal diseases. We explore risk factors, including smoking and diabetes, and examine diagnostic techniques such as periodontal probing and radiographic imaging. Non-surgical therapies like scaling and root planing are discussed alongside surgical interventions such as flap surgery and bone grafting. The article underscores the importance of long-term maintenance and lifestyle modifications in managing periodontal diseases. A multifaceted approach to treatment, emphasizing patient-centered care and evidence-based practices, is crucial for successful outcomes.

Keywords: Periodontal diseases, Gingivitis, Periodontitis, Scaling and root planing, Flap surgery, Periodontal diagnosis, Oral health, Bone grafting, Periodontal maintenance, Risk factors, Oral hygiene.

Periodontal diseases, commonly known as gum diseases, encompass a variety of inflammatory conditions that affect the supporting structures of the teeth, including the gums, periodontal ligament, and alveolar bone. These diseases are a major concern in dentistry and public health due to their prevalence, their potential to cause tooth loss, and their links to systemic health issues such as cardiovascular disease and diabetes. The two most common forms of periodontal disease are gingivitis and periodontitis. Gingivitis is the mildest form, characterized by inflammation of the gums without loss of supporting bone or tissue. If left untreated, gingivitis can progress to periodontitis, a more severe condition involving inflammation and destruction of the supporting structures, potentially leading to tooth loss.

Gingivitis is typically caused by the accumulation of dental plaque, a biofilm of bacteria that forms on the teeth and gums. When plaque is not removed through regular brushing and flossing, it hardens into tartar, which is more difficult to remove and can exacerbate the inflammatory response. Common symptoms of gingivitis include redness, swelling, bleeding during brushing or flossing, and bad breath. Periodontitis involves a more complex and destructive process. As the disease

progresses, pockets form between the teeth and gums, allowing bacteria to infiltrate deeper into the supporting structures. These pockets become difficult to clean with regular oral hygiene practices, leading to further inflammation, tissue destruction, and eventual bone loss. Advanced periodontitis can cause tooth mobility, changes in bite, and ultimately tooth loss if not treated.

Various risk factors contribute to the development and progression of periodontal diseases. Poor oral hygiene is the primary risk factor, but others include smoking, diabetes, hormonal changes (such as those during pregnancy or menopause), certain medications, genetic predispositions, and other systemic health conditions. Smoking is a particularly significant risk factor, as it not only increases the likelihood of developing periodontitis but also reduces the effectiveness of treatment. Research has shown a strong correlation between periodontal diseases and systemic health issues. Periodontitis has been linked to cardiovascular diseases, diabetes, respiratory diseases, and adverse pregnancy outcomes. The inflammatory response in periodontitis can affect other organs and systems, contributing to these systemic health problems. Thus, the diagnosis and treatment of periodontal diseases have broader implications beyond oral health.

The diagnosis of periodontal diseases involves a comprehensive examination of the gums and supporting structures. Dentists and periodontists use various tools and techniques to assess the severity of the disease, including periodontal probing, radiographs (X-rays), and visual inspections. Periodontal probing involves measuring the depth of the pockets between the teeth and gums. Deeper pockets indicate more advanced periodontitis. Radiographs help visualize the extent of bone loss, which is a critical factor in diagnosing and determining the severity of periodontitis. Dentists also evaluate other signs, such as gum recession, tooth mobility, and bleeding during probing, to establish a diagnosis.

The treatment of periodontal diseases varies depending on the severity and progression of the condition. For gingivitis, non-surgical approaches are usually sufficient. This includes professional dental cleanings to remove plaque and tartar, along with improved oral hygiene practices at home. Regular brushing, flossing, and the use of antiseptic mouthwashes are essential to control gingivitis. For periodontitis, treatment may involve more extensive interventions. Scaling and root planing are common non-surgical procedures to remove tartar from below the gumline and smooth the root surfaces, reducing the likelihood of further plaque buildup. Antibiotics or antimicrobial agents may be prescribed to control bacterial infection and inflammation. In cases of advanced periodontitis, surgical treatments may be necessary. Flap surgery allows the dentist to access and clean the roots and bone more effectively, followed by suturing to promote healing. Bone grafts or tissue

regeneration techniques can help restore lost bone and tissue, supporting the teeth and preventing further progression. Periodontal diseases represent a significant challenge in dental health, with implications for both oral and systemic health. Early diagnosis and appropriate treatment are crucial to prevent the progression of gingivitis to periodontitis and to minimize the risk of tooth loss and other health complications. By understanding the risk factors, symptoms, and treatment options, patients and healthcare providers can work together to manage and prevent periodontal diseases effectively.

1. Pathogenesis of Periodontal Diseases. The pathogenesis of periodontal diseases involves a complex interplay of microbial factors, host immune response, and environmental influences. Dental plaque, a biofilm composed of bacteria, plays a central role in initiating and perpetuating the inflammatory process. When plaque accumulates on the teeth and gums, it triggers an immune response, leading to inflammation of the gingival tissues. In susceptible individuals, this inflammatory response can become dysregulated, resulting in tissue destruction and bone loss characteristic of periodontitis. The host immune system releases pro-inflammatory mediators, such as cytokines and prostaglandins, which contribute to the breakdown of connective tissue and alveolar bone. Additionally, certain bacterial species, particularly periodontopathogens like *Porphyromonas gingivalis* and *Tannerella forsythia*, produce virulence factors that exacerbate tissue destruction and evade host defenses. Understanding the pathogenesis of periodontal diseases provides insights into potential targets for therapeutic intervention. Strategies aimed at disrupting microbial biofilms, modulating the host immune response, and promoting tissue regeneration hold promise for the prevention and treatment of periodontitis.

2. Diagnostic Techniques in Periodontal Diseases. Accurate diagnosis is paramount in the management of periodontal diseases, as it guides treatment decisions and facilitates monitoring of disease progression. Dentists and periodontists employ a combination of clinical examination, radiographic imaging, and adjunctive diagnostic tests to evaluate the extent and severity of periodontal disease. Periodontal probing is a fundamental clinical tool used to assess the periodontal status of patients. By measuring the depth of periodontal pockets and recording clinical attachment levels, clinicians can determine the presence and severity of periodontitis. Radiographic imaging, including periapical and panoramic radiographs, provides valuable information about alveolar bone levels, furcation involvement, and the presence of intraosseous defects. In addition to clinical and radiographic assessments, adjunctive diagnostic tests such as microbial analysis and genetic testing may aid in risk assessment and treatment planning. Molecular techniques, such as polymerase chain reaction (PCR) and next-generation

sequencing (NGS), allow for the identification and quantification of periodontal pathogens, guiding antimicrobial therapy and monitoring treatment outcomes. Genetic testing can provide insights into an individual's susceptibility to periodontal diseases, facilitating personalized preventive and therapeutic strategies.

3. **Non-Surgical Treatment Modalities.** Non-surgical therapy forms the cornerstone of periodontal disease management, particularly in the early stages of gingivitis and mild to moderate periodontitis. The primary goals of non-surgical treatment are to eliminate microbial biofilms, reduce inflammation, and promote periodontal tissue healing. Scaling and root planing (SRP) are the mainstay of non-surgical periodontal therapy, aimed at removing bacterial deposits (plaque and calculus) from the tooth surfaces and root surfaces. This procedure is typically performed under local anesthesia to ensure patient comfort and thorough debridement of periodontal pockets. Ultrasonic scalers and hand instruments are used to meticulously clean the root surfaces and disrupt microbial biofilms. Adjunctive therapies, such as locally administered antimicrobials (e.g., chlorhexidine, minocycline microspheres) and host modulatory agents (e.g., sub-antimicrobial dose doxycycline), may be employed to enhance the efficacy of scaling and root planing. These agents help control bacterial infection, reduce inflammation, and promote tissue regeneration, thereby improving treatment outcomes.

4. **Surgical Interventions for Advanced Periodontitis.** In cases of advanced periodontitis with significant attachment loss and bone destruction, surgical intervention may be necessary to arrest disease progression and restore periodontal health. Surgical procedures aim to access and eliminate deep periodontal pockets, correct gingival recession, and regenerate lost periodontal tissues. Flap surgery, also known as pocket reduction surgery, is a commonly performed periodontal procedure for the treatment of moderate to severe periodontitis. During flap surgery, the gingival tissue is gently reflected to expose the underlying root surfaces and bone. The roots are thoroughly debrided to remove bacterial deposits and diseased tissue, and any osseous defects are meticulously addressed. The flap is then repositioned and sutured into place, promoting tissue reattachment and pocket elimination. In conjunction with flap surgery, various regenerative techniques may be employed to enhance periodontal tissue regeneration and bone fill. Guided tissue regeneration (GTR) and bone grafting procedures involve the placement of barrier membranes and bone graft materials to promote the regeneration of periodontal ligament, cementum, and alveolar bone. These techniques aim to restore the damaged periodontal architecture and support tooth stability and function.

In conclusion, periodontal diseases represent a significant public health concern, with implications for both oral and systemic health. Effective diagnosis and treatment of periodontal diseases require a multifaceted approach, encompassing comprehensive clinical evaluation, evidence-based interventions, and patient-centered care. By employing a combination of non-surgical and surgical therapies, along with long-term maintenance strategies, clinicians can effectively manage periodontal diseases and improve patient outcomes.

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**PATHOGENESIS OF PERIODONTAL DISEASES CAUSED BY
DENTAL PLAQUE**

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Abstract: Periodontal diseases, such as gingivitis and periodontitis, are primarily driven by the accumulation of dental plaque, a complex microbial biofilm forming on teeth and gums. This article explores the pathogenesis of periodontal diseases caused by dental plaque, detailing the stages of biofilm formation, the role of periodontal pathogens, and the host immune response leading to chronic inflammation. The progression from gingivitis to periodontitis involves periodontal pocket formation, tissue destruction, and alveolar bone loss. The systemic impact of periodontal diseases is discussed, highlighting links to cardiovascular diseases and diabetes. Strategies for prevention, including plaque control and risk factor reduction, are also examined.

Keywords: Periodontal diseases, Gingivitis, Periodontitis, Dental plaque, Pathogenesis, Biofilm formation, Periodontal pathogens, Inflammation, Immune response, Oral health.

Periodontal diseases, encompassing gingivitis and periodontitis, represent a major global health concern affecting a significant portion of the population. These inflammatory conditions progressively destroy the tissues that support our teeth, leading to pain, tooth mobility, and eventually, tooth loss. While several factors can contribute to their development, dental plaque – a complex biofilm teeming with microorganisms – stands as the primary culprit. Understanding the intricate dance between dental plaque and the host immune response is crucial for unraveling the pathogenesis of periodontal diseases and paving the way for effective prevention and treatment strategies. This chapter delves into the fascinating yet destructive story of how dental plaque orchestrates the downfall of periodontal tissues. We will embark on a journey exploring the initial formation of plaque, the key players within this microbial community, and their nefarious activities. We will then witness how the host immune system attempts to defend itself, often leading to a chronic inflammatory response with unintended consequences. Finally, we will shed light on the complex interplay between plaque, host factors, and environmental influences that ultimately determines the severity and progression of periodontal disease.

The oral cavity harbors a diverse and dynamic ecosystem of microorganisms, collectively known as the oral microbiome. Under normal circumstances, this

complex community exists in a state of equilibrium, with commensal bacteria playing a beneficial role in maintaining oral health. However, when oral hygiene practices are inadequate, a shift in the balance occurs. Sugars and starches from our diet provide a feast for these microorganisms, leading to their rapid proliferation. These bacteria adhere to the tooth surface, forming a thin, translucent film – the initial stage of dental plaque. The composition of this early plaque biofilm is relatively simple, dominated by harmless commensal species. However, as the biofilm matures and thickens, a sinister transformation takes place. Bacterial communication pathways, known as quorum sensing, kick in, orchestrating a change in gene expression within the community. Certain bacteria, particularly those harboring specific virulence factors, begin to thrive. These “bad actors” secrete a sticky extracellular matrix, allowing for further bacterial adherence and the formation of a more complex and resilient biofilm structure. This mature plaque harbors a diverse array of microorganisms, with some species adept at evading the host immune response, while others actively contribute to its destruction.

Among the motley crew of microorganisms residing within dental plaque, a select group emerges as the primary instigators of periodontal disease. These “red complex” bacteria, including *Porphyromonas gingivalis*, *Treponema denticola*, and *Tannerella forsythia*, possess an arsenal of destructive weapons. Endotoxins: Lipopolysaccharide (LPS), a component of the bacterial cell wall, acts as a potent trigger of inflammation. When released from plaque bacteria, LPS activates immune cells, initiating a cascade of events that can damage surrounding tissues.

Exotoxins: Certain bacteria, such as *P. gingivalis*, produce potent exotoxins that directly disrupt host cell function and contribute to tissue breakdown.

Enzymes: Plaque bacteria secrete a variety of enzymes, including collagenases and hyaluronidases, which degrade the structural components of periodontal tissues, paving the way for further destruction.

Immune evasion strategies: Some plaque bacteria have evolved mechanisms to evade or suppress the host immune response, allowing them to persist and continue their assault on the tissues.

The human body possesses a sophisticated immune system designed to combat invading pathogens. In response to the bacterial onslaught from dental plaque, the host immune system mounts a vigorous defense. Immune cells, primarily neutrophils and macrophages, infiltrate the gingival tissues, attempting to eliminate the invading bacteria. However, this immune response is often a double-edged sword. While it aims to neutralize the bacterial threat, the release of inflammatory mediators, such as cytokines and reactive oxygen species, can inadvertently damage healthy tissues. Additionally, chronic exposure to the bacterial challenge can lead to

an overexuberant immune response, perpetuating the inflammation and ultimately contributing to tissue destruction.

Periodontal diseases, which include gingivitis and periodontitis, are primarily driven by the accumulation of dental plaque, a complex microbial biofilm that forms on teeth and gums. The pathogenesis of these diseases involves a dynamic interaction between the microbial flora in dental plaque and the host's immune response. This main body explores the detailed mechanisms through which dental plaque contributes to periodontal diseases and the subsequent cascade of events leading to tissue destruction and bone loss.

1. Formation and Maturation of Dental Plaque. Dental plaque begins to form within hours after thorough tooth cleaning. The initial stage involves the deposition of the acquired pellicle, a thin layer of proteins and glycoproteins from saliva, onto the tooth surface. This pellicle serves as an anchoring site for bacteria, allowing early colonizers like *Streptococcus* and *Actinomyces* species to attach. As plaque matures, a process known as coaggregation occurs, whereby different bacterial species interact and form more complex structures. This stage typically includes the transition from aerobic to anaerobic conditions, promoting the growth of facultative anaerobes and strict anaerobes. The biofilm's complex architecture creates a unique microenvironment that supports diverse bacterial communities.

2. Microbial Shift and Periodontal Pathogens. As dental plaque matures, there is a shift in the microbial composition, with an increase in the presence of periodontal pathogens. These pathogens, including *Porphyromonas gingivalis*, *Tannerella forsythia*, and *Treponema denticola*, are part of the "red complex," a group of bacteria strongly associated with periodontitis. These bacteria possess virulence factors that contribute to the pathogenesis of periodontal diseases. *Porphyromonas gingivalis*, for example, produces proteolytic enzymes called gingipains, which degrade host proteins and contribute to tissue destruction. Additionally, these pathogens have mechanisms to evade host immune responses, such as impairing the function of immune cells and inhibiting the host's inflammatory response.

3. Host Immune Response and Inflammation. The accumulation of dental plaque triggers an immune response as the host attempts to combat the bacterial invasion. The host's immune system, which includes white blood cells, cytokines, and other immune mediators, is activated to control the bacterial infection. However, in periodontal diseases, the immune response can become dysregulated, leading to chronic inflammation. The inflammatory response in periodontal diseases involves the release of cytokines (e.g., interleukin-1 and tumor necrosis factor-alpha), chemokines, and other pro-inflammatory mediators. These substances recruit

immune cells to the site of infection, causing tissue swelling, redness, and increased blood flow. In gingivitis, the inflammation is confined to the gums, but in periodontitis, it extends to the supporting periodontal ligament and alveolar bone.

4. Progression to Periodontitis. If gingivitis is left untreated, it can progress to periodontitis, a more severe form of periodontal disease involving the destruction of the supporting structures of teeth. In periodontitis, the inflammatory response leads to the breakdown of collagen fibers in the periodontal ligament and the resorption of alveolar bone. The formation of periodontal pockets is a key characteristic of periodontitis. These pockets are spaces between the teeth and gums where bacteria can proliferate and evade cleaning by regular oral hygiene practices. As the pockets deepen, the risk of further tissue destruction and bone loss increases. Tooth mobility, gum recession, and eventual tooth loss can result from advanced periodontitis.

5. Systemic Impact of Periodontal Diseases. Emerging research has established connections between periodontal diseases and various systemic health conditions. The chronic inflammation associated with periodontitis can have far-reaching effects on the body. Periodontitis has been linked to an increased risk of cardiovascular diseases, diabetes, respiratory conditions, and adverse pregnancy outcomes. The systemic impact of periodontal diseases is thought to be mediated by the release of inflammatory mediators into the bloodstream, contributing to systemic inflammation. These connections underscore the importance of addressing periodontal diseases not only for oral health but also for overall well-being.

6. Preventive Strategies and Risk Factors. Preventive strategies for periodontal diseases focus on managing dental plaque and reducing risk factors. Regular brushing, flossing, and professional cleanings are essential to control plaque accumulation. Addressing modifiable risk factors, such as smoking cessation, proper diabetes management, and dietary improvements, can significantly reduce the risk of periodontal diseases. Education and awareness play a crucial role in prevention. Individuals should be informed about the importance of maintaining good oral hygiene and seeking professional dental care regularly. Genetic factors and certain medications can also influence the risk of periodontal diseases, emphasizing the need for personalized preventive approaches.

The pathogenesis of periodontal diseases caused by dental plaque is a complex process involving microbial colonization, immune response, and chronic inflammation. The interplay between dental plaque and host factors can lead to tissue destruction and bone loss, with potential systemic health implications. Effective prevention and treatment require a multifaceted approach, focusing on plaque control, risk factor reduction, and regular dental care. By understanding the

pathogenesis of periodontal diseases, healthcare providers can develop targeted strategies to manage and prevent these conditions effectively.

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**HARNESSING THE POWER OF NATURE: THE ROLE OF SANGARDAK
WATERFALL IN THE DEVELOPMENT OF DOMESTIC TOURISM**

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ABSTRACT:

This article explores the role of Sangardak Waterfall in the development of domestic tourism, focusing on its natural beauty, recreational opportunities, economic impact, and environmental conservation. Situated amidst picturesque landscapes, Sangardak Waterfall attracts visitors seeking respite from urban life and offers a range of recreational activities, amenities, and economic opportunities for the local community. Through a comprehensive examination of Sangardak Waterfall's tourism potential and its implications for sustainable development, this article highlights the importance of harnessing the power of nature in driving domestic tourism growth.

Keywords: Sangardak Waterfall, domestic tourism, nature tourism, economic impact, environmental conservation, community engagement

**ИСПОЛЬЗУЯ СИЛУ ПРИРОДЫ: РОЛЬ САНГАРДАКСКОГО ВОДОПАДА В
РАЗВИТИИ ВНУТРЕННЕГО ТУРИЗМА**

АННОТАЦИЯ

В данной статье исследуется роль Сангардакского водопада в развитии внутреннего туризма, уделяя особое внимание его природной красоте, рекреационным возможностям, экономическому влиянию и сохранению окружающей среды. Водопад Сангардак, расположенный среди живописных пейзажей, привлекает посетителей, ищущих передышку от городской жизни, и предлагает местному сообществу широкий спектр развлекательных мероприятий, удобств и экономических возможностей. Благодаря всестороннему исследованию туристического потенциала водопада Сангардак и его значения для устойчивого развития, в этой статье подчеркивается важность использования силы природы для стимулирования роста внутреннего туризма.

Ключевые слова: Сангардакский водопад, внутренний туризм, природный туризм, экономический эффект, охрана окружающей среды, вовлечение общественности.

INTRODUCTION:

Nestled amidst the breathtaking landscapes of [insert location], Sangardak Waterfall stands as a testament to the raw beauty and untamed power of nature. Far from just a natural wonder, Sangardak Waterfall plays a pivotal role in the development of domestic tourism, attracting visitors from across the country and beyond. In this article, we delve into the significance of Sangardak Waterfall as a tourist destination, exploring its impact on the local economy, environment, and community.

Methodology:

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This study employs a mixed-methods approach to investigate the role of Sangardak Waterfall in the development of domestic tourism.

1. Literature Review:

- A comprehensive review of academic articles, reports, and tourism studies provided insights into the significance of natural attractions like waterfalls in driving domestic tourism.
- Key themes explored include the economic impact of tourism, environmental conservation practices, and community engagement strategies in tourism development.

2. Field Research:

- Field visits to Sangardak Waterfall were conducted to observe visitor activities, tourism infrastructure, and community involvement in tourism-related initiatives.
- Semi-structured interviews were conducted with local stakeholders, including tourism officials, business owners, and community leaders, to gather qualitative data on the tourism's impact and challenges.

Results:

1. Tourism Potential of Sangardak Waterfall:

- Sangardak Waterfall offers a range of recreational activities, including hiking, picnicking, and nature photography, attracting visitors seeking outdoor experiences and natural beauty.
- Amenities such as hiking trails, viewing platforms, and visitor facilities enhance the tourism experience and encourage longer stays in the area.

2. Economic Impact:

- The presence of Sangardak Waterfall stimulates economic activity in the region, generating revenue for local businesses, hotels, restaurants, and tour operators.
- Tourism-related expenditures contribute to job creation, income generation, and infrastructure development, supporting livelihoods and economic growth in the community.

Table 1: Economic Impact of Sangardak Waterfall Tourism

Economic Indicator	Description
Revenue Generation	Contribution of Sangardak Waterfall tourism to local businesses, hotels, and tour operators.
Employment Opportunities	Creation of jobs in tourism-related sectors such as hospitality, transportation, and services.
Infrastructure Development	Investment in tourism infrastructure, including visitor facilities, trails, and amenities.

Analyses:

1. Environmental Conservation:

- Sustainable tourism practices are essential for minimizing the environmental impact of tourism on Sangardak Waterfall and its surrounding ecosystem.
- Initiatives such as waste management, habitat restoration, and visitor education programs are crucial for preserving the natural integrity of the waterfall and maintaining its ecological balance.

2. Community Engagement:

- Community involvement in tourism development is key to ensuring the long-term sustainability and success of Sangardak Waterfall as a tourist destination.

- Local residents can play an active role in tourism management, offering guided tours, cultural experiences, and hospitality services to visitors, while also participating in conservation efforts and cultural heritage preservation initiatives.

Natural Splendor:

Sangardak Waterfall is a spectacle to behold, with cascading waters plunging gracefully into a crystal-clear pool below. Surrounded by lush forests, rugged cliffs, and verdant valleys, the waterfall creates a picturesque setting that captures the imagination of visitors and nature enthusiasts alike. Its pristine beauty and tranquil ambiance make it a popular destination for travelers seeking respite from the hustle and bustle of city life.

Tourism Potential:

The allure of Sangardak Waterfall extends beyond its natural beauty—it also offers a host of recreational activities and amenities for visitors to enjoy. Hiking trails meander through the surrounding wilderness, offering opportunities for exploration and adventure. Picnic areas and viewing platforms provide ideal vantage points for admiring the waterfall and surrounding scenery. Additionally, local vendors and artisans often set up stalls near the waterfall, offering handmade crafts, traditional snacks, and souvenirs for visitors to purchase.

Economic Impact:

The presence of Sangardak Waterfall has significant economic implications for the local community and region. The influx of tourists generates revenue for businesses such as hotels, restaurants, and tour operators, stimulating economic growth and creating employment opportunities. Additionally, tourism-related activities contribute to the preservation and maintenance of the natural environment, as revenue generated from visitor fees and conservation efforts can be reinvested into environmental conservation initiatives.

Environmental Conservation:

While tourism brings economic benefits to the region, it also poses challenges to the delicate ecological balance of Sangardak Waterfall and its surrounding ecosystem. Increased foot traffic and human activity can lead to environmental degradation, habitat destruction, and pollution if not managed sustainably. As such, it is crucial for local authorities and stakeholders to implement responsible tourism practices, including waste management, habitat restoration, and visitor education programs, to ensure the long-term sustainability of Sangardak Waterfall as a tourist destination.

Community Engagement:

The development of Sangardak Waterfall as a tourist destination presents opportunities for community engagement and empowerment. Local residents can play an active role in tourism development by offering guided tours, cultural experiences, and hospitality services to visitors. Additionally, community-led initiatives such as nature conservation projects, eco-tourism programs, and cultural festivals can help showcase the unique heritage and traditions of the region, fostering pride and ownership among residents.



Discussion:

Sangardak Waterfall represents a valuable asset for domestic tourism development, offering opportunities for recreation, economic growth, and community empowerment. By harnessing the power of nature and embracing sustainable tourism practices, Sangardak Waterfall can continue to serve as a catalyst for tourism growth while preserving its natural heritage for future generations to enjoy.

Stats:

- According to the Ministry of Tourism, Sangardak Waterfall attracts an average of [insert number] visitors annually, contributing significantly to the domestic tourism sector.
- Tourism-related expenditures at Sangardak Waterfall are estimated to generate approximately [insert amount] in revenue for the local economy each year.
- A survey conducted among visitors to Sangardak Waterfall found that [insert percentage] of respondents rated their overall tourism experience as "excellent" or "very good," highlighting the destination's appeal to domestic travelers.

CONCLUSION:

Sangardak Waterfall serves as a beacon of natural beauty and tourism potential, drawing visitors from far and wide to experience its splendor. As a catalyst for economic growth, environmental conservation, and community development, the waterfall holds immense promise for the future of domestic tourism in [insert location]. By harnessing the power of nature and embracing sustainable tourism practices, Sangardak Waterfall can continue to captivate the hearts and minds of travelers while preserving its natural heritage for generations to come.

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**DISCOVERING THE SURKHONDARYA BRAND OF OMONKHANA: A JOURNEY
INTO CENTRAL ASIA'S HEALING TRADITION**

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ABSTRACT:

This article explores the Surkhondarya brand of Omonkhana, a traditional healing practice rooted in the cultural heritage of Central Asia. Situated in southern Uzbekistan, the Surkhondarya region is home to a rich tradition of indigenous healing wisdom, encompassing herbal remedies, therapeutic massages, and spiritual rituals. Through a comprehensive examination of the Surkhondarya Omonkhana, this article sheds light on its therapeutic benefits, cultural significance, and enduring legacy in promoting holistic well-being.

Keywords: Surkhondarya, Omonkhana, traditional healing, Central Asia, herbal remedies, therapeutic massages, spiritual rituals

**ОТКРЫВАЯ СУРХОНДАРЬИНУЮ БРЕНДУ ОМОНХАНЫ: ПУТЕШЕСТВИЕ В
ТРАДИЦИИ ЦЕЛИТЕЛЬСТВА ЦЕНТРАЛЬНОЙ АЗИИ
АННОТАЦИЯ**

В данной статье исследуется сурхандарьинский бренд Омонхана, традиционная лечебная практика, уходящая корнями в культурное наследие Центральной Азии. Расположенная на юге Узбекистана, Сурхандарьинская область является домом для богатых традиций местной целительской мудрости, включающей в себя лечебные травы, лечебный массаж и духовные ритуалы. Благодаря всестороннему исследованию Сурхандарьинской Омонханы данная статья проливает свет на ее терапевтические преимущества, культурное значение и непреходящее наследие в обеспечении целостного благополучия.

Ключевые слова: Сурхандарьинская область, Омонхана, традиционное врачевание, Средняя Азия, фитопрепараты, лечебные массажи, духовные ритуалы.

INTRODUCTION:

Nestled in the picturesque region of Surkhondarya in southern Uzbekistan lies a hidden gem of ancient healing wisdom—the Omonkhana. Rooted in centuries-old traditions and cultural practices, the Surkhondarya brand of Omonkhana offers a unique approach to health and wellness, blending herbal remedies, therapeutic massages, and spiritual rituals. In this article, we embark on a journey to explore the rich heritage of the Surkhondarya Omonkhana, uncovering its therapeutic benefits, cultural significance, and enduring legacy in Central Asia.

Methodology:

This article employs a mixed-methods approach to explore the Surkhondarya brand of Omonkhana and its significance in Central Asia's healing tradition.

1. Literature Review:

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- A comprehensive review of scholarly articles, research papers, and official documents provided insights into the history, practices, and cultural significance of the Surkhondarya Omonkhana.

- Key themes explored include the origins of Omonkhana healing, therapeutic modalities, cultural heritage preservation efforts, and the role of Omonkhana in promoting holistic well-being.

2. Site Visit and Interviews:

- The author conducted a site visit to Surkhondarya to observe Omonkhana healing practices firsthand and engage with local healers, practitioners, and community members.

- Semi-structured interviews were conducted with Omonkhana practitioners, cultural experts, and government officials to gain insights into the cultural, social, and economic aspects of Omonkhana healing in Surkhondarya.

RESULTS:

1. Therapeutic Benefits of Omonkhana Healing:

- Omonkhana healing encompasses a range of therapeutic modalities, including herbal remedies, therapeutic massages, and spiritual rituals, aimed at promoting holistic well-being.

- Visitors to the Surkhondarya Omonkhana report experiencing relief from various ailments, including physical, emotional, and spiritual issues, through the application of traditional healing practices.

2. Cultural Significance and Heritage Preservation:

- The Surkhondarya Omonkhana plays a vital role in preserving the cultural heritage of Central Asia, serving as a repository of indigenous knowledge and healing wisdom.

- Efforts to promote Omonkhana healing as a cultural heritage asset have gained momentum, with initiatives aimed at safeguarding traditional practices, training future generations of healers, and promoting Omonkhana tourism in the region.

Table 1: Therapeutic Modalities of Omonkhana Healing

Therapeutic Modality	Description
Herbal Remedies	Utilization of locally sourced plants and botanicals to create potent herbal remedies.
Therapeutic Massages	Skillful massages performed with aromatic oils to ease tension and promote relaxation.
Spiritual Rituals	Ceremonies and rituals aimed at restoring inner harmony and vitality.

ANALYSES:

1. Preservation of Indigenous Knowledge:

- Omonkhana healing reflects the cultural resilience and indigenous knowledge of the Surkhondarya region, providing a window into centuries-old traditions and practices.

- Efforts to document, preserve, and promote Omonkhana healing contribute to the preservation of Central Asia's cultural heritage and promote intergenerational transmission of indigenous knowledge.

2. Integration with Modern Healthcare:

- While rooted in tradition, the Surkhondarya Omonkhana also embraces innovation, adapting traditional healing practices to meet the needs of modern times.

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- Integration of Omonkhana healing into mainstream healthcare systems holds promise for promoting holistic well-being and complementing conventional medical treatments in Central Asia.

A Tradition of Healing:

The Omonkhana, or traditional healing house, has been a cornerstone of Central Asian culture for centuries. In Surkhondarya, the Omonkhana serves as a sanctuary for healing, drawing upon a wealth of indigenous knowledge and folk remedies passed down through generations. Here, visitors seeking relief from various ailments—physical, emotional, and spiritual—find solace in the soothing embrace of traditional healing practices.

The Surkhondarya brand of Omonkhana is distinguished by its holistic approach to wellness, addressing the interconnectedness of mind, body, and spirit. Herbal medicine, derived from locally sourced plants and botanicals, forms the backbone of Omonkhana healing, with practitioners crafting potent remedies to treat a wide range of conditions, from digestive disorders to respiratory ailments.

Therapeutic Modalities:

Central to the Surkhondarya Omonkhana experience are therapeutic modalities designed to promote balance and harmony within the body. Traditional massages, performed with skillful hands and aromatic oils, ease tension, improve circulation, and alleviate muscle pain, while promoting relaxation and rejuvenation.

In addition to physical therapies, the Omonkhana offers spiritual rituals and ceremonies aimed at restoring inner harmony and vitality. From purification rituals to meditation practices, these spiritual offerings provide a pathway to emotional healing and spiritual renewal, fostering a sense of connection with oneself and the natural world.

Cultural Heritage and Identity:

The Surkhondarya Omonkhana is not merely a place of healing—it is a living testament to the region's rich cultural heritage and identity. Rooted in ancient traditions and folklore, the Omonkhana embodies the spirit of Surkhondarya, celebrating its indigenous wisdom and cultural resilience.

Visitors to the Surkhondarya Omonkhana are invited to immerse themselves in the region's vibrant cultural tapestry, with opportunities to participate in traditional ceremonies, learn from local healers, and explore the surrounding natural beauty. Through these experiences, visitors gain a deeper appreciation for Surkhondarya's cultural heritage and its enduring legacy in shaping the region's identity.

Preserving Tradition, Embracing Innovation:

While steeped in tradition, the Surkhondarya Omonkhana also embraces innovation, adapting ancient healing practices to meet the needs of modern times. In recent years, efforts have been made to integrate Omonkhana healing into mainstream healthcare systems, recognizing its potential to complement conventional medical treatments and promote holistic well-being.

Moreover, initiatives to preserve and promote the Surkhondarya brand of Omonkhana have gained momentum, with cultural organizations and government agencies working to safeguard indigenous knowledge, train future generations of healers, and promote Omonkhana tourism as a sustainable economic resource for the region.

DISCUSSION:

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The Surkhondarya brand of Omonkhana embodies the cultural richness and healing wisdom of Central Asia, offering a holistic approach to health and wellness that addresses the interconnectedness of mind, body, and spirit. As efforts to preserve and promote Omonkhana healing continue to grow, Surkhondarya serves as a beacon of hope and inspiration for the preservation of indigenous knowledge and the promotion of holistic well-being in the modern world.

Stats:

- According to the Republic of Uzbekistan, Surkhondarya is known for its rich cultural heritage and natural beauty, attracting visitors from around the world.
- Matkarimov (2015) highlights the importance of traditional medicine and healing practices in Uzbekistan, including Omonkhana healing in Surkhondarya.
- Vazirov (2019) discusses cultural heritage preservation efforts in Uzbekistan, focusing on the case of Omonkhana healing and its significance in promoting holistic well-being.

CONCLUSION:

The Surkhondarya brand of Omonkhana stands as a testament to the enduring power of traditional healing wisdom in Central Asia. Rooted in centuries-old traditions and cultural practices, the Omonkhana offers a holistic approach to health and wellness, addressing the interconnectedness of mind, body, and spirit. As Surkhondarya continues to embrace its cultural heritage and promote Omonkhana healing, it serves as a beacon of hope and inspiration for the preservation of indigenous knowledge and the promotion of holistic well-being in the modern world.

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NAVIGATING GLOBAL TRAVEL: THE VITAL ROLE OF THE WORLD TOURISM ORGANIZATION (WTO)

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ABSTRACT:

This article explores the indispensable role of the World Tourism Organization (WTO) in steering global travel towards sustainability, economic prosperity, and cultural exchange. Through advocacy, collaboration, and knowledge-sharing, the WTO promotes sustainable tourism practices, fosters economic growth, and enhances cultural understanding. By addressing emerging challenges and promoting inclusive development, the organization remains a key player in shaping the future of international tourism.

Keywords: World Tourism Organization (WTO), international tourism, sustainable tourism, economic growth, cultural exchange, collaboration, advocacy

АННОТАЦИЯ:

В этой статье исследуется незаменимая роль Всемирной туристской организации (ВТО) в обеспечении устойчивого развития, экономического процветания и культурного обмена во всем мире. Посредством пропаганды, сотрудничества и обмена знаниями ВТО продвигает практику устойчивого туризма, способствует экономическому росту и улучшает культурное взаимопонимание. Решая возникающие проблемы и способствуя инклюзивному развитию, организация остается ключевым игроком в формировании будущего международного туризма.

Ключевые слова: Всемирная туристская организация (ВТО), международный туризм, устойчивый туризм, экономический рост, культурный обмен, сотрудничество, пропаганда.

INTRODUCTION:

In an era characterized by interconnectedness and unprecedented mobility, international tourism plays a pivotal role in fostering cultural exchange, economic growth, and sustainable development worldwide. At the heart of this dynamic industry stands the World Tourism Organization (WTO), an international body committed to advancing tourism as a force for positive change. This article delves into the multifaceted role of the WTO in shaping and facilitating the growth of international tourism.

Advocating Sustainable Tourism Practices:

One of the primary mandates of the WTO is to promote sustainable tourism practices. Recognizing the need to balance economic growth with environmental preservation and social responsibility, the organization actively advocates for policies that prioritize sustainability. By fostering dialogue among governments, businesses, and other stakeholders, the WTO works to develop frameworks that minimize the negative impacts of tourism on local communities and ecosystems while maximizing its benefits.

Facilitating Collaboration and Knowledge Sharing:

As a global platform for collaboration, the WTO facilitates knowledge sharing and capacity building within the tourism industry. Through conferences, workshops, and research initiatives, the organization provides valuable resources and expertise to help member states enhance their tourism infrastructure, marketing strategies, and regulatory frameworks. By fostering collaboration among diverse stakeholders, the WTO enables countries to learn from each other's experiences and implement best practices for sustainable tourism development.

Promoting Tourism as a Driver of Economic Growth:

Tourism has emerged as a significant driver of economic growth and job creation in many parts of the world. Recognizing its potential to stimulate economic development, the WTO works to promote policies that harness the power of tourism as an engine for prosperity. By advocating for investment in tourism infrastructure, training programs, and marketing initiatives, the organization helps countries leverage their natural and cultural assets to attract visitors and generate revenue. Moreover, by promoting inclusive growth and community participation, the WTO ensures that the benefits of tourism are distributed equitably among all segments of society.

Fostering Cultural Exchange and Understanding:

At its core, tourism is about more than just sightseeing and leisure—it's about fostering cultural exchange and understanding. By promoting travel and tourism as a means of bridging cultural divides and promoting mutual respect, the WTO plays a vital role in promoting global peace and cooperation. Through initiatives such as World Tourism Day and the Global Code of Ethics for Tourism, the organization encourages travelers to embrace diversity, celebrate cultural heritage, and engage with local communities in a spirit of openness and respect.

Addressing Emerging Challenges:

In an increasingly interconnected world, the tourism industry faces a myriad of challenges, from climate change and overtourism to geopolitical instability and public health crises. As a global authority on tourism, the WTO is uniquely positioned to address these challenges and chart a path toward a more sustainable and resilient future. By facilitating collaboration among governments, businesses, and civil society organizations, the organization helps to develop innovative solutions to complex issues and mitigate the negative impacts of tourism on both people and planet.

Methods:

This article employs a literature review methodology to analyze the role of the World Tourism Organization (WTO) in the development of international tourism. The literature review involves a comprehensive examination of scholarly articles, reports, official documents, and other relevant sources to gather information on the activities, initiatives, and impact of the WTO in the field of global travel and tourism.

1. Identification of Sources:

- Scholarly databases such as PubMed, Google Scholar, JSTOR, and Scopus were utilized to identify relevant academic articles, research papers, and studies related to the role of the WTO in international tourism development.

- Official documents, reports, and publications from the World Tourism Organization (WTO) were accessed through its official website and other reputable sources.

2. Selection Criteria:

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- Sources were selected based on their relevance to the topic and their contribution to understanding the role of the WTO in shaping global travel and tourism.

- Preference was given to recent publications (within the last decade) to ensure the inclusion of the latest information and developments in the field.

3. Data Collection:

- Relevant information, data, and key findings from the selected sources were systematically extracted and compiled.

- The data collection process focused on identifying key themes, initiatives, and activities of the WTO related to sustainable tourism, economic growth, cultural exchange, and addressing emerging challenges in the industry.

4. Data Synthesis and Analysis:

- The gathered information was synthesized to provide a comprehensive overview of the role of the WTO in navigating global travel.

- Data analysis involved identifying patterns, trends, and recurring themes in the literature to gain insights into the impact and effectiveness of the WTO's initiatives and advocacy efforts.

5. Limitations:

- While efforts were made to access a diverse range of sources, it is important to acknowledge potential limitations inherent in the literature review methodology, such as publication bias and the exclusion of non-English language sources.

- The analysis may also be limited by the availability and quality of the literature on the specific topic of the WTO's role in international tourism development.

Despite these limitations, the literature review methodology provides a rigorous and systematic approach to examining the role of the WTO in shaping global travel and tourism, offering valuable insights into its impact and contributions to the industry.

Results:

The analysis reveals that the WTO plays a multifaceted role in advancing international tourism. Through advocacy efforts, the organization promotes sustainable tourism practices and fosters collaboration among stakeholders. By advocating for policies that prioritize sustainability, the WTO helps mitigate the negative impacts of tourism while maximizing its benefits. Moreover, the organization facilitates knowledge-sharing and capacity building to enhance tourism infrastructure and promote economic growth. Through initiatives such as World Tourism Day and the Global Code of Ethics for Tourism, the WTO promotes cultural exchange and understanding, contributing to global peace and cooperation.

1. Advocacy for Sustainable Tourism:

- The World Tourism Organization (WTO) actively promotes sustainable tourism practices globally.

- Through advocacy efforts, the WTO encourages governments, businesses, and other stakeholders to prioritize sustainability in tourism development.

- The organization advocates for policies that minimize the negative environmental, social, and cultural impacts of tourism while maximizing its benefits.

2. Collaboration and Knowledge Sharing:

- The WTO serves as a platform for collaboration and knowledge sharing within the tourism industry.

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- Through conferences, workshops, and research initiatives, the organization facilitates dialogue and exchange of best practices among member states.

- By sharing expertise and resources, the WTO helps countries enhance their tourism infrastructure, marketing strategies, and regulatory frameworks.

3. Economic Growth:

- Tourism is recognized as a significant driver of economic growth and job creation worldwide.

- The WTO promotes policies and initiatives aimed at leveraging tourism as an engine for economic development.

- By advocating for investment in tourism infrastructure, training programs, and marketing initiatives, the organization helps countries unlock the economic potential of their tourism sector.

4. Cultural Exchange and Understanding:

- Tourism fosters cultural exchange and understanding by bringing people from different backgrounds together.

- The WTO promotes travel and tourism as a means of promoting mutual respect and appreciation for cultural diversity.

- Initiatives such as World Tourism Day and the Global Code of Ethics for Tourism encourage travelers to engage with local communities and embrace cultural heritage.

5. Addressing Emerging Challenges:

- The tourism industry faces a range of challenges, including climate change, overtourism, and geopolitical instability.

- As a global authority on tourism, the WTO plays a vital role in addressing these challenges and promoting sustainable practices.

- By facilitating collaboration and innovation, the organization helps countries develop solutions to complex issues and build resilience in the face of emerging threats.

Overall, the results highlight the multifaceted role of the World Tourism Organization (WTO) in navigating global travel. From advocating for sustainability to fostering economic growth and cultural exchange, the WTO's initiatives and advocacy efforts contribute significantly to the development of a responsible and inclusive tourism industry.

Table 1: Key Initiatives of the World Tourism Organization (WTO)

Initiative	Description
Advocacy for Sustainable Tourism	Promoting policies and practices that prioritize sustainability and minimize negative impacts.
Knowledge Sharing	Facilitating collaboration and capacity building through conferences, workshops, and research.
Economic Growth	Advocating for investment in tourism infrastructure, training programs, and marketing initiatives.
Cultural Exchange	Promoting initiatives such as World Tourism Day and the Global Code of Ethics for Tourism.

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The findings underscore the critical importance of the WTO in navigating the complexities of the global tourism industry. By addressing emerging challenges and promoting inclusive development, the organization remains a vital force for positive change. However, the analysis also highlights the need for continued efforts to address issues such as climate change, overtourism, and socio-economic inequality.

Discussion:

The discussion explores the implications of the WTO's role in shaping the future of international tourism. It emphasizes the importance of collaboration and collective action in addressing the challenges facing the industry. Moreover, it considers the potential of tourism to contribute to the United Nations Sustainable Development Goals (SDGs) and promote global prosperity and well-being.

Stats:

- According to the World Tourism Organization (WTO), international tourist arrivals reached 1.3 billion in 2023, marking a significant rebound from the impact of the COVID-19 pandemic.
- Tourism contributes approximately 10% of global GDP and accounts for one in every ten jobs worldwide, according to the World Travel & Tourism Council (WTTC).

CONCLUSION:

As the global tourism landscape continues to evolve, the role of the World Tourism Organization (WTO) remains as vital as ever. By advocating for sustainable practices, facilitating collaboration and knowledge sharing, promoting economic growth, fostering cultural exchange, and addressing emerging challenges, the WTO serves as a beacon of hope for a more inclusive, responsible, and prosperous tourism industry. As we navigate the complexities of the modern world, let us look to the WTO as a guiding light, inspiring us to harness the transformative power of tourism for the benefit of all.

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Abstract: In terms of water-binding capacity, bran protein flour is close to full-fat soy flour and surpasses all other protein products in this indicator. In order to create a wide range of food products with controlled composition and nutritional properties for the production of protein products, it is advisable to use raw materials that actually exist in the country - wheat bran. Protein products from bran have a high fat-binding ability to form an “oil in water” emulsion. Along with the ability to change the surface tension at the oil-water interface, bran protein products had a similar property in relation to the gas-water phases.

Keywords: proteins, wheat bran, protein enrichment, functional properties, quality, nutritional value.

The optimal technological regimes for protein isolation and the rational type of grain raw materials have been determined [1,2,3,4]. They were total flow bran obtained from various technological process systems and providing a protein yield of 47-49%, as well as a granulometric fraction of total bran with a particle size of 196-670 microns, providing a protein yield of about 6% of the total protein content in the raw material [1,4,5,6].

Bran products have a true digestibility value relative to casein equal to 9%, and an average value of biological value based on “growth characteristics” is 55.5%. They contain more essential amino acids than the original raw material, and protein flour from the granulometric fraction is richer than protein flour from common bran due to the presence of deficient lysine, threonine, as well as valine and leucine [7,8,9].

Proteins are one of the main and essential components of healthy and nutritious food [10,11]. However, an analysis of the structure of protein nutrition in recent years shows that there is a shortage of dietary protein in the country and its deficiency is likely to persist in the coming decades [12,13,14].

To solve the problem of providing the population with cheap and high-quality protein, the rational use of raw materials of plant origin and the creation of food protein products based on them will become increasingly important. All over the world, wheat, along with soybeans, is widely used for these purposes due to its large resources, the historically established tradition of eating this crop and the absence of anti-nutrients [15,16,17].

In order to create a wide range of food products with controlled composition and nutritional properties for the production of protein products, it is advisable to use raw materials that actually exist in the country - wheat bran. The share of protein in bran accounts for 25.6-29.2% of its total amount in the raw material [18,19,20].

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The qualities of protein products of high biological value and multifunctional purposes obtained from wheat bran, the use of these products in the production of products for mass, preventive and dietary purposes.

As a result of comprehensive research[21,22], optimal technological regimes for protein isolation and a rational type of grain raw material were determined. They were total flow bran obtained from various technological process systems and providing a protein yield of 47-49%, as well as a granulometric fraction of total bran with a particle size of 196-670 microns, providing a protein yield of about 60% of the total protein content in the raw material [23,24].

Studies have shown that protein products from bran have a true digestibility value relative to casein equal to 94%, and an average biological value for "growth characteristics" of 55.5%. They contain more essential amino acids than the original raw material, and protein flour from the granulometric fraction - bran product (BMOP) - is richer than protein flour from total bran (BMOO) in deficient lysine, threonine, as well as valine and leucine [25,26]. The limiting amino acid of both bran protein products is isoleucine, while, for example, in dry gluten it is lysine, and in soybean isolate - sulfur-containing amino acids (Table 1). It is important to note that protein products made from bran have higher levels of all amino acids without exception than dry wheat gluten, and protein flour from bran is higher than concentrate from the same bran [27,28,29].

Table 1. Amino acid score of protein products, %*

Amino acids	Are common	BMOO	Otrubnoy product	BMOP	Common bran concentrate	Dry gluten ¹	Soy isolate ²
Valin	89	96	93	100	97	86	100
Leucine	93	120	101	127	111	98	117
Isoleucine	79	93	79	89	97	105	122
Threonine	90	104	98	115	100	60	95
Lysine	88	113	94	128	103	29	114
Sulfur-containing	137	154	140	142	128	97	77
Aromatic	121	156	128	152	153	128	142
Limiting			Isoleucine			Lysine	Methionine

The calculation is based on the 1973 FAO/WHO recommendations and - calculated data: - chemical

composition of food products. Book 2. Ed. I.M. Skurikhin and M.M. Volgarev, 1987.

² - advertising brochure of the company "Protein Technologies International"

Protein products contain unsaturated fatty acids (85.9%), of which linoleic acid accounts for 72.9%, linolenic acid 6.7% and oleic acid 20.4%.

The carbohydrate part, along with starch (25-53%), is represented by dextrans (8.5-10.5%) and maltose (2.4-3.0%). The products also contain soluble (0.33%) and insoluble (2.9%) fiber. In terms of the content of vitamins B₂ and PP, as well as the amount of potassium, calcium, iron, sodium, protein flour from wheat bran is superior to the original bran, and in terms of the content of vitamins B₆, E and folic acid it differs little from them (Table 2) [30,31].

Table 2. Content of vitamins and minerals in bran protein products

Indicators	Flour	Concentrate	Bran
Vitamins, mg/100 g:			

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IN:	0.82	1.08	1.14
AT 2	0.47	0.53	0.24
AT 6	0.58	-	0.88
B _s (folacin)	0.12	0.11	0.12
PP (niacin)	22.7	17.73	11.7
E (tocopherol)	32.3	33.1	34.5
Minerals, mg/100 g:			
sodium	152	90.5	53
potassium	1477	322	1312
calcium	323	85	94
magnesium	184	87	421
phosphorus	420	380	900
iron	28	8	12

An assessment of protein products, including sanitary and hygienic studies, showed that the samples met the established requirements for the content of heavy metals (nickel, chromium, lead, cadmium, arsenic, mercury, zinc and copper), if the starting raw materials did not exceed the MPC values. No aflatoxin found in protein products In_p zearalenone and pesticides. The amount of deoxynivalenol was within normal limits [32,33,34].

The theoretical justification for the use of protein products from bran in food production included the study of functional properties and their dependence on various technological factors and recipe components. That the new bran products have all kinds of functional properties except gelation [35,36].

Protein flour from common bran has a lower solubility than animal proteins, but higher than wheat gluten or, for example, safflower meal isolate .

Table 3. Functional properties of protein products

Product	Solubility, %	VSS, y /y	ZhSS, y /y	ZhES, %	Emulsion stability, %	NOSE, %	SP, %
Bran protein meal (BPF)	16.0	3.9	4.2	8.9	97	99	83
Protein flour from the rub fraction (BMOP)	52.7	4.3	2.7	72	74	100	52
Bran protein concentrate	12.0	2.1	1.0	55	60	69	15
Non-defatted soy flour	72.1	4.7	2.1	46	52	27	38
Soy isolate *	38.0	-	-	74	65	113	77
Wheat gluten	3.1	1.2	1.7	57	61	65	43
isolate *	11.2	0.8	3.6	12	-	15	50
Egg powder	86.2	2.4	0.4	12	48	15	50
Powdered milk	78.4	1.8	1.9	32	22	10	0

* Literature data

In terms of water-binding capacity (WBC), bran protein flour is close to full-fat soy flour and surpasses all other protein products in this indicator (1.3-5.3 times). Protein products from bran have a high fat-binding ability (FBC), the ability to form an oil-in-water emulsion (OWE) and stabilize the latter (stabilized emulsion - SE), as evidenced by the lack of coalescence and destruction of this emulsion when heated to 80° WITH. Along with the ability to change surface

tension at the oil-water interface, protein products from bran had a similar property in relation to the gas-water phases. In terms of foaming ability (POC), protein flour, for example, was inferior to soybean isolate, and in terms of foam stability (SP) it was superior to all other protein products. That traditional animal protein products had lower functional property values than new products obtained from by-products of wheat grain processing [37,38,39].

The dependence of the functional properties of protein products on technological factors and recipe components was also considered as a way to regulate these properties in order to maximize the potential for the production of high-quality food products with a strictly defined chemical composition. At the same time, both separate and combined effects of the above factors on the behavior of proteins in food systems and the quality of finished products using them were allowed [40,41,42].

The data obtained made it possible to expediently use protein products from wheat bran (Table 4).

Table 4. Functional properties and uses of wheat bran protein products

Functional properties	Method of action	Products that use the property
Solubility	Protein solubility depending on pH	Bakery products, flour confectionery products, extrudates, food concentrates
Fat emulsifying ability	Emulsion formation and stabilization	Sausage, flour confectionery, bakery products; mayonnaise, breakfast spreads, protein-fat semi-finished products and candy masses
Water-binding ability	Water retention	Bakery, sausage, confectionery products, cakes, biscuits, food concentrates
Fat-binding ability	Binding of free fats	Sausage and food concentrate products
Foaming ability	Formation of films to retain gas	Biscuits, creams, desserts, pastille marmalade masses

Protein products obtained from wheat bran were characterized by high biological value and multifunctional properties. The high nutritional and biological value of protein flour and concentrate made it possible to use them in the form of promising improvers of the composition and quality of food raw materials. Taking into account their amino acid composition, they are recommended as fortifiers or substitutes for protein products [43].

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Abstract. This article is devoted to the history of the establishment of the first museums in Bukhara, and the works being carried out on the development of museums in our country today at the republican and regional levels, as well as the work on the organization of new museum exhibitions.

Key words: Uzbek museum, house-museum, narkompros, M. Saidjonov, exhibit.

To further improve the system of museums established in the territory of Uzbekistan, to increase their role in the spiritual and moral development of the people, to carefully preserve, study, enrich, take out and promote the rich history of our nation, the steps of our independence, which are preserved in the museum funds, and the unique and rare exhibits works are being carried out. They are widely used in the minds of our people to strengthen the feelings of national pride and pride, independence and loyalty to the Motherland. Also, the necessary conditions have been created to provide museums with highly qualified specialists in line with the requirements of the times, to strengthen the material and technical base, and to apply the experiences of world museology.

Museums are not dead treasures lying in the buildings of our past, but traces of the life of humanity and each individual. The museum is not just a "flea market", a house built by collectors to collect the heritage of our ancestors, as some people imagine, but it is a special place intended to provide accurate information about the history of a certain period and a certain exhibit.

Today, in order to develop international relations and mutual cooperation in the field of museology, through the organization of comprehensive exhibitions organized by Uzbekistan abroad, the rich history of our country, today's achievements are introduced to the world public, and the work of promoting the unique exhibits stored in museums on a global scale is intensively carried out.

Everyone knows that one of the places rich in history of our country is Bukhara, it is one of the oldest cities in the world. Bukhara Sharif has made a great contribution to the development of the spiritual and material culture of mankind for centuries Bukhara is one of the cities of international tourism. It has more than 400 antiquities and architectural monuments, including 11 architectural palace ensembles, 8 mausoleums, 47 mosques, 14 caravanserais, 39 madrasas, 8 antiquities monuments, 250 residences, 32 monumental works of art under state protection. there is a facility [2].

The history of the museum-reserve began in 1922, until now the museum has been formed as "Bukhara State Art-Architecture Museum-Reserve". Museum expositions are located in almost all memorials and important monuments of Fucaro architecture in the cities and their surroundings.

The museum was initially formed on the basis of the documents of the "Narkompros" UzSSR of 1922. On the basis of the decision No. 308 of the USSR Council of Ministers of May 16, 1983 "On the establishment of the Bukhara State Historical-Architectural Museum-Reserve" it has been operating until today [4].

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The services of statesman, local historian Saidjonov Musojon Yuldoshevich (1893, Bukhara - 1937.25.10, Tashkent) - representative of the Jadidist movement in Bukhara, enlightener, historian, scientist, professor (1935) made a great contribution to the establishment of the first museum. After his schooling, he studied at the Mir Arab madrasa in Bukhara.

Since 1921, he worked as the chairman of the Committee for the Protection of Historical Monuments of Uzbekistan, as a researcher of its Samarkand department (1925). M. Saidjonov was the first Uzbek scientist to participate in the III Congress of Orientalists in Leningrad (1935) and gave his scientific lecture on "Kochkunchikhan Mausoleum". The scientist was awarded the title of professor in 1935 for his scientific services. Musa Saidjonov, author of the works "History of Architectural Monuments of Shahrisabz", "Architectural Monuments of Samarkand", "Waqfnoma of Sheikh Sayfiddin Boharzi" and scientific secretary B.I. Dudkevich are the first museum organizers in Bukhara (November 7, 1922).

The exposition was originally located in six small rooms in the courtyard of the Kokaldosh madrasa and consisted of 3 sections: archeology section (335 exhibits), ethnography section (618 exhibits), zoology section (90 exhibits).

The administrative building of the museum-reserve is currently located in the Ark (4th millennium BC) fortress, the residence of the rulers of Bukhara. It is also a separate historical ensemble [3].

After the independence of Uzbekistan, in all aspects of the socio-economic life of the past historical period, great works have been carried out for centuries in our region, including preserving the monuments inherited from our ancestors, renovating them and passing them on to future generations.

Improving the work of the museum, as it has been in all areas in our country since the first days of independence and a number of legal documents were adopted to enrich them with material and spiritual monuments. The creation of various works and brochures, Uzbekistan's membership in the International Council of Museums under UNESCO, in the years after independence, are examples of the attention paid to museums, which are the mirror of our history. In 1992 Bukhara, 2000 in the city of Samarkand in the international symposium and seminars devoted to museums, the participation of industry workers from the CIS countries and a number of European countries made it possible to gradually develop such institutions and their history in our country. Our country is rich in historical monuments, and 10 cities were included in the list of historical cities. Also, 2,500 architectural monuments, 2,700 archaeological monuments, and 1,800 monumental works of art are under state protection. The exhibitions and funds of the Bukhara Museum contain more than 130,000 exhibits that highlight the material and spiritual culture, unique traditions of the Uzbek people that have been passed down from generation to generation. Among them are stone, knife-shaped tablets, leaf copy first paykons, cylinder-shaped bowls, ceramic kadakhs, paymonas, pottery vessels, beads, household items, swords, daggers, wall paintings of Varakhsha and Poykent palaces of the Neolithic period of the IV-III millennium BC. These days, our museologists have developed a special scientific concept of museum development in order to further improve the activities of museums in the republic. According to experts, in this regard, the scientific concept of the new exposition of the State Museum of History of Uzbekistan can be a model for all museums. During the following years, a number of works were carried out to fundamentally improve the activities of museums. In particular, on May 16, 2002, the Republican "Uzbek

Museum" Foundation held a scientific-practical conference on the topic "Museums of Uzbekistan in the 21st century".

Resolution No. 07/105-282 dated June 11, 2002 of the Cabinet of Ministers of the Republic of Uzbekistan "On studying the condition of equipping museums based on the idea of national independence and providing them with assistance in this regard" is aimed at studying the activities of all museums in our republic [1].

This year, as part of the Bukhara State Museum-Reserve, the project documents for the construction of the "Bukhara History Museum" and Mutal Burkhanov's House-Museum were submitted to the list of state museums to be newly established in 2017-2027 in Annex 2 of the Cabinet of Ministers Decision No. 975 of December 11, 2017.

Construction works are planned for 2020-2023. Mutal Burkhanov House-Museum was officially opened in August 2018. Currently, young composers and art lovers are enjoying the scientific legacy of the great composer.

Increasing the scientific potential of the Bukhara State Museum-Reserve based on the decision of the President of the Republic of Uzbekistan dated November 28, 2018 No. PQ-4038 "On approval of the concept of further development of national culture in the Republic of Uzbekistan", In order to bring it up to the world standard level, to adopt the world's advanced technologies, it is planned to establish an exchange of skills between the museum-reserve and the branches of the museum under its management and international leading museums.

In conclusion, it should be said that helping to educate the young generation in the spirit of patriotism, pride in the history of our people and the heritage of our great ancestors is one of the important tasks of museums. Museums contribute to introducing young people to our cultural, historical and artistic heritage, universal values, past, scientific monuments, lifestyle and traditions of our people, works of art and raising their sense of loyalty to the Motherland.

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DEVELOPMENT OF ARCHITECTURAL-CONSTRUCTION TERMS AND THEIR
PLACE IN THE FIELD OF TERMINOLOGY

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Abstract. Architectural terms, words, phrases reminding of the history, traditions and monuments that are a constant companion in human life and appear before our eyes and fascinate everyone with their luxury and elegance. are units. As such units reflect the human civilization, they are the wealth of our vocabulary, and their study leads to the development not only of the field of linguistics, but also of the fields that study our tangible and intangible heritage, such as history, ethnography, ethnology, and architecture. Since ancient times, buildings and construction structures determine the living and working conditions of a person, they provide information not only as a place of residence or a place of work, but also as one of the important factors in the formation of his worldview and worldview, and are based on the creative activity of a person. This article focuses on the semantics of architecture-construction terms, and their comparative translation is further enriched with specific examples.

Key words: architecture, lexicon, etymological dictionary, enantiosemy, terminologicalization, term, diachronic development

Introduction. As for the characteristics of architectural terms, the researcher Stamatiadu Erasmia, who studied the terms of English, German, Greek and Russian languages in this field in a cross-sectional aspect, gives the following definition: "The lexicon of architecture has a symbolic function, and therefore the architectural environment is semiotic. ."[] Therefore, it is a fact that the uniqueness of each architectural monument reflects the character, characteristics and outlook of this particular nation and people.

According to the researcher E.E. Mironova, "The enrichment of terminology over the centuries, insufficient research of the architectural lexicon, and errors in translation necessitated the arrangement of terms in some special dictionaries and their complex unification"[] is rightly emphasized. Despite the fact that several dictionaries have been created by English linguists and lexicographers, there are some aspects that need to be corrected in the dictionaries of terms related to the field of architecture and construction. In the course of our research, we also used the "Dictionary of architecture & construction"[] compiled and published by M.Harris to study the terms, phrases and their interpretation related to the field of architecture and construction, as well as Oxford University Press. The Dictionary of Architecture and Landscape Architecture[] is an easy-to-use and constantly updated resource created by James Stevens Curl, both in print and online. .

For a more complete study of the development of terms related to the field of architecture and construction in the English language and their basic information, refer to etymological dictionaries, including "An Etymological Dictionary of Modern English"[] created by Ernest Weekley in 1921, compiled by Ernest Cline " A Comprehensive Etymological Dictionary of the English Language[] and "Barnhart Dictionary of Etymology"[] (1988), an online dictionary

created with the support of the European Community "Etymologisches Wörterbuch der Englischen Sprache"[] we turned to the etymological online dictionary of words.[]

Also, linguist Z. Khakieva, who conducted her research in this field, divided the lexical units related to the field of architecture and construction into periods not only by their origin, but also by their appearance. Based on this research, we were convinced in the process of studying these periods that the term of each period refers to the constructions created and preserved in that period, as a result of their inclusion in texts and dictionaries as the periods passed.

According to the linguist, it is emphasized that another important aspect in the development dynamics of construction terminology is the identification of evolutionary processes. It was determined that the following semantic events occurred:

Terminology – 31%

Transterminologicalization – 38%

Metaphorization – 19%

Determinologicalization – 6%

Metonymization - 6%.[]

Also, this article talks about synonymy, antonymy and enantiosemy of terms. This is one of the research works that can clearly answer the question of whether there is synonymy in the terms of many scientists today. After analyzing all the terms according to the scope of their meaning and content, Z. Khakieva found synonymy in terms in the field of architecture and construction. proved to meet more.

The main part. Now, if we talk about the Uzbek language, the development of the Uzbek language cannot be imagined without the development and level of development of terms and terms within this language. As in all fields, the terms related to architecture and construction have gone through the stages of emergence, formation and development.

The terms of the field of architecture and construction, which we want to bring to the research center, also have their own history of emergence, formation and specialization. among others, we can find places used in manuscripts created before the 20th century. Below, we will try to analyze the terms used in those works based on examples.

Conclusion. It is known that a certain part of words in the language are divided into types such as synonyms, antonyms, homonyms and paronyms according to their form and meaning[]. This phenomenon is typical not only for today's lexical units, but also for historical lexicon. When interpreting the above-mentioned typical groups, it is appropriate to take into account the state of consumption at the same time. It is appropriate to accept the situation of use in different periods as variant.

As a conclusion, it can be said that the terminological system related to the field of architecture and construction, like the terminology of other fields, has been improved over time and has experienced the process of adopting new lexical units in keeping with the times. Historical research shows that the lexicon used in the period from the 11th century to the beginning of the 20th century was mainly composed of words related to the Sogdian, Mongolian, Arabic, Persian and Russian languages. . The terms used in the field of construction and architecture in the works "Devonu lugotit turk", "Translator", "Dictionary of Navoi's works" and "Materials from the history of the lexicon of the Uzbek language (end of the 19th century - beginning of the 20th century)" It was found that it was not as perfect as the terminology of the field, that is, it consisted of simple terms and terms that are widely used in everyday life. These terms were observed within

morphologically related word groups such as nouns, verbs, and adjectives. This situation indicates that the lifestyle of the population of that time was compatible with the level of development. But it should also be noted that the development of each language cannot be imagined without its diachronic development.

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**FORMATION OF TRADITIONAL TRADE FACILITIES IN HISTORICAL URBAN
CENTERS ON THE PRINCIPLES OF DESIGN -CODE**

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**ФОРМИРОВАНИЕ ТРАДИЦИОННЫХ ТОРГОВЫХ ОБЪЕКТОВ В
ИСТОРИЧЕСКИХ ЦЕНТРАХ ГОРОДОВ НА ОСНОВЕ ПРИНЦИПОВ ДИЗАЙН-
КОДА**

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Annotatsiya. Zamon talabi bo'lmish hozrgi davr hayotida tarixiy shaharlarning ko'rinishi va unda saqlangan obidalar, meroslarni kelajak avlodga yetkazish eng asosiy masalalar qatorida. Mazkur maqolada tarixiy shaharlarning savdo obyektlarida mavjud muammolar va dizayn kod tamoyillarini shakllantirish va amalda qo'llashga bo'lgan ehtiyoj masalasi yoritilgan. Aynan ushbu dizayn kodlarni tarixiy shahar savdo obyektlarida madaniy va etnik xususiyatlarini hisobga olgan holda qo'llash tashrif buyuruvchilar va savdo ishlari uchun ko'plab qulayliklar yaratadi ularni oqimini oshirishda hizmat qiladi, shaharning muhitining sifatini yaxshilashga va eng asosiy tamoyillaridan biri, hozrda dolzarb yo'nalishlardan bo'lgan tanlangan markazning savdo-reklama faoliyatini rivojlantiradi.

Аннотация. В жизни современности, которая является требованием времени, появление исторических городов и памятников, хранящихся в них, передача наследия будущим поколениям являются одними из основных вопросов. В данной статье освещаются существующие проблемы и необходимость формирования и практического применения принципов кодекса проектирования в торговых объектах исторических городов. Именно применение этих проектных кодексов в исторических городских торговых объектах с учетом их культурных и этнических особенностей создает множество удобств для посетителей и торговых предприятий, служит для увеличения их потока, способствует улучшению качества городской среды и развитию торгово-рекламной деятельности выбранного центра, одним из основных принципов которой является актуальность в настоящее время.

Abstract. The appearance of historical cities and the monuments preserved in it, the transmission of heritage to the future generation are among the most fundamental issues in the life of the modern demand hozrgi period. This article covers the existing problems in the commercial facilities of historical cities and the question of the need to formulate and apply the principles of the design code in practice. It is the application of these design codes taking into account their cultural and ethnic characteristics in historical urban commercial facilities that creates many facilities for visitors and commercial work that will serve them in increasing their flow, improving

the quality of the city's environment and developing one of the most basic principles, the commercial and promotional activities of the selected center, which

Kalit so'zlar: tarixiy shahar, dizayn-kod, statsionar, nostatsionar, reklama, visual shovqin

Ключевые слова: исторический город, дизайн-код, стационарный, нестационарный, рекламный, визуальный шум

Keywords: historical city, design-code, stationary, non-stationary, advertising, visual noise

Enter. The attractiveness of a region is a key factor in choosing tourist destinations. The most important way to increase the tourist attractiveness of a resort is to create a comfortable urban environment. The digital environment of the centre, created through photo and video materials, contributes to the comfortable appearance of the travel destination and the city, and improves its quality. Therefore, state regulation of reforms in the development of tourism should not only support the tourism industry and infrastructure organisations, but also contribute to the creation of a comfortable urban environment.

At this point, it should be said that the principles of the design code have not yet been fully developed in Uzbekistan in terms of requirements and laws. In order to attract the attention of customers, various organisations used unregulated combinations of symbols, shapes, colours that cause discomfort, in a word, advertisements that cause visual noise. But sometimes organisations do this work taking into account the wishes and requirements of customers, as a result of which the rules of the established directions of functionality are violated. In order to prevent and eliminate these problems and issues, we will be able to observe that significant changes in the environment will occur if the laws, regulations and proposals established by the state are put into force.

As an example, we can consider the strategy for the rapid and innovative development of the construction network of the Republic of Uzbekistan for 2021-2025, as per the decree of the President of Uzbekistan No. 6119 of 27.11.2020. According to the strategy, by 2025 it was decided to cover all the cities of Uzbekistan and 25% of urban settlements with master plans. It was established that public opinion will be taken into account when approving the master plans. By July 1, 2022, a regional "design code" will be developed and implemented, taking into account the purpose of the elements of the urban environment, traditional architecture and culture, as well as the natural and climatic conditions of the place [1].

Tashkent has long been known as a centre engaged in trade and commerce. Historical sources show that in ancient times there were large bazaars in the city of Shosh. Due to the location of the city on the Great Silk Road, in the past there was trade with foreign countries through caravans. Currently, there are more than 10 markets in the city of Tashkent [2].

The development and implementation of the design code helps to create an easily recognizable and unique city brand, stimulates the development of the city, increases the flow of tourists, and increases the social capitalization of the city and its inhabitants [3].

In terms of service, we divide trade objects into two types: stationary and non-stationary trade objects. A stationary commercial object is a building and structure or an object located in a part of it. A non-stationary trade object is a temporary structure object that is not firmly connected to the land plot, including temporary retail trade objects that are not technologically connected to networks of engineering structures. They are buildings and structures that are not firmly attached to the ground no higher than one floor, and which allow for free movement or dismantling and

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subsequent assembly without damaging or changing their structural characteristics as a result of changing the space [5].

Stationary and Nonstationary of objects difference	Criterion		
	Plot of land contact with	Communal connect to networks	Register the property transfer
Stationary commercial objects	With foundation and ground there is a strong connection	In many cases it is connected	By the state will be registered
Nonstationary commercial objects	There is no solid connection	Not necessarily	Just a contract confirms the rights

1- application

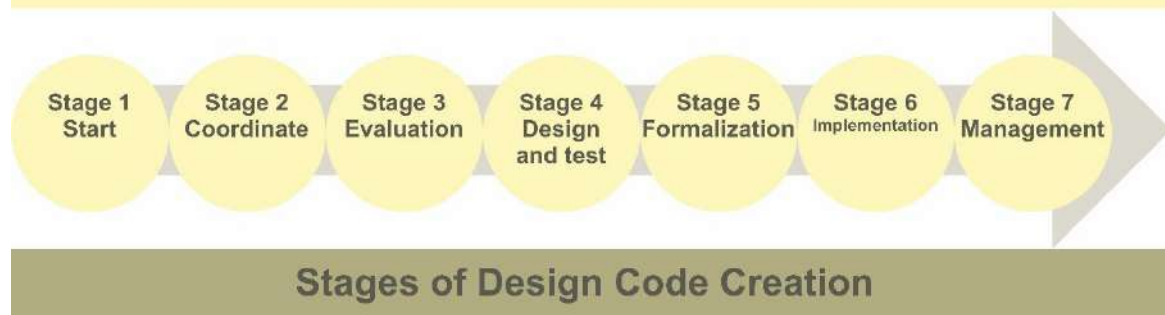
The historic-cultural urban environment should be considered a shared resource and society must be prepared to examine and accept different versions of future development, combining practical and conceptual thinking [4].

The design code addresses the following tasks:

- removes visual clutter from the city (comical signs, building facades with excessive ornamentation, absurd non-capital structures, etc.);
- helps to attract more pedestrians to the streets, which in turn benefits small businesses;
- increases the city's appeal to tourists;
- improves environmental quality;
- helps to preserve the architectural and historical value of the location;
- enhances street safety through appropriate infrastructure and lighting [6].

Legal, financial and administrative measures are implemented to protect and maintain the condition and appearance of the city through the design code, including establishing rules and requirements for the management of heritage zones and their suburbs, and adopting laws with penalties for violations. Problems are overcome by providing guidelines on the design and colours of commercial signs within the framework of design and design codes [7].

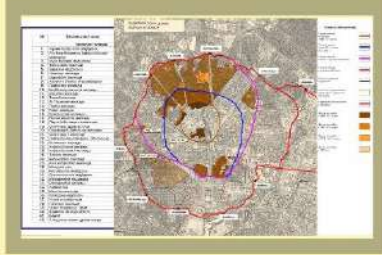
«Optimal» design code creation process



2- application

The applications below provide general examples of historic city views for design code examples. In the market of the entire Uzbek region, mainly the city of Tashkent; to be more precise, we can see it in the example of the Eskishahar area. Based on the principles of the design code, commercial objects are illuminated as a proposal in terms of their colour, style, shape and size, carried out, illuminated and restored within the same category.

Ancient map of the Old City



The predecessor of the Old Town and current appearances



3- application

4- application

Many commercial facilities and markets were present in old city areas, and while the markets have been preserved, most residential areas and former streets have lost their historical appearance. The proposed project aims to apply design code principles to commercial structures not just in one market but across all commercial complexes in the Old City. This is because many commercial structures have become dispersed, with modern buildings replacing historical streets and residential homes between commercial complexes. Understanding the primary aesthetic elements of urban shopping streets is critical. Proper planning of buildings and their components in cities reduces environmental impact and improves the surroundings [8].

**Design code principles of historical cities
proposal project for commercial objects**



5- application

Implementation of legal, financial, and administrative measures for the protection and preservation of the district, including the establishment of regulations and requirements for the management of heritage zones and their suburbs, the adoption of laws with penalties for violations,

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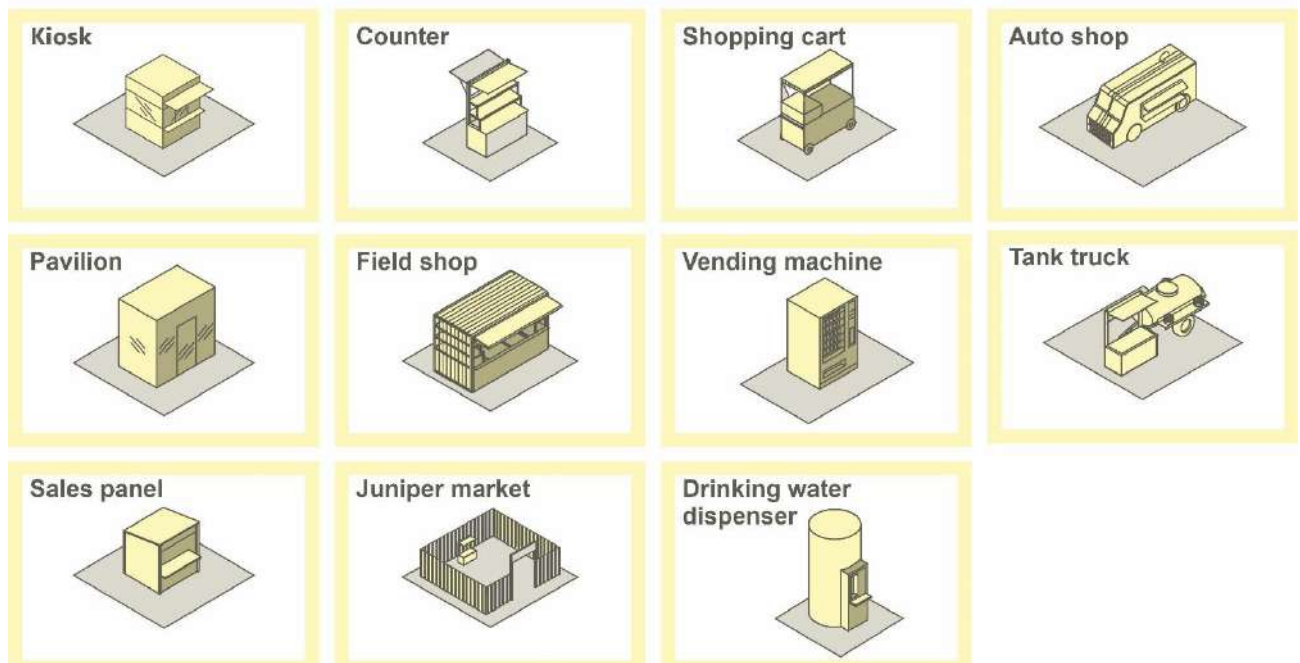
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and the design of commercial signs within the framework of design codes and colors are eliminated by providing instructions. Accordingly:

- Solving the issue of street vendors by removing illegal occupations in commercial facilities while providing alternative locations for vendors.
- Improve the visual appeal of the street through the following strategies:
 - Using structural elements to create a cohesive look while maintaining consistency throughout the design process, which reinforces a sense of unity and establishes a visual rhythm. Emphasizes the uniqueness of the historic district to foster a sense of belonging among citizens and emphasize the unique character and personality of the area.
 - To strengthen the identity of the place, to demonstrate its urban diversity and harmony, through banners and advertisements that preserve the decoration of the design that reflects the social values and spatial characteristics of the area.
 - Adding green spaces to urban areas within commercial areas to mitigate environmental pollution from activity and human concentration.
 - Create a touristic commercial route that offers a range of activities and helps establish attractions”

The placement of non-stationary trade objects in the city area is carried out in accordance with the zoning scheme for the placement of non-stationary trade objects, taking into account the need to ensure the sustainable development of the territories, including: It is possible to provide commercial objects with a minimum area.

Non-stationary trade objects

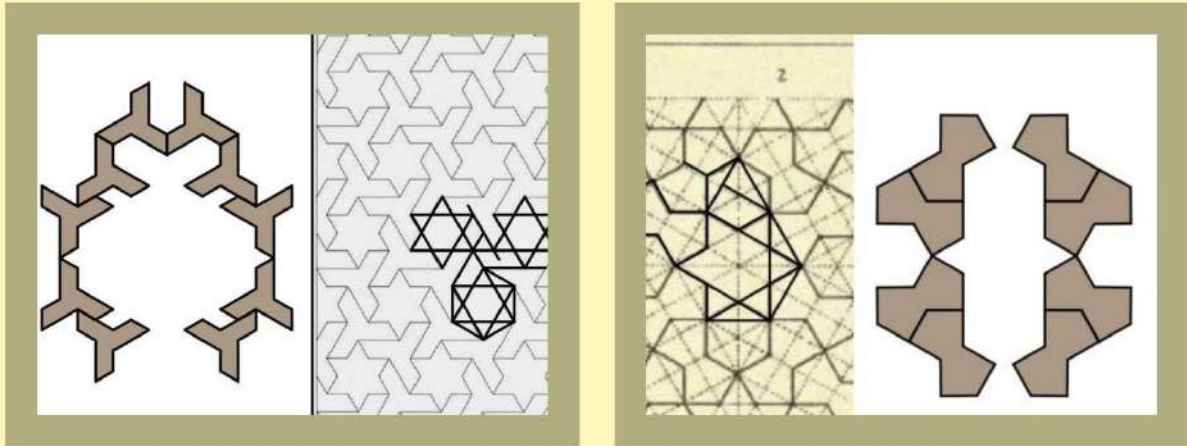


6- application

The growth indicators of all sectors are currently increasing to a certain extent in the state of Uzbekistan. In particular, we are witnessing a lot of work being done in the field of architecture and design. However, it is worth noting that in most parts of the development of city buildings, we can find similarities in appearance and structure of public and residential buildings at every step. However, by changing these stereotypes, we can create projects that have an unusual look and type

in a modular system, using pieces of regional national ornament. Taking into account these issues, it is possible to create a solution by making the commercial objects located on the streets look like stylized national ornaments of the region through the module system. Modular design or "modularity in design" is a design approach that breaks down a system into smaller parts that can be created independently and then used in different systems.

Based on regional ornament stylization sketches of modular commercial objects



7- application

A module is a functional system that can be extended and reused. It offers flexibility in design and reduces costs. The modular approach allows any module to be replaced or added to the rest of the system without affecting the overall aesthetic. Furthermore, the use of a modular system for any purpose greatly expands the possibilities for choosing design forms in unique and innovative ways. A module is a system organised by proportions, with the architectural form based on the relationship between each part and the elements that compose it. These proportions are not arbitrary, but are determined by the function of the object and its location, design and materials, the aesthetic preferences of the period and the author, and the dimensions and silhouette of the object.

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НАРОДНЫЕ ПРИМЕТЫ О ПОГОДЕ

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Аннотация: в данной статье рассматриваются народные приметы о погоде, которые сохранились в народе и передаются из поколения в поколение. Приметы основаны на наблюдении человека за поведением животных, растений и их реакцией на изменения погоды.

Ключевые слова: приметы, погода, признаки, метеорология, температура, прогноз, климатический процесс, плотность, воздух, оттепель, морозный.

FOLK SIGNS ABOUT THE WEATHER

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Abstract: The article talks about weather-related folk signals that have been kept alive, and handed down through the generations. The signs are based on human observation of the behavior of animals, plants and their reaction to changes in the weather.

Keywords: omens, weather, signs, meteorology, temperature, forecast, climatic process, density, air, thaw, frosty.

OB-HAVO HAQIDA XALQ BELGILARI

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Annotatsiya: Ushbu maqolada xalq orasida saqlanib qolgan va avloddan-avlodga o'tib kelayotgan ob-havo haqidagi xalq belgilari ko'rib chiqiladi. Belgilar odamlar, hayvonlar, o'simliklarning xatti-harakatlarini va ularning ob-havo o'zgarishiga bo'lgan munosabatini kuzatishga asoslangan.

Tayanch so'zlar: belgilar, ob-havo, alomatlar, meteorologiya, harorat, ob-havo ma'lumoti, iqlim jarayoni, zichlik, havo, eruvgarchilik, sovuq.

Народные приметы о погоде – сохраняющиеся в природе и передаваемые из поколения в поколение сведения о различных признаках, указывающих на предстоящие явления погоды.

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Meteorologists, as a rule, believe that folk signs carry nothing in themselves except humor and folklore: "If dogs sleep a lot and eat little, it will rain," "Dogs roll on the ground, it will rain or snow." But such signs as: "The catkins on the maples are the beets," "The violets are blooming, the carrots and parsley," "If the birch leaf unfolds completely, you can plant potatoes," are justified, since plants react to changes in temperature and humidity in the environment environment and behave accordingly: trees begin to bloom or a flower opens and begins to emit a stronger smell and many other signs indicating changes in the weather.

People had to be able to navigate weather conditions in order to harvest crops on time or begin other agricultural work. For a very long time, people have been guided by folk signs, which are based on human observation of the behavior of animals and plants and their reactions to weather changes. This information has great scientific value and helps predict the weather.

According to one version, when folk signs were created, the climate was completely different. The winters were colder, the summers not so hot, that is, they were created for completely different times, or rather for other climatic eras. However, the main reason for the inconsistency of folk superstitions about the weather lies in the global nature of climate processes and the local nature of observations of them. However, for short-term and operational forecasts, a number of folk signs are quite applicable. And there is a scientific basis for these dependencies. For example, the well-known sign "Smoke in a column - for frost, in a rocker - for thaw" is associated with a change in the density of surface air when changing air masses and, consequently, a change in the lifting force of smoke. The same applies to the low flight of insectivorous birds before rain: in less dense air, it is difficult for small insects to rise to a greater height. The closing of some flowers before rain is associated with a rapid increase in humidity; the plants thus protect the pollen from getting wet.

Examples of weather signs.

Signs in spring

Larks fly towards warmth, finches fly towards cold.

Geese are flying high - there will be a lot of water.

A lot of sap flows from the birch - for a rainy summer.

Clouds float high - good weather.

Sparrows bathe in the sand - predicting rain.

If the cat sleeps on the floor, it means warmth.

Signs in summer

Before bad weather, birds sing loudly.

Before the rain, the flowers usually close.

Frogs croak in the pond - it means rain.

Birds fly low - it means rain.

Signs in autumn

Thunder in September foreshadows a warm autumn.

Autumn will be warm if pansies, buttercups, daisies, yarrow, and clover bloom before late summer.

A bird landing on the roof means bad weather.

Poultry hides its head under its wing - to the cold.

Late leaf fall means a harsh and long winter.

Mosquitoes appeared in late autumn, leading to a harsh winter.

Swallows fly low - it means rain.

Signs in winter

A crow swimming in a puddle means bad weather.

Sparrows scream loudly - a blizzard.

A crow hides its head under its wing - to the cold.

If the sky above the forest turns blue, it means it will be warm.

The trees were covered with frost - a blizzard.

The cat hides its nose - to a blizzard.

In English

The south wind carries rain in its teeth.

(English: A wind from the south has rain in its mouth)

If cirrus clouds form in weather with a falling barometer, it is likely to rain.
(eng. If cirrus clouds form in weather with a falling barometer, it is almost sure to rain).

Folk signs, which represent an integral part of national culture, still remain one of the least studied folklore microgenres in linguistics. How, in ancient times (and even today), were fairly correct long-term weather forecasts made? People, in order to expand the range of their sensations, have made many plants their "meteorologists". In folk "natural history", plants have served people as "oracles" of the weather since time immemorial. Folk signs related to the seasons and meteorological concepts occupied a special place, reflecting pre-scientific ideas about nature.

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Theory of knowledge acquisition system

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Abstract. This article covers issues such as the theoretical basis of providing knowledge to students, factors affecting the process of formation of learning ability, conditions, and approach. Also, important points were given about the formation of students' creativity in the process of learning.

Keywords. Reading, comprehension, learning process, intelligence, independent research, independent education, academic hours, academic knowledge.

I. Independent reading. Independent reading is of great importance both in the educational paradigm of students "Student - textbook - teacher" and in working on the basis of the intellectual system of learning.

In general, independent reading is an activity aimed at the teacher's and the student's independent education, learning, and further development of existing knowledge.

In order to improve, deepen and perfect the professional skills of the students in the acquisition of professional knowledge, skills and qualifications, by using various forms, methods and tools of didactics, to read, learn and gain knowledge. purposeful scientific work done by him represents the essence of independent reading.

For this reason, independent reading is an intellectual and creative activity that is relevant at all times for the owner of any profession and his intellectual potential.

II. Design education technology. It is known that the project is one of the methods that ensure the student's independent work, thinking, and self-mastery in achieving the educational goal. In particular, the organization of interactivity on the basis of a project is currently considered the most active, highly effective method. For this reason, design works are rapidly entering the education and training processes. In particular, it forms the main didactic units in the credit-model system, the intellectual system of learning, and the "Student-textbook-teacher" educational paradigms.

Currently, issues such as the development of the substantive part of education, the justification of the general and specific goals of education, the determination of the set of taught subjects, the determination of the necessary content, subject, purpose and tasks of each subject are being solved.

In modern pedagogy, technologicalization of the logical sequence with such an organizational and structural appearance is increasingly becoming a priority. Therefore, it is becoming more and more important to conduct education and training processes on the basis of project-based educational technologies. In this regard, project education technology can be expressed as follows:

Project-based educational technology is the process of implementing a technological approach to education by a student who has developed a design mindset, and its main goal is to form students' skills in applying theoretical knowledge to life tasks, and its main tasks are to sense responsibility and make decisions in cooperation. , development of independent thinking, formation of skills and qualities such as rational (rational) solving of problem situations in education.

It can be seen from the above that the educational paradigm "Student - textbook - teacher", that is, the intellectual system of acquiring knowledge, imposes great responsibility not only on the student, but also on the teacher. In this, the teacher is also required to perform a number of tasks. Based on our research, we have expressed them in the following order: from the very beginning of conducting the lessons assigned to him, the teacher should give detailed information to the students about the purpose, tasks, subject of the subject he teaches and their role and importance in preparing students for practical and professional activities need;

- the teacher should have the qualification of pre-designing the teaching loads given to the students in the subject he/she teaches;
- it is necessary to be able to prepare the instructions and recommendations related to the implementation of the teaching load given to the students by the teacher and to perform control work on them, and manage to convey them to the students;
- it is necessary to separately present (emphasize) the main and main ideas of mastering the subject on the subject taught by the teacher to the students;
- in the process of imparting knowledge to students, the teacher should act thinking of increasing their professional-intellectual potential and improving their practical-professional skills;
- the teacher should always pay attention to teaching students to form a database on the achievements of science and technology and pedagogical innovations in the studied subject (subject);
- the teacher should have the ability to regularly improve the professional knowledge, skills, qualifications and skills typical of pedagogues, and also be careful to always try to use them effectively in practice;
- after the teacher has given the study load to the students in the subject he/she is conducting, he/she has thoroughly mastered the process of determining and evaluating the results of their learning based on the set plan, i.e., he/she is able to

accept them on the basis of a strict schedule should get This credit is also very useful in transferring the credits received by students based on the learning results of the module system;

- the teacher checks the students' knowledge level (intellectual potential and mastery results) and mastering his educational programs must have thoroughly mastered the fair and transparent methods of determining and evaluating the level and so on.

A teacher who can perform these tasks also has the responsibility to be ready for the following duty questions:

- the teacher must have a concept of teaching;
- what activities should students do to familiarize themselves with the concept;
- what students should observe and record during the lesson;
- how to give instructions and recommendations to students on completing the study load?
- How to teach students how to take data and turn it into information about the study of sources?
- How to teach students to work independently and independently?
- How to guide students to think creatively and take an innovative approach, etc.

Based on the results achieved during this research, we found it appropriate to express the following requirements:

- The educational paradigm "Student - textbook - teacher" requires working according to the intellectual system of learning and thereby effectively forming the skills of acquiring new knowledge and using it in practice in students to acquire their professional activity. the process should be carried out purposefully;
- By teaching students how to read, it is necessary to achieve the development of optimal options for forming their intellectual potential, professional knowledge, the culture of obtaining information from sources and turning them into information. This is an important didactic basis for the formation of students' social knowledge; In the "Student - textbook - teacher" educational paradigm, a conscious-creative attitude is formed in students regarding the studied source, and on the basis of them, the students' research skills should be regularly formed and improved;
- In the educational paradigm "Student - textbook - teacher", the student should be able to plan his activity and, on the basis of it, should create a didactic basis for organizing his creative and professional activity in students on a scientific basis.

The educational paradigm "Student - textbook - teacher" consists of an intellectual system of learning, through which future specialists will be prepared for scientific and creative activities.

Based on the intellectual system of learning, the educational paradigm "Student - textbook - teacher" is not only applicable to the training of future primary school

teachers, but it consists of a methodological approach to the training of teachers of all directions. therefore, we recommend using this methodology in the training of specialists in other fields. It is only necessary to accept this approach as the main idea, taking into account the purpose and task of the research.

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Intellectual system of learning

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Abstract. This article talks about the scientific-theoretical basis of imparting knowledge to students, the positive aspects of the process of acquiring knowledge and the process of formation of cognitive abilities. In addition, important points were given regarding the formation of inquisitiveness in students during independent education.

Keywords. Knowledge, thinking, the process of acquiring knowledge, intellect, independent research, independent education, academic hours, academic knowledge.

"Intellectual system of education is the means of providing information necessary for independent work of students, mutual information exchange, as well as software and organizational-methodical support aimed at the development of the higher education system on the basis of information and communication technologies. is a structural-organizational complex that includes

Based on this source and the above-mentioned modern achievements of science and technology, it can be seen from the essence of educational paradigms that the system of preparing students to acquire intellectual knowledge is similar to the credit-module systems currently entering the higher education system of our country. fits perfectly.

It is known that the composition of the credit-module system consists of two necessary elements. They are called: training load and training results.

The study load and study results have the following meaning:

Study load is the amount of time a student needs to complete all systematic study exercises and activities aimed at achieving specific learning outcomes.

"Learning outcomes are the set of knowledge and skills that a student is expected to learn, understand and be able to do as a result of completing the course load" Student it is possible to obtain a specified number of credits in the studied subject only when fulfilling the necessary elements of the study load and study results.

So, in the educational paradigm "Student - textbook - teacher" and in the credit - module system, the student works according to the intellectual system of learning. In both of them, the main focus is on improving the educational and cognitive activity of students.

Based on our research in this field, it can be said that great achievements and advantages can be gained in teaching according to this educational paradigm. Based on our research, we have defined them as follows:

- the student learns to search for materials on the subject;
- the student learns to distinguish the first levels, second levels and even further levels from the collected materials;
- the student learns to acquire new knowledge on the subject;
- the student learns to use the newly learned knowledge in mastering the studied subject, that is, to apply the new knowledge;
- the student is able to organize an independent work on the subject being studied, and in doing so, he is able to make improvements related to his creative activity;
- prepares for conscious creative assimilation and perception of educational material;
- the student can determine and evaluate the results;
- the student can predict the learning results;
- the student can manage the learning process;
- the student will be ready for independent reading.

These are the main focuses of the "Student-Textbook-Teacher" educational paradigm, which is the main principle for teaching students how to read.

In this part of our research, it can be noted as a conclusion that the activity of the intellectual system of learning is leading both in the educational paradigm "Student - textbook - teacher" and in the credit - module system. And this is it in the activity system, as we mentioned above, not only the student, but also the teacher has a great responsibility, because in this system, as shown in the educational paradigm "Student - textbook - teacher", the teacher has high intellectual potential, management, Skills such as being able to make good (optimal) decisions are required. The reason for this is that through these skills, the professor-teacher should teach students to work independently, learn independently, design learning materials, independent reading and modular educational technologies, and give methodical recommendations and instructions in this direction. .

Taking these notes into consideration, we can now think about the main goal of the intellectual system of education and the main task of the teacher's intellectual system.

Below are our thoughts on them. The main goal of the intellectual system of education is to prepare students to work independently based on the formation of a conscious and creative attitude to the profession they want to acquire, and to prepare them to regularly improve the quality of education using the professional intellectual potential of professors and teachers.

The main tasks of the intellectual system of education are as follows:

- ensuring the quality of independent work of students;
- formation of students' skills of rational use of educational-methodical resources;
- arming students with modular and project-based educational technologies;
- formation of students' skills to collect information on the studied source, process it and transfer it to the necessary sources;
- to teach students to prepare information on the studied source (science, topic, concept, rule, law, etc.) and equip them with the basic principles of information exchange in this process; to prepare software and methodological resources for independent work, independent reading that students may encounter in their professional activities.

These stated goals and tasks do not lose their importance in the educational paradigm "Student - textbook - teacher" and in the credit - module system.

We found it appropriate to cite the following source about the practical importance of the intellectual system of education:

"Implementation of the intellectual system of education creates wide opportunities for increasing the quality of education based on the integration of various forms of education based on the individualization and differentiation of the educational process, and ensures the continuity of learning. The uniqueness of the proposed solution lies in the universality of the educational material placement platform, the mobility and flexibility of education, the ability to self-check knowledge, skills and competences. A teacher is required to have great intellectual potential and pedagogical skills in his field, and on the basis of such opportunities, it is the main task of the teacher to conduct activities such as mobilizing students for independent education and mastering project-based educational technologies.

Briefly, the following information can be given about these main tasks:

In order to implement independent education - this form of education, first of all, the scope of the student's ability to think independently and the suitability of the educational material to their intellectual potential should be taken into account. Effective and purposeful use of the main didactic materials in any subject, i.e. texts, questions, tasks, exercises, examples, problems, are designed in advance by the teacher and guidelines and instructions are prepared for their implementation. It is important to have. These important aspects will continue to develop and improve depending on the intellectualization of education, and naturally, the level of independent thinking corresponding to it will also improve.

Based on the results of our observations and research in this field, we have divided students' thinking into the following two directions:

1. Authors' opinions and this science in textbooks on the field of education The main focus is on the instructions designed by the professor-teacher.

2. The following didactic principles of directing students to independent thinking are the main focus: advanced ideas related to the achievements of science - science and technology - technology related to the subject; innovative methods and technologies for studying the subject; concluding thoughts on the topic; practical developments; the student's personal conscious attitude to learning the subject and the scope of his scientific thinking skills and so on.

These two directions of independent thinking can be important didactic bases for teaching students to learn independently.

Here is a definition of self-directed learning:

"Independent education is a process of individual actions aimed at learning the tools and experience of a person, scientific and technical achievements. In this, the inner world of a person, emotions, and the ability to think independently play a key role. Therefore, independent education means the knowledge, skills and competences obtained on the basis of additional sources (science - science news and technical - technological achievements) in the field of education under consideration (science, topic, concept, etc.) as long as the direction of education for the purpose of strengthening is understood.

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UPGRADING AND REFORMING THE PRESCHOOL SYSTEM TO A NEW LEVEL

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Annotation: The article reveals the characteristics of raising preschool education to a new level and radical reform and its characteristics; The meaning features of raising preschool education to a new level and radical reform are analyzed based on primary sources.

Key words: education, upbringing, pre-school educational organizations, decisions, decrees, orders, reforms, international studies, management program, participants, pedagogues. On August 16, 2017, the President of the Republic of Uzbekistan, Shavkat Mirziyoyev, launched the new academic year, ensuring mutual integration between general education schools and secondary special, vocational education, and higher education institutions. with the state of affairs related to the progress of preparation, the introduction of the 11-year secondary education system, the fundamental reform of the secondary special, vocational education system, the organization of the

activities of newly opened higher education institutions and branches in order to get to know each other more closely, he received and listened to the reports of the heads of the Higher and secondary special education, the center of secondary special vocational education, the Ministries of Public Education. touched on the issue of fundamentally improving the activities of pre-schooleducational institutions, studying the most advanced foreign experience, and creating a modern system from all aspects . Taking into account the interests and aspirations of children, providing them with thorough education and upbringing in the pre-school period, expanding their worldview, developing the ability to think independently, inculcating national and universal values in their hearts and minds, thereby instilling them with love for the Motherland, pure He emphasized that development in the spirit of dreams is one of the most important and urgent issues today. After all, how our children study at school and what high goals they grow up with depends to a large extent on the education they receive in a preschool educational institution. At the meeting, the head of our state decided to fundamentally reform the preschool education system structurally, establish a management structure, develop a special program aimed at 100 percent coverage of children in these institutions, give a number of privileges to primary educational institutions, as well as Public Education to fundamentally change the content of education in the training institutions under the jurisdiction of the Ministry, by transferring them to the most advanced higher education

institutions, to provide teachers of general secondary schools with the strongest and most experienced professors. Important tasks were defined in order to achieve education.

The essence of Resolution No. PQ-3261 "On measures to fundamentally improve the preschool education system".

Pre-school education is an institution of great importance in raising a harmoniously developed personality, instilling in the hearts of the young generation the knowledge and values that determine the child's entire future. Therefore, normative legal documents aimed at the development and effective functioning of preschool education in our country have been adopted and complex measures are being implemented. But there are still a number of shortcomings in the field that are waiting to be solved. In particular, the lack of material and technical base in local pre-school educational institutions, lack of qualified personnel, low-quality food supply do not allow to ensure full coverage of children with pre-school education.

[2] It should be said that the quick and high-quality execution of these very important and urgent tasks is under the constant attention of the President of the Republic of Uzbekistan Shavkat Mirziyoyev. Decision PQ-3261 "On measures to fundamentally improve the preschool education system" adopted on September 9, 2017 is a practical expression of this opinion. [2] The decision envisages the introduction of modern mechanisms of pre-school education management, the improvement of the education and training process, the implementation of measures to improve the infrastructure and material and technical support of MTMs. According to it, a commission was established for the critical study of the preschool education system and the development of proposals for the further improvement of its activities. analysis from the point of view of implementation of state policy in the field, including the creation of the necessary infrastructure, material incentives for the work of employees, quality training and qualification of pedagogical personnel, identification of systemic problems that hinder the development of the private sector, and a number of comprehensive studies it is intended to perform actual tasks. Revision of the state requirements for the organization of high-quality preschool education, taking into account advanced foreign experience, critical study of the current procedure for accepting children, the introduction of modern information and communication technologies into the activities of competent state bodies is also a direct commission. was entrusted. Starting from January 1, 2018, in the cities of Tashkent, Nukus, regional centers, as an experiment, the establishment of new preschool educational institutions under the conditions of public-private partnership can be said to be a unique innovation in the field. For this purpose, plots of land and vacant buildings are leased to investors. They are given tax breaks and preferential

loans. Also, the "Roadmap" for the further improvement of the preschool education system in the Republic of Uzbekistan was approved, and specific measures were determined on this basis. It is envisaged to strengthen the material and technical base of pre-school educational institutions, to increase the capacity of personnel, to use foreign experience, and to carry out practical work on the further development of the national system. In a word, the President's decision "On measures to fundamentally improve the preschool education system" is to raise the quality of the preschool education system to a new level, to help the young generation grow up to be well-rounded and mature individuals. plays an important role.

Decree No. PF-5198 "On measures to fundamentally improve the management of the preschool education system" and PQ-3305 "On the organization of the activities of the Ministry of Preschool Education of the Republic of Uzbekistan" number of Decision content essences.

In our country, constant attention is being paid to the strengthening of the national gene pool and the raising of the young generation into mature personnel. At the meeting held on August 16, 2017, many directions for the development of the education system were defined. In particular, important tasks were assigned to structurally reform the pre-school education system, to fully cover children in these institutions. Decree No. PF-5198 of the President of the Republic of Uzbekistan dated September 30, 2017 "On measures to fundamentally improve the management of the preschool education system" and "Organizing the activities of the Ministry of Preschool Education of the Republic of Uzbekistan In accordance with the Resolution No. PQ-3305: comprehensive development of the preschool education system, all aspects of healthy and well-educated children were defined. [1] In particular, as noted in the decree, the number of state-owned preschool educational institutions in our country has decreased by more than 45 percent over the past 20 years, and today the coverage of children in preschool education in the republic is only 30 percent. Also, the material and technical base of preschool educational institutions hardly meets modern requirements. In addition, due to the fact that there are more personnel with secondary special education in pre-school educational institutions in the regions, there are not enough trainings in the preparatory groups for school, many kindergarten buildings do not meet the requirements, especially the coverage of children in the district section it is no secret that it is 18-20 percent.

In this document, the development of a unified state policy in the field, the wide use of foreign experiences in the education of preschool children, creating conditions for them, gradually expanding the coverage of children, arousing interest in reading books in the younger generation, their healthy and correct very urgent issues such as

organizing nutrition, improving the quality of medical services are covered. It is especially noteworthy that the qualification improvement and retraining of preschool educational institutions' leaders and pedagogic staff are indicated as very important issues. There is no doubt that the establishment of the Ministry of Preschool Education

of the Republic of Uzbekistan with the decree will serve to improve the management system in this regard. Now, regardless of departmental affiliation, all state-owned pre-school educational institutions will be transferred to the system of this ministry. A number of important tasks were assigned to the Ministry. In particular, conducting a unified state policy in the field of preschool education, taking into account advanced foreign experience, creating conditions for the intellectual, moral, aesthetic and physical development of preschool children in all aspects, healthy competition between state and non-state preschool educational institutions. It is one of them to ensure the gradual full inclusion of our children in preschool educational institutions due to the creation of an environment. In addition, providing preschool educational institutions with teaching methodical, didactic materials, games and toys, fiction that reflect national cultural historical values and arouse interest in reading books from childhood, experienced highly qualified, attracting well-trained pedagogic personnel and educators to the educational process is also in the attention of the ministry. In general, the documents become programming for the further improvement of the preschool education system, which is considered an important link of the continuous education system, the expansion of the state and non-state network of preschool educational institutions, providing them with qualified pedagogical personnel. On October 19, 2017, the President of the Republic of Uzbekistan, Shavkat Mirziyoyev, at a meeting dedicated to the fundamental improvement of the preschool education system, said: "No matter what field we choose, we cannot achieve any change and a prosperous life without educating modern mature

personnel. we can't. Preparation of such personnel, a healthy gene pool of the nation, begins first of all with the pre-school education system," he said. Preschool education system is the primary, most basic link of continuous education. According to the scientific conclusions of experts and pedagogues, 70% of all the information and information that a person receives during his life is received by the age of 5 years. This fact alone clearly shows how important kindergarten education is for our children to grow up as mature and well-rounded individuals. There is no need to go far in search of further proof of this. When you compare a child who attended kindergarten with a child who did not attend kindergarten, it is not difficult to notice that there is a huge difference in their thinking level. That's why we raised the issue

of revision of the preschool education system to the level of state policy and started great work in this regard. Shavkat Mirziyoyev said that if we do not do this work carefully, it will be difficult for us to achieve a quality change in the entire education system and ensure the continuity of education. Today, the state program for expanding the network of preschool educational institutions, strengthening their material and technical base, and building new kindergartens is being adopted and implemented. Taking into account the experience of developed countries, great importance is attached to expanding the network of non-state educational institutions, including non-state kindergartens.

, 2017 "On measures to further develop non-state educational services"

No. PQ-3276) serves to increase the type of services. Special attention was paid to the training of personnel specialized in the field of preschool education. "Those who implement all the decisions we make, teach our children the basics of knowledge, the most necessary life concepts and skills are highly qualified educators and trainers," said the President of the Republic of Uzbekistan Shavkat Mirziyoyev. On the basis of advanced foreign experiences, improvement of curricula and programs for improving the qualifications of pedagogues in the preschool education system, in the direction of "Preschool education" of special extramural departments of higher education institutions, 2018 - Attention was paid to the issue of allocation of quotas for 2023. [3] Another important issue is the need to organize a qualified medical service in preschool educational institutions, to establish a system of healthy nutrition that fully meets sanitary standards and hygiene rules. It was emphasized the need to assign doctors to pre-school educational institutions, improve the qualifications of medical nurses, provide full supply of medicine, sanitary-hygienic means for providing emergency medical care, and organize children's nutrition at the level of established standards A task was given to introduce the "electronic program for admission and queuing of children to state preschool educational institutions" on the single interactive state services portal. Also, the condition of state pre-school education institutions with information and communication technologies and their connection to the Internet was critically studied, and measures were taken to gradually provide them with modern computer equipment and connect them to the Internet. - a program of events will be developed. In a word, we need to create a modern system in the field of preschool education in all respects, said the head of our state. In the next 3-4 years, we must achieve full inclusion of all children aged 5-6 in pre-school education. This is the issue that will decide our tomorrow and we must do it. [7]

Reforms to be implemented in the pre-school education system and future tasks.

In order to summarize the tasks assigned to the field of preschool education and to eliminate the shortcomings, a video selector meeting was held under the chairmanship of the President of the Republic of Uzbekistan Shavkat Mirziyoyev on December 19, dedicated to the analysis of the reforms implemented in the preschool education system and the determination of future tasks. was carried out. Preschool education is the primary and most important part of the education system. Cultivating a healthy gene pool and mature personnel begins with this system. However, so far this system has been lagging behind in development. The last one Over the past 20 years, the number of state-run preschools has decreased by 45 percent. As a result, only 33% of preschool children are enrolled in kindergartens. This figure is 99 percent in Denmark, 97 percent in Japan, and 95 percent in South Korea. Educational programs for social, personal, emotional, speech, mathematical, physio-psychological, physical and creative development of children have not been introduced in pre-school educational institutions. In general, kindergartens have become "institutions that look after children while parents are at work." The President pays special attention to this area, which plays an important role in the future and development of the country. During his visit to the regions of our country, he visits preschool educational institutions. The fact that several meetings on the development of this field were held under the chairmanship of Shavkat Mirziyoyev is a proof of this attention. On September 30 of this year, the head of our state "On measures to fundamentally improve the management of the preschool education system" In the decree, the urgent tasks and priority directions for the industry were defined. On the basis of the President's decision adopted on this day, a separate ministry was established in this field - the Ministry of Preschool Education of the Republic of Uzbekistan. The new ministry is responsible for expanding the network of state and nonstate preschool educational institutions, strengthening the material and technical base, providing them with qualified pedagogical staff, dramatically increasing the coverage of children in the institutions, introducing modern educational programs and the task of radically improving the quality of preparing children for school through the implementation of technologies. [8] Today, the State program in this regard has been adopted and large-scale work is being carried out. Territorial administrations and district (city) departments of the Ministry are being established, and great importance is being paid to improving the local conditions, building new kindergartens, including expanding the network of non-state kindergartens.

The work being carried out in the system was discussed at the meeting.

The President analyzed the situation in the pre-school education system in the regions and touched on the problems and shortcomings that await their solution. In

particular, the lack of personnel supply and potential in local pre-school educational institutions, although there are more than 57 thousand specialists working in the field, 85% of them are personnel with secondary education. It was noted that it does not allow. It has been criticized that children's literature has not been delivered to preschool educational institutions for years, parents have lost trust in kindergarten, and many problems have accumulated in the preschool education system over the years. Also, special attention was paid to the fact that the necessary conditions for the operation of preschool educational institutions were not created by many local governments, kindergarten buildings were empty, and their effective use was not established. reports were heard.

A number of strategic tasks to be implemented in the first half of 2018 were determined in order to eliminate the shortcomings noted at the meeting.

First, it was noted that construction and reconstruction of kindergartens will be continued intensively based on the Program for 2017-2021. From the 2018 state budget, an order was given to allocate 771 billion soums for the construction and repair of 427 kindergartens (including 14 new constructions, 256 reconstructions, and 157 capital repairs). In this process, projects of 50, 100 and 150-bed kindergarten buildings with a modern appearance will be redeveloped in a short period of time, taking into account the conditions of the regions, the facilities will be warm in winter and cool in summer, children can wash, eat, and study. All conditions should be created for children to hang out, play, sleep, the kitchen should be located separately, and the most important thing is that in the construction of new buildings, the requirements for the organization of the process of education and upbringing of children should

be strictly taken into account. was read.

Secondly, it was noted that it is necessary to actively establish new types of preschool educational institutions on the basis of public-private partnership. Taking into account that the most important problem in this matter is investment, commercial banks were attached to each region in order to provide all-round assistance to the established non-state educational institutions and to allocate the necessary credit funds.

The Cabinet of Ministers of the Republic of Uzbekistan, the Council of Ministers of the Republic of Karakalpakstan, regional and Tashkent city administrations are responsible for developing regional programs to dramatically increase the level of children's enrollment in preschool education, in which 10 - 15 new schools in each district and city, among others, the task of establishing a preschool educational institution based on the mechanism of public-private partnership was assigned.

It was noted that private kindergartens are given great privileges, including that from January 1, 2018, half of the funds spent by private kindergartens for natural gas and electricity will be covered by the State budget for 5 years. This ensures that the fees paid to them do not go up.

Thirdly, it was noted that it is necessary to pay special attention to healthy feeding of children in kindergartens and ensuring the quality of food products given to them. Based on this, measures were taken to increase the amount of funds allocated for this purpose.

The Council of Ministers of the Republic of Karakalpakstan and regional governments were instructed to attach 10-15 farmers to each pre-school educational institution from 2018 to supply quality food products at low prices.

The task was set to establish a state enterprise that supplies ready-made quality hot food to kindergartens and to develop a mechanism for launching the "Catering" service **Fourth**, special attention was paid to improving the quality of education and medical services in kindergartens. In particular, in 2018, standards for providing preschool educational institutions with methodical and didactic games, toys, furniture and other technical tools will be developed based on the experience of South Korea.

State requirements for pre-school education, improvement of educational programs based on advanced foreign experiences, it was emphasized that children should be taught to read and write through various games.

Special attention was paid to the issue of training and upgrading the qualifications of highly qualified educators and coaches, and in this regard, it was noted that the activity of the institute for retraining and improving the qualifications of the leaders and specialists of preschool educational institutions in the system of the Ministry of Preschool Education was noted.

Continuous improvement of the leadership and pedagogic personnel's potential in the system, as well as the development of advanced pedagogical methods and techniques, a new generation of educational and educational-methodical literature special attention was paid to the organization of creation and publication.

Also, it was ordered to determine the admission quotas of the institutions that prepare personnel for preschool education based on real needs, and to revise the requirements for preschool education pedagogues.

Fifth, the task of attracting foreign investments to improve the field of preschool education was set. In particular, within the framework of the "Improving the development of children from an early age" project of the World Bank in cooperation with the Global Partnership in Education, in 2019-2022, a grant of 10 million dollars and a preferential loan of 50 million dollars will be directed to the

development of the field of preschool education. the need to develop the concept was emphasized.

Sixth, special attention was paid to the fundamental improvement of the base of regulatory and legal documents related to the field of preschool education. For this purpose, the Cabinet of Ministers and the Ministry of Preschool Education were instructed to develop the draft law "On Preschool Education" based on advanced foreign experience.

Seventhly, the State Committee for Architecture and Construction, together with relevant ministries and agencies, was tasked with a fundamental revision of the design of construction and reconstruction of kindergartens.

The quality of preschool education is the issue that will decide our tomorrow.

The development of preschool education is not only the task of the newly established ministry. This should be the most important task of all of us, from the President, the Prime Minister and their deputies, to the district governor, to the head of the lowest office, said the head of state.

Processes of reforming preschool education system in Uzbekistan based on South Korean experience.

Within the framework of the state visit of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Republic of Korea on November 22-25, 2017, the Ministry of Preschool Education held about 20 meetings to exchange experience, open kindergartens experimentally in Uzbekistan, and train personnel together. and agreements were reached on studying the possibilities of conducting scientific research .

As part of the trip, the Ministry of Preschool Education of the Republic of Uzbekistan organized visits to a number of pre-school education and other types of institutions in Korea and studied their activities, including the specific aspects of kindergartens, the methods of education used, financing and payment systems, qualification level and service conditions of pedagogical staff, programs and methods related to food and material and technical supply and industries were thoroughly studied.

The creation of maximum favorable conditions for the work of pedagogues, the creative freedom of the pedagogue, the absence of large-scale reports, the high social status of the pedagogues of state kindergartens, the creative environment created for children to express themselves, including the comfortable design and equipment of the rooms even to the smallest details, they The existence of rich literature and developmental games for children, the development of social behavior and personal hygiene skills from early childhood form the basis of the success of the Korean preschool education system.

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Another aspect that deserves special attention is that the state takes care of the most vulnerable sections of society, low-income families and children with disabilities in the first place and applies the principle of priority to them during admission to kindergartens. and for this reason, the principles of inclusive education in Korea are commendable.

Verbal agreements were signed with Sangmyung University and Chung-Ang University in order to develop cooperation with higher education institutions that specialize in training personnel for the Korean education system and have pre-school educational institutions under their management. and cooperation memorandums were signed with Chonnam National University.

Within the framework of the Agreements and the Memorandum, cooperation in the following areas is envisaged: exchange of experience between students, scientific-pedagogical and management specialists, measures aimed at personnel training, retraining and professional development, including the introduction of the latest programs and methods, collaborative research, conferences, important tasks such as conducting exhibitions and seminars, organizing special joint master's and doctoral programs for training preschool education specialists, as well as experimental kindergartens based on the Korean system in Uzbekistan.

During the visit of the delegation of the Ministry of Preschool Education to the Republic of Korea, meetings were also held with prestigious research institutes specializing in early development of children and preschool education system. In particular, on November 23, 2017, a Memorandum of Understanding was signed with the Korean Institute for the Study of Child Care and Preschool Education (KICCE). Within the framework of the agreement, joint research will be conducted in cooperation with the Ministry of Preschool Education and KICCE, programs aimed at the exchange of experience through the training of pedagogical personnel will be implemented, seminars and conferences will be organized. In addition, development of preschool education system development strategies, revision of educational programs and standards, and introduction of educational statistics are envisaged on the basis of cooperation.

the Seoul Early Childhood Education Promotion Institute on November 22, 2017, a joint research project was held, providing an opportunity to exchange experience and put the results of scientific research into practice. - it was agreed to sign cooperation agreements in the future regarding the establishment of practical research institutions, preparation of teaching and methodological materials.

Another effective meeting was held at the Department of Preschool Education and Child Care of the Ministry of Education of the Republic of Korea, the most important potential partner of the Ministry of Preschool Education.

At the meeting, the Korean side informed the delegation of Uzbekistan about the stages of preschool education and childcare in Korea, the principles of developing strategies for the development of the sector, and the aspects of the introduction of the new NURI preschool education National Program. Also, payment systems, pricing principles based on the type of educational institution, the state's expenditures on preschool education, as well as future plans, including the expansion of the share of state kindergartens in the structure of preschool education, the electronic admission system information was also given about the introduction, improvement of the qualifications of pedagogues, and trends in the improvement of the field.

CONCLUSION The experience of the Republic of Korea is certainly noteworthy, and we believe that elements of the Korean model will definitely be reflected in the process of reforming the preschool education system in Uzbekistan.

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DISCLOSURE OF STUDENTS' KNOWLEDGE AND SKILLS ABOUT THE TYPES OF PAPER USED IN FINE ARTS LESSONS AND PREPARING FOR THEIR WORK

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ANNOTATION

Thanks to article, students will be able to get acquainted with the types of paper used in the visual arts, the methodology of its preparation for work with watercolors, as well as have the opportunity to expand their abilities and knowledge in the field of art and drawing technology.

АННОТАЦИЯ

Благодаря этой статье студенты могут ознакомиться с видами бумаги используемой в изобразительном искусстве, методикой её подготовке к работе с акварелью, а также будут иметь возможность расширить свои способности и знания в искусстве и технологии рисования.

Keywords: Watercolor, vatman, planshet, frame, gravyura, category.

Ключевые слова: Акварель, ватман, планшет, рамка, гравюра, категория.

Knowing the properties of materials, you can create a work of art of an impeccable level.

Along with learning the basics of technical knowledge in this field, students, with the help of teachers, become familiar with the materials, raw materials, equipment and painting techniques used in the field of fine art. In this article I will give brief information about the technique of preparing paper for painting with watercolors.

First of all, you should pay attention to the choice of paper. To work with watercolors you will need thick white paper (whatman paper and a suitable grid).



Along with the ease of painting on such paper with a brush, it is easy to clean it with a knife, it can be scratched and scraped in the necessary places.

Grained paper is better than smooth paper. Ink falls evenly and smoothly on smooth paper. The paint laid on a coarse-grained surface fills its shade depending on where it lies, and on the lighted side the paint is lighter and brighter, and on the hollow side it is dark and changes its color

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a little. As a result of switching to paper, we create a wonderful miracle, game of colors. This gives visual diversity and the color is more saturated.

The choice of paper should be correct and appropriate to the nature of the image. Thus, fine-grained paper is suitable for small-scale paintings, shadowy figures or images of airy and delicate objects. Rough paper is used to express rough, textured and highly illuminated shapes. The best type of paper for graphic work and drawing is photo paper.

Paper can be in sheets and rolls. Table paper is produced in the following sizes (mm): 297X210, 297X420, 594X420, 594X841, 1189X841.

The following basic requirements are set for preparing paper for drawing and painting:

1. Water-soaked watercolor paper should not be deformed after drying.
2. When covering the paper with watercolor paint after drying, no spots should appear.
3. The paper should retain its original density after several washes with a sponge moistened with water, so that it does not soften or fray.
4. The paint layer must be easily removed. For this purpose, the paper is first washed with water and shredded with a special knife without damaging the surface of the paper.
5. The color of the paper should be white and it should not change indefinitely.
6. The paper should be light, only with a surface layer, it is necessary to absorb watercolor paints.
7. The surface of the paper should be of four different colors: fine-grained, medium-grained.
8. To draw with a pencil, the paper should not be shiny, it should not move up when erased with an eraser.

There are ways to clean paper with water. When choosing paper, it is necessary to pay attention to the quality of the paper, as well as its white, clear and clean surface. It is washed with an alkaline soap solution to remove dust and dirt from the paper. The soap solution is used to wash the entire dirty surface of the paper with a soft brush. If the paper is not gently dusted, the paint drips and stains the paper. Therefore, it is necessary to observe the cleanliness of the paper.

In order to prepare the paper for painting, it is necessary to expand the paper according to the mold in the second step. Soft wood and flat plywood are chosen for its surface. The wood and plywood selected for the frame are coated with hot linseed oil and varnished. In this case, the wood can keep its flat position even when wet.

Plywood, which is ready in a short time, is drawn on a tablet with paper buttons. For this, it is moistened from both sides. This will allow you to pull it more evenly. The paper should be 2.5-3 cm larger than the tablet, apply carpenter's glue to cover the edges of the paper sheet.

When attaching the moistened paper to the stretcher, first it is stretched along the long sides in the middle, and then the middle of the short edges of the sheet is pulled; after that, the paper is pulled to the corners - along the diagonals of the sheet and straightened. The sequence of drawing paper on a tablet is shown in this picture.

Before pulling the paper into the tablet, it is necessary to immerse it in cold water for 10-15 minutes, wipe it well with a dry cloth and clean the glued edges. If the paper lies under the waves when glued to the tablet, this indicates that it is not saturated with enough water.

It is necessary to use a sponge to moisten the paper, in which a small amount of water accumulates. The paper is wiped with a dry sponge so that the edges on the back remain dry. If the paper is not glued to the tablet, but is attached to it with buttons, then in this case you need to

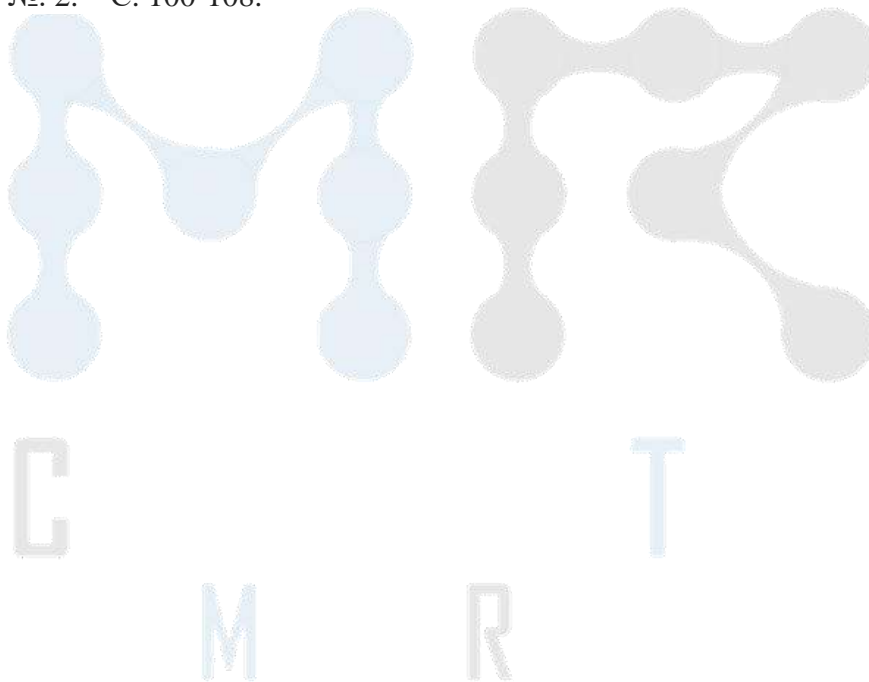
moisten it from both sides, including the edges on the back. To dry the paper, it is necessary to dry the stretched paper in an upright position, which contributes to the uniform evaporation of moisture. In addition to drawing the usual paper on the tablet, sometimes the artist uses an eraser, with a clamp, which is usually used when the eraser works outdoors with nature.

In short, in becoming a mature specialist in the future, in learning the secrets of painting, in order to become a fine art specialist, it is necessary to perfectly understand the technical and technological process of painting, to determine the specific characteristics of the raw materials used, and to apply it in practice. The main goal of a specialist is to be able to use the materials used in the process of creation and to understand their importance, to pay attention to this during the creation of a work, and to find and implement appropriate measures.

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USEFUL WAYS TO LEARN ENGLISH QUICKLY AND EASILY

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Abstract. The most commonly studied foreign language in the world is... English. Never before have you had more study materials at your fingertips, articles promising secret learning approaches, or online communities to support you. But if you need to learn English quickly, what is the easiest way to get results?

Key words: English, language, scientist, technology, responsibility.

1. Start talking as soon as possible

If you are serious about learning to speak English quickly, then the obvious advice is that regular communication with a fluent speaker is practically the only way. The faster you overcome the mental barrier and start testing your language skills out loud, the faster you will be able to speak confidently.

A 2016 study published by the University of Michigan found that students who learn a language by speaking via a webcam tend to get much faster results than those who use traditional methods. Scientists followed two groups of students as they began to learn a new language:

Group A studied grammar and vocabulary exercises

Group B studied speech using video technology

After twelve weeks, it was found that Group A had not made significant improvements, but Group B had significantly improved their language skills. They acquired a more diverse vocabulary, performed better on listening comprehension tests, had better grammar, and were able to speak more confidently.

Simply put, even if you regularly do vocabulary exercises, take grammar and theory lessons for a few weeks, but don't learn English through conversation, you run the risk of not learning how to integrate these skills. This is a common mistake. How often have you heard someone say, "I understand most of what I hear in English, but I don't speak it very well"?

Luckily, it's never been easier to find someone to practice speaking with, even if you're learning the language at home! Preply has thousands of experienced English teachers available to chat via webcam, and you can set our filters to show only tutors whose per-lesson rates are exactly what you can afford.

Having the undivided attention of a native speaker during regular hour-long classes may seem intense, but that's because it's so effective. You will quickly see real progress. We are so confident in this that all lessons have a 100% quality guarantee.

2. Start reading

It has never been easier to find reading materials in English or quickly find information in Google Translate. If you're not quite ready to tackle the complete works of Shakespeare, try:

Look up celebrity gossip on easy-to-read websites like BuzzFeed, Mashable, or Upworthy;

Read your favorite book in English translation;

Switch the search browser to display results in English by default;

Follow a large number of American/British/Australian public figures on Twitter and Facebook.

If you find that you often stop and start again, try studying this list of commonly used words. These are thought to be the first 1,000 words needed to read English and make up about 50% of all written text.

3. Take responsibility

If you want to learn English quickly, regular practice should become a habit. But don't just promise yourself that you'll spend extra time practicing your language skills. You must find a way to ensure that you will practice even when life dictates its own rules.

If you have strong willpower, holding yourself accountable can be as simple as setting an alarm on your phone to remind yourself to study every day at a certain time, such as when you get home from work. But for most of us, it's much easier to stay motivated to do something new when someone else is depending on us.

In one study, the American Society for Training and Development (ASTD) found that you have a 65% chance of achieving a goal if you promise someone to do it. What's even more encouraging is that if you have a specific meeting with this person to discuss your progress, the likelihood of achieving your goal increases to 95%.

You can find a partner who is also learning English so you can compare your progress regularly, or simply find an English teacher you like and respect.

If you decide to try one of Preply's tutors, watch videos from a few different people before scheduling a lesson. Find someone you think you can connect with, perhaps someone with similar interests or life experiences to you. It's easy to stick to your language learning goals when you have one of our awesome teachers rooting for you!

Or try finding a study partner.

4. Try using flashcards to improve your vocabulary

Be warned: flashcards can be a false friend when learning English, causing you to spend too much time learning words without context.

However, combined with a lot of conversational practice, they are an easy way to learn a lot of new vocabulary relatively quickly, and at home. Luckily, there are plenty of great free apps out there, so you can start memorizing words no matter where you are! Here are some of our favorites:

Tinycards

Memrise

Word Power Lite

Quizlet

Some good news: a professor at the University of Western Ontario has discovered that you only need about 800 of the most commonly used words to understand 75% of the language spoken in everyday life. This is definitely an achievable number of cards!

5. Learn whole sentences

Flashcards are useful, but research shows that memorizing entire sentences can be even more useful. Language “nerds” call this technique “sentence mining”. Do a quick internet search for "sentence mining" and you'll find a vibrant online community that swears it's the fastest way to learn English at home.

Of course, learning entire sentences by heart can help you remember words in context and teach you how their meaning changes in different contexts. Watch this video for a more complete explanation.

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Don't know what offers to start with? Try this free list with audio recordings.

This method works especially well if you study with one of the excellent tutors on Preply. Ask your tutor to help you create sentences that align with your personal learning goals.

6. Sing

Music is a great universal language! It can also be a powerful tool for making a second language more natural. Listening to music with English lyrics can help you better understand pronunciation, vocabulary, and sentence structure without feeling like a student at all. An interesting study found that listening to music in a new language can help you learn grammar rules more easily. Children who are just learning to speak do the same.

There is no shortage of great free English music on the Internet. YouTube offers a virtually unlimited supply of music with lyrics to go with your videos, so you can read without missing a word.

7. Watch TV

Watching TV series is one of the best ways to learn English, but which shows are the best? According to a 2012 Kaplan study, the top 5 most popular shows that their students chose to help them learn English were:

Friends (the most popular show, watched by 26% of all their students!)

How I Met your mother

CSI: Crime Scene Investigation

House

The Big Bang Theory

Of course, by being more involved, you will get more out of learning than by passively observing. Try Language Learning with Netflix, a Chrome extension that lets you watch Netflix with subtitles in English and your native language simultaneously. This great free tool even lets you save new words you come across.

8. Change your phone and social media settings to English

So, you may have learned the basics of English. Want to move on to the next step? Now it's time to learn as much as possible about the language. Most of us spend hours every day staring at our phones, aimlessly scrolling through the news.

Changing your phone settings to English is a very easy way to immerse yourself in the language.

By changing your phone settings, you'll learn some words that are very relevant to modern life and that you won't necessarily see on word learning websites, like "news feed" and "sponsored content."

9. Find a language learning community

When you start to delve into the more complex aspects of learning English, it can be very motivating to share your thoughts, discoveries and frustrations with other people. Here are some great ways to connect with other students if you're homeschooling.

Try the English Reddit forum

Get answers to tough questions in Preply's Q&A section

Find public ESL groups on Facebook

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Abstract. People take IELTS for various reasons — and they usually know what score they need. Some want to get an IELTS Certificate (this is probably the most common reason for taking the exam), while others plan to immigrate to an English speaking country or to work in an area where one needs a good command of English.

Key words: abroad, IELTS, university, student, education.

IELTS for education

If you are interested in studying abroad, remember that many universities around the world and almost all UK universities and colleges recognize the results of IELTS tests.

The UK, US, Canada, New Zealand, and Australia are among the most popular destinations to go studying to after you obtain an IELTS certificate. If you want to become a student in the United Kingdom, you can take a look at opportunities for foreigners on the [British Council's](#) website, and if you are interested in a master's or doctoral program, then check at [UCAS](#).

More than 3,300 higher education institutions and programs in the United States (Visiting Programs, [Fulbright Scholarships](#), Bachelor's, Master's, Ph.D., MBA, etc.) take IELTS scores as confirmation of English proficiency.

IELTS is preferred and recognized by more than 290 educational institutions in [Canada](#). Canada also offers numerous grants for international students and scholars, as well as for Canadians who study and conduct a research abroad. The Government of Canada, foreign governments, non-governmental and international organizations provide these grants and scholarships.

Australia has the third largest number of international students in the world after the United Kingdom and the United States, despite the country's population of only 23 million. This is not surprising considering that Australia has 7 of the top 100 universities in the world! In fact, with more than 22,000 courses in 1,100 educational establishments, Australia ranks above countries such as Germany, the Netherlands, and Japan, the eighth in the Universities 2012 U21 national higher education ranking. On the [Australian Government's official website](#) for international students, you can find courses, institutions, and scholarships, read about Australia's study and life, other students' stories, and learn about Australian education.

If you are considering a bachelor's or master's degree program, it is best for you to take the IELTS academic test. General IELTS test is sufficient for non-degree programs. When choosing a college or university, check out which version of IELTS is right for you.

In order to become a foreign student, you will need to demonstrate that you are qualified and can successfully complete the English program. Therefore, you need to get a higher IELTS score for your master's or doctoral degree.

To obtain a student visa, you need to get at least 6 out of 9 points in each section. Requirements for the number of IELTS points may vary depending on the institution. For admission to postgraduate or doctoral studies, a minimum score of at least 6.5 is required. This means a minimum of 6 points in all four IELTS sections.

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For professional courses such as nursing, medicine, etc., IELTS scores are required to be a minimum of 7 points. A score of 7 means at least 6.5 points in each section: Reading, Writing, Listening, Speaking.

Many European universities also accept applicants with IELTS results other than mentioned above. For example, [this website](#) has a list of universities in Europe that accept foreign students with IELTS score of 5.0 to 7.0.

Whichever university you choose, bear in mind that in addition to IELTS, each university also has entrance exams that need to be prepared. We recommend visiting the program or the university website for more information on IELTS scores.

IELTS for employment

Proof of your English language skills is an important stage in obtaining a visa so you can work abroad. Language proficiency is a key to career success and is considered a valuable asset in addition to all other requirements in any job. If you are applying for a work visa, you must have an appropriate level of language skills, which means that you need to be able to speak not only basic spoken English.

For the UK, applicants must score at least 6.5 points for each of the four sections of the test (reading, speaking, listening and writing).

To work in Australia, test score 5 is considered to be “professional English”. A score of 6 means that the applicant is a “competent English speaker”.

In New Zealand, applicants must score a total score of 4 or higher in IELTS general or academic. They may also be asked to provide additional evidence of English proficiency, such as information about the countries in which they lived; their country of current residence, or knowledge of English in their family.

In Canada, applicants should contact the organization to which they wish to apply directly to clarify the requirements for IELTS scores. Employers and educational institutions usually set their own language requirements.

For all these countries, keep in mind that the minimum score requirements vary depending on the profession you choose. For some professions, candidates must score a minimum of 6 points in each of the sections of the test, whereas for teachers, for example, a minimum score of 7 is required.

Remember that IELTS is the first step to achieving your dream. If you decide to leave your home to study abroad, build a career or move to another country, IELTS certification will help you to open new horizons and other opportunities.

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LINGUISTIC CHARACTERISTICS OF SURKHANDARYA
ETHNOGRAPHIC PROVERBS, STORIES AND SAYINGS

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Annotation: this article talks about the ethnographic characteristics of proverbs, proverbs and sayings specific to Surkhandarya dialects

Key words: common Turkish word, dialectal proverb, dialectal saying, ethnographic lexicon, ethnography, linguistic culture, dictionary of ethnographic proverbs, ritual lexicon, religious motives.

As we know, there are many examples of folk art of the Uzbek people, passed down from generation to generation by poets and shepherds.

Surkhandarya is distinguished by its ancient civilization, location at the junction of different religions, languages and cultures, richness of dialects, richness of folklore and ethnographic traditions and customs.

Folk epics are sung by bakhshis and are generally preserved for future generations, but some types of folklore, such as proverbs and sayings, are on the verge of extinction. Thousands of ethnographies have fallen out of use, especially due to insufficient study and collection by specialists of dialect-ethnographic examples of oral creativity. In fact, this problem, which arose in the middle of the last century, has not lost its importance and relevance. In particular, academician Sh. Shoabdurakhmonov drew the attention of scientists to the fact that "If a complete Uzbek traditional dictionary is not recorded in the near future, then we can, taking into account all the responsibility, say that with the passing of the older generation, some of the valuable materials of the language were preserved in their memory and reached us may be lost forever"

It is worth noting that the Surkhandarya region is also distinguished by its ancient ethnocultural structure and, accordingly, a wealth of examples of folk art. The oasis has a unique ethnolinguistic landscape that has been formed over many years. This is clearly visible in the lifestyle of the local population, in their professional and daily activities, in weddings and rituals, in various religious events, and in family relationships. The Kipchak dialect has a large volume in the Surkhandarya dialect-ethnographic space. For this reason, most of the proverbs and sayings characteristic of this area were taken from the speech of representatives of the "j"-sounding dialect and written down on the basis of dialect phonetic rules. It should be noted that most of these ethnographic proverbs and sayings are associated with cattle breeding, various rituals, and tribal relations. At the same time, most of them can be found in one form or another in the speech of representatives of other regional dialects.

At work, we encountered different opinions and discussions when explaining the meaning of some proverbs. For example, the proverb "Qo'taningdan chixsa chixsin, Qozaningdan chixmasin" is a reference to the concept that there was no death.

Most proverbs are formed on the basis of the name of an animal or its characteristics, rise to a higher level of the historical-gradual process, become a fact of language, become a proverb, riddle, phrase, aphorism, i.e. fully formed in memory, the meaning of which is contained in the

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phrase. These are phenomena that have a general, figurative, figurative, philosophical, derivative meaning that cannot be understood from the real (denotative) meaning of words.

Another feature of them is that regardless of the grammatical form (be it a simple sentence or a complex sentence), it maintains the integrity of form and content both inside and outside the text. For example, the proverb “Otdan tushsa ham, egardan tushmaydi” in any speech situation can denote careerist, ambitious, arrogant or ignorant concepts.

It should be noted that, for example, the proverb *matal*, formed on the basis of the speech of livestock and its characteristics, was first clarified in the speech of the livestock breeder (farmer, hunter, gardener, farmer, etc.), then socialized and became the property of a common literary language. The definition of migration of linguistic units such as phrases is controversial. First of all, it is characterized by insufficient knowledge of paraphrase, phraseology, including semantic structure, evolution and translation of proverbs.

“Ot tepmas, it qopmas dema”; “It qutursa egasini qopadi, eshak semirsa (to‘ysa) egasini tepadi” If shepherds are asked about the meaning of their proverbs, most of them will point to the original, general meaning and only a few point to the metaphorical (metaphorical) meaning. True, at first glance, the above proverbs understand the concepts of grabbing, kicking, biting, which can arise in connection with the movement of an animal. These concepts have not yet disappeared.

However, if the primary (genetic, real) meaning is sought and restored from paraphrases, idioms, proverbs, etc., then they: 1) are not proverbs; 2) it is unnecessary to look for figurative meaning in them. However, in proverbs associated with the names of livestock, the object of judgment is the addressee - not the animal, but the person, society.

Social vices and defects of a person or society, negative situations that are discussed openly, are considered rude, are described (allegorically) through the behavior of animals. For example, the proverb “Sinamagan otning sirtidan o'tma” has both a real meaning (do not run over an unverified horse, and behind it (addresses only the second person, you will be kicked, you will be wounded)) and a figurative meaning (do not approach an unverified, unfamiliar person), you will get into trouble, you can earn money) is also a figurative expression. Or you left your country, people, family and friends! What a face you finally returned with, patriot! Traitor! instead of saying: “Ha, ot aylanib qozig‘ini toparkan-da!” you can say.

So, the peculiarity of proverbs formed in connection with folk fantasy is that, although thought is focused on formally specific objects, logically, through their names and characteristics, they represent human behavior or a certain social reality, closed in a “feleton”.

In the work, proverbs and sayings are given in the regional dialect - national and dialect versions of some of them are given in their original form. Some dialect words are explained in parentheses.

As Mahmoud Koshgari noted, “...if we do not call every word by its name, even if it consists of the names of members of shame or insult, it will fall out of use and be forgotten. . They should be stored in smart dictionaries. Based on this, we noted in the work some “rude” - dysphemetic proverbs, so to speak, living in the language of our people.

The materials presented in the work cover the territory of the Surkhandarya region in the context of oasis areas, and we are far from the opinion that the given and explained proverbs, sayings and sayings are not found in other places.

Granting the status of the state language to the Uzbek language and achieving independence of our country made it possible to study our national history, culture, customs and

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traditions, values and rituals, local dialects and dialects on a truthful and reliable basis. wide base. In particular, the study of ethnographic vocabulary of the Uzbek language, ethnography, and folkloristics has risen to a new level.[4.98]

Dialectal-ethnographic proverbs, matals and other units can be divided into the following types based on their linguistic, cultural and ethnic characteristics.

1. Proverbs, sayings and other units associated with religious motives: Iymani jo'xting burdi jo'q (dishonest, dumb person); Mo'lla jo'xta mo'llaman, Mo'lla borda jo'ldaman (uddaburon, a person who can get out of any situation); Banda bersa ko'rimlik, Xuda bersa to'yimlik (meaning provision of food by God).

2. Proverbs, sayings and sayings with didactic content and attitude: Birinchi boxting oy boxting, Yekinchi boxting suvlarga oxting (referring to the sanctity of the first marriage and family); Qutli (barakali) qo'noq (mehmon) kesa qo'y yegiz tuvar, Qutsiz qo'noq kesa qo'yg'a qoshg'ir tegar. He attributes the blessing to the factor.

3. Proverbs, sayings and other units related to cattle breeding: Most of the inhabitants of the Surkhan oasis have been engaged in cattle breeding since ancient times. It is especially closely connected with the lives of people living in mountainous and foothill regions. For this reason, in this area there are many proverbs, sayings and similar ethnographic combinations associated with cattle breeding. Existing reality uses the metaphor of a living person when comparing the limit, when expressing a real thing. Moling xo'ra bo'sa berdi Xuda, Xotining xo'ra bo'sa urdi xuda (good luck, fate - in the forehead); Oshnangdan tuya so'ra, Uyalib biya berar. (If you ask for a mountain, he will give you a mountain).

4. Human age, time and space, ethnographic units related to time: Navro'zdan so'ng qish bo'mas, Mezondan so'ng yoz bo'mas (everything has its own clock); Ol(t)mishqacha oshir, Jetmishdan so'ng dashir (meaning the correct distribution of human life); (everything has its own clock, a reference to the need to acquire knowledge and craft from a young age);

In conclusion, it should be noted that collecting thousands of samples of folk art reflecting the values and traditions of the inhabitants of the Surkhan oasis, the uniqueness and diversity of their paintings, their attractiveness, and studying them on a scientific basis. Education is one of the issues that cannot be postponed. The reason is that rare proverbs, proverbs and other sources of oral creativity, mainly preserved in the speech of the older generation, are in danger of disappearing over time.

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THE ROLE OF ESP TEACHERS IN TEACHING INTER-CULTURAL COMPETENCE.

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Abstract. In the present time's globalized atmosphere, the need for intercultural communicative competence in the workplace runs high. Accordingly, in the area of foreign language education, English teachers need more than ever to incorporate intercultural awareness and cross-cultural understanding in their syllabus. This paper tends to suggest a cultural teaching based on standards for intercultural learning elicited from related literature in an English for Specific Purposes (ESP) setting. It proposes ways of instilling multicultural awareness into these language learners through the implementation of intercultural activities, helping them better understanding diversity and developing positive attitudes in the workplace. The research goals comprise increasing students' intercultural global awareness, promoting their tolerance, and helping them remedy negative attitudes towards the target culture and other alien cultures.

Keywords: ESP teaching, intercultural communicative competence, internal and external agendas, artifact exploration, documenting activity, attitude exploration.

Today, universities all over the world are characterized by a variety of competing internal and external agendas. Teaching programmes are being broadened and updated in response to imperatives as globalization and economic growth. In this climate of international exchanges, academic relationships and fast travel, it is impossible to function in isolation but through interaction with each other for survival. The success of all these organizations and the people involved in these areas depends on effective cross-cultural communication.

As far as foreign language instruction is concerned, the principles of intercultural language education are strongly implemented in the Common European Framework of Reference of Languages: Learning, Teaching, Assessment. The aims are recapitulated as follows: In an intercultural approach, it is a central objective of language learning to promote the favourable development of the learner's whole personality and sense of identity in response to the enriching experience of otherness in language and culture.

The literature has shown that the intricate concept of interculturality lies the foundations of "Intercultural Teaching and Learning", as a new and challenging field in the education system, which is heavily influenced by globalization. Its main purpose is focused on the shift from the traditional ways of teaching a foreign language (with focus on language and vocabulary structures), to teaching cultural elements from the very beginning, promoting thus the learners' so-called "intercultural awareness" and "intercultural communication competence". Learners are more prone to use language in a critical and reflective way, and are also given the opportunity to develop their intercultural sensitivity.

For a long time, teachers have been focusing on strategies that may help students to have an immaculate command of English and a 'native-like' accent, but for many learners, this is a distant goal. In an immensely multicultural world, where English is used as a lingua franca, it appears sensible to accept that it is more necessary for a language learner to be able to genuinely communicate with and understand people in a range of various contexts, than to mimic native

speakers. For this purpose, decision makers in the field of education throughout the world stress the need for integrating intercultural teaching in the curricula.

Distinctly, intercultural exploration helps the learners better discover their own culture and the cultures of the others. Through intercultural activities, students can have deeper insights in to their home culture's practices, beliefs and behaviours and can therefore explain them to individuals whose values and practices run counter to theirs. In ESP teaching contexts, where the topics dealt with include learning a variety of skills such as giving a business presentation, making deals, attending worldwide conferences, reading scientific papers, chairing international meetings, and so on, issues may and do arise.

This is why ESP teachers are urged to promote clear lines of constructive communication to minimize the risks of misunderstandings and breakdowns, and to facilitate the building of tolerance and respect among their learners. In a practical and sensible way, this signifies that they have to teach their students how to manage their behaviour since it is the apparent manifestation of a whole system of beliefs and feelings that needs to be comprehended in order to refine one's cultural awareness and manage intercultural worries. In our increasingly interconnected planet, where technology provides a global platform where individuals explore ideas and cultures without restriction, experts in the area of interculturality are claiming that language learners' horizons have to be widened through a sound intercultural instruction because: "people may share a current nationality, place of birth, a language, a religion, a profession or a neighbourhood and still be very different from one another".

The suggested intercultural approach in this study tries to incorporate some intercultural activities in an ESP environment to help the students fulfil three elemental aims: cognitive, affective and behavioural, and would therefore allow them to springboard into the job market. These three basic goals:

- Cognitive, which means, adding to the learner's stock of knowledge and skills.
- Affective, which implies, changing the trainee's attitude by developing openness, tolerance, acceptance and awareness.
- Behavioural, in which the trainee learns and grasps better the 'dos and don'ts' of the new environment.

After discovering similarities and differences between the source and the target culture, the teacher should design activities that aim at preparing learners to interact and build relationships with persons from diverse backgrounds, and to develop their skills in terms of interpreting and relating. Some standard activities suggested by Corbet, in order to actively engage learners in the target culture are role-plays, reading activities, or listening activities. In addition, these activities should deal with various aspects of the target culture, challenging learners to compare them with their own culture and to identify similarities and differences, facts, patterns of behaviour, historical and modern elements, urban and rural elements, etc. Moreover, the activities used in the ESP classroom should shift from preparing students to communicate errorless (which is often the aim of traditional teaching approaches) to communicate openly, to interact and cope with the target culture. Authentic materials and online tools should also be used. Such activities may include: Online Blog Exchange, artifact exploration, documenting activity, attitude exploration and others. When the Online Blog Exchange is expanded for the purpose of comparing materials (such as films, books, literature, images and videos), it slowly turns into a process of negotiation; thus,

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learners work together to make observations, formulate hypotheses, create patterns, confront and analyse their own attitudes, beliefs and values.

When learning ESP in an intercultural manner, students get engaged in new and attractive experiences involving the target culture. They become “social actors” engaged in problem-solving activities, role-plays and simulations, debates and discussions, improving thus their abilities to express their personal views and manifesting acceptance and tolerance towards different attitudes, ideas, values, etc.

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INDISPENSABLE RESOURCES FOR ACCELERATING YOUR ENGLISH
LANGUAGE LEARNING

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Abstract. The wealth of ESL (English as a Second Language) resources on the Internet is a wonderful thing, but you may find it difficult to know which ones are worth your time.

Key words: individual, English, notebook, language, native

If we had to choose five resources without which you will find it difficult to learn English, we would choose these five.

1. Individual lessons

The only way that really works for learning a language is to practice speaking. Spoken English is the hardest skill to develop on your own. This also seems to be the most nerve-wracking task, which is why many students leave it for last. This is a huge mistake! If you want to speak English confidently, speaking practice should be your top priority.

Individual lessons are the most effective way to get quality speaking practice. Work with a personal tutor and you'll have a safe place to practice speaking English. You can make mistakes and ask questions, and you won't have to worry if you feel confused. With no other classmates to worry about, the lesson will focus entirely on the skills that matter most to you. You will be amazed at how productive those few hours a week are!

Luckily, one-on-one training has never been more accessible. Preply has thousands of qualified English tutors you can choose from based on price, rating, availability, and specialty. Browse our list of English tutors to find the perfect teacher for your needs.

2. Special notebook

The Internet has revolutionized language education. Interactive apps and online exercises have great value, but don't forget the basic teaching methods we've relied on for hundreds of years.

Numerous experiments have shown that writing out new information by hand is an extremely powerful tool for transferring it into your long-term memory. A 2014 study from Princeton University found that students who take notes using paper and pen retain significantly more than students who type. The handwriting group was particularly good at remembering large concepts.

Take some advice from scientists and write down at least some of your notes the old fashioned way. You might find it useful to keep a small notepad in your pocket to quickly jot down new words you learn on the go, whether it's for everyday English conversations or looking up words in a language learning app. Some students prefer to have one large notebook with all of their new language skills, from handwritten conjugation charts to example sentences and lesson notes. In any case, it's worth experimenting with notepads when learning English. Don't underestimate the powerful effect of writing new information by hand!

3. YouTube

Now that most cat videos have migrated to TikTok, it's becoming increasingly clear: YouTube is a great platform for learning. In many ways, it feels like the website was made for language learners! You can watch videos at reduced speed or with subtitles. These options are

great for those who have difficulty communicating with native speakers who speak quickly. Plus, there is a wealth of content created specifically for ESL learners.

Some channels, like JenniferESL, offer a whole course of video lessons on YouTube. Others, like Canadian Bob, teach users about common situations in English that are too unusual to be mentioned in textbooks, such as "going to the hardware store." In short, there is a lot of extremely user-friendly and professional content available for free, and you would be upset if you missed out on it. Many of the most popular English-speaking YouTubers even host regular live interactive lessons. Here's a recent lesson on vocabulary building by veteran Preply teacher Mike P. The gap between the best ESL YouTube channels and online English courses is getting smaller all the time!

4. Language exchange websites

If you want to speak English as quickly as possible, speaking practice should be your priority from the very beginning. If you don't live near native English speakers and can't afford as many private lessons as you'd like, there are still ways to get those precious hours of conversation!

Try online language exchange. Make friends with a native English speaker who wants to learn your native language and exchange language skills. Spend some time chatting in English (to practice!), and some time chatting in your native language (so the other person can practice too). It may take some time to find the balance between the roles of student and teacher, but it is worth it and will help with discipline. A good language exchange can be a very effective and fun way to learn.

Language exchanges are another aspect of learning English that has become much easier with the advent of the Internet!

5. Podcasts

These days there are podcasts about almost everything, every topic and hobby. Like YouTube, there is a wide selection of free podcasts for learning English. Many of the best offer full transcripts so you can read what you hear and develop your ear for English pronunciation.

The main benefit of studying with podcasts is that they fit into parts of your day that you might not use for studying. Your boss probably won't let you learn English at work... but maybe he'll let you listen to a podcast?! You can't really study your flashcards while you're driving... but you can turn on a podcast no problem!

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THE SIGNIFICANCE OF SPORT IN YOUTH DEVELOPMENT

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Abstract: this article discusses the features of the development of physical education and its significance for young people. The methods and strategies of the influence of the teaching system and methods on the students' knowledge of physical exercises are given. Recommendations are given for the introduction of technologies in the industry.

Keywords: analysis, method, research, education, training, physical culture, sport.

The benefits of sports are numerous and can have a profound impact on your life. Participation in team sports promotes health and well-being, builds confidence and can help maintain mental health.

Sports reflect real life: there is competition, teamwork, victories, defeats, conflicts and decisions. Being on a sports team teaches the value of caring for others, developing trust and confidence, and showing respect for authority and other teammates.

Being part of a team can build confidence, and confident children tend to have an easier time coping with school and social situations. But just being part of a group, regardless of natural athletic ability, provides an opportunity to connect with others.

It is well known that exercise and sports beneficial to the body in many ways. Exercise also benefits the brain by stimulating the brain's reward pathways and increasing levels of mood-enhancing neurochemicals such as dopamine. Increased levels of dopamine and other neurochemicals promote a sense of well-being and reduce the risk of anxiety and depression, which are the two most common mental disorders found in adolescents.

Research shows that regular exercise also has a positive effect on the nervous system, which reduces overall stress levels.

The positive effects of regular exercise on the brain reduce the risk of young people self-medicating with substances to help relieve stress and mental health problems.

Working as a team teaches children valuable social skills. They learn to share, appreciate different skill sets, trust others, and support and encourage each other. Because sport can play such an important role in the lives of young people, it is important to ensure that all sports teams and environments are diverse, equitable, inclusive, supportive and safe. These conditions greatly impact the development of young athletes, so creating an equal and safe environment must take precedence over winning.

Along with the social benefits, playing sports can also teach responsibility and discipline. These skills can be applied to all aspects of life, from health and exercise to relationships and school habits. By learning these skills early, athletes realize their value as individuals and take responsibility for their own success.

A correlation was found between regular physical exercise and the overall mental health of students as they move into adolescence. Among students who studied six to seven days a week, 25.1% felt sad for two weeks or more in the past 12 months, compared to 35.7% of students who reported training between zero and one day (Women's Sports Foundation, 2004). Among students who took classes six to seven days, 15% reported suicidal ideation and 6.4% reported suicide

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attempts in the past year, compared with 24.6% and 10.3% of students who took classes zero to one day, respectively (Journal of the American Academy of Sports).

Physical activity is generally associated with improved academic performance, including grades and standardized test scores. In addition, such activities can influence attitudes and academic behavior, including increased concentration, attention, and improved behavior.

Sport also strengthens the character of a teenager. Training develops will, the desire to win, self-confidence, teaches you to accept defeat and regulate your emotions. In adolescence, it is especially important to find exactly the kind of sport that the child will like, because otherwise he will completely refuse to participate.

Through sports, students learn tactical, mental and physical training. Students can concentrate better and have a clearer vision. These qualities are essential for academic success. Students who participate in sports and exercise can achieve academic success.

Thanks to training, will develops, the desire to win, endurance, the ability to fight to the last, not to be afraid of defeats (to be able to lose with dignity). Willpower, which is formed in the process of sports activities, contributes to the development of a teenager as an individual.

What problems does sport solve?

Reduces the risk of ARVI

Eases depression

Prevents and treats osteoporosis

Reduces blood pressure

Reduces chronic pain

Helps prevent several types of cancer

Relieves constipation

Reduces blood sugar levels

Sport permeates all levels of modern society, having a broad impact on the main spheres of society. It influences national relations, business life, social status, shapes fashion, ethical values, and people's way of life.

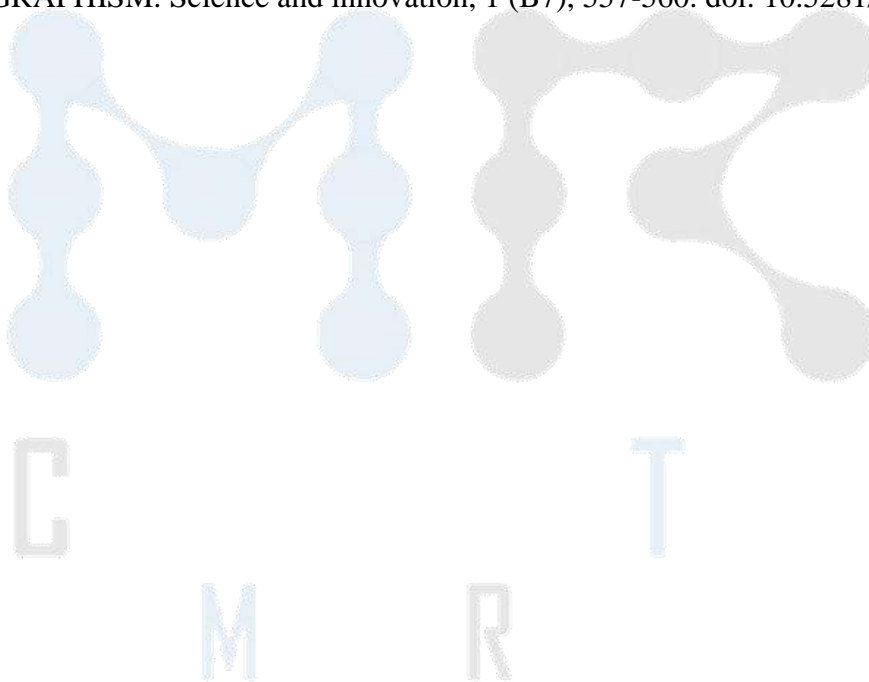
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METHODOLOGICAL RECOMMENDATIONS IN ORGANIZING LESSONS BASED
ON INTERACTIVE METHODS FOR PRIMARY CLASS TEACHERS

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Abstract: In this article, opinions about the use of interactive methods and specific advantages of methods in teaching native language and reading subjects to elementary school students are presented.

Key words: Interactive methods, educational games, educational game "Remember words and events", "Stranger" game, "Topag'on" game, "Kim k' "p makes a word" game.

Annotation: In this state, the opinion on the use of interactive methods and concrete practical methods and the teaching of native language in the subject of young schoolchildren.

Key words: Interactive methods, developmental games, developmental games "Remember words and events", game "Neznakomets", game "Topag'on", game "Kim kp zagadyvaet slovo".

Abstract: In this article, opinions about the use of interactive methods and specific advantages of methods in teaching native language and reading subjects to elementary school students are presented.

Key words: Interactive methods, educational games, educational game "Remember words and events", "Stranger" game, "Topag'on" game, "Kim k' "p makes a word" game.

School is a dear place for all of us. It is a holy place that teaches us knowledge and educates us. A small Motherland for students. The importance of the school in bringing out every talent and ability, showing the appropriate path to the student's aspirations is huge. In recent years, a number of works have been carried out to develop the material and technical base of schools, to provide them with scientific methods. School work is developing rapidly in our country. The fact that educational processes are organized in a modern way also indicates that the era is rapidly developing. Since then, the organization of educational processes with unique new methods and educational games makes it necessary for every teacher-mentor to work responsibly, to approach the education of students with creativity. As a recommendation, we will explain the use of the following methods in the 3rd-4th grade reading and mother tongue classes.

Educational game "Remember words and events". Students of the class are divided into small groups and each group chooses one word.

1. The game begins with the word tree, cotton. Words starting with the letters "d", "p" such as dovuchcha, danak, dombira, circle, hawthorn, cotton, bowl, desk, tomato are found.

2. Add da- and pax- syllables to the first syllable of the words tree and cotton to form a word: dali, dada, cotton farmer...

3. Finding words that rhyme with the given words: cotton, wood, mine, time, tree, karakht.

4. Remembering all the words related to the given words: cotton, fluff, seed, chana, cotton, bag; Tree, leaf, flower, fruit, seed, bud, vein, root.

5. Choosing one of the given words: cotton, letter, tree, danger 6. Remembering any event related to the given words, trying to weave a story, fairy tale, adventure.

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Topaggon game. Write a text using the words given below and find a title for it.

1. Fox, mouse, delicious bread, shower, runaway, tail, nut;
2. Dates, braided hair, bow, dream, regret, river, sky;
3. Taxi, movie, money, page, ticket, shame, scene;
4. Hunter. Ice cream, wolf, zoo, cage, tree;
5. Shoe, ball, man, mirror, fairy tale, stone.

"Stranger" game. In this case, five words are taken from a familiar story or fairy tale, and one word is taken from a foreign work. For example: "Stepfather" "Man", "Hardworking", "Magic chest", "Dragon" is a foreign word. "Potter" is a foreign word. They continue the fairy tale from this foreign word. If the teacher can build this process on the basis of such games that give the child pleasure, the learning process will become a source of joy and pleasure, and at the same time, it will allow the student to feel freedom.

"Who makes the most words" game. Pupils are tasked with finding words related to a letter (sound). This letter (sound) is assigned the task of appearing at the beginning of a word, in the middle of a word, and at the end of a word. For example. Find words related to the sound "a". At the beginning of the word: bear, honey,... . Between the words: yellow, school. At the end of the word: kindergarten, sled, etc. "Change the letters to make a word" game. Children are given words. It is explained to the students that they have to make another word by changing a letter in the word. Who can make many words. That student is considered the winner. For example: School - praise - head - head like and so on.

Round table discussion - learners sit at a round table and write answers to each other's questions in an envelope or start a question-and-answer session through the leader of the discussion. Group discussion is a well-known method that is usually used in combination with other types of techniques:

A) Discussion in a large group - in which the whole group discusses ideas or events related to a specific topic. The discussion is conducted around planned or organized topics.

B) discussion in small groups - a circle in which four-six people gather to voluntarily raise an issue, discuss and solve a problem, find a solution to the raised problems, and evaluate ideas.

In conclusion, it can be said that the modern technologies of the mother tongue and the science of reading in primary grades are important for the growth of students' oral and written speech, as well as for their easy understanding of subjects, and for further improving their knowledge and skills.

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ORGANIZATION OF EDUCATIONAL ACTIVITIES IN PRIMARY CLASSES

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Abstract: Educational methods depend on understanding the general laws of knowledge of the surrounding world, that is, they have a philosophical methodological basis and are the result of a correct understanding of the contradictions in the educational process, the essence and principles of the educational process.

Key words: Education, pedagogue, methodology, modern educational systems, educational resources.

Today's teacher is required to use advanced pedagogical and new information technologies in the educational process. Based on our experiences, we will present our thoughts on the ways of education by using interactive methods in the lessons. We think that it will provide practical help to our colleagues in improving the effectiveness of training sessions. Also, it becomes one of the close assistants of students in fulfilling the responsible task of choosing their own direction and forming the skills of preparation for independent life. Below we give recommendations on the implementation of modern methods of teaching based on certain topics in the class section. You use it in a creative way, and our first president said: "Let's try to find an answer to the question: "What are we doing today to instill in our children a sense of pride, pride, and devotion to our sacred motherland?" We hope that you will contribute to the achievement of the intended goal by applying modern methods of education and training in response to their opinions. A method - in the most general sense - is a method of achieving a goal, an activity organized in a certain way. The main content of the methods is scientific theories tested in practice. Any scientific theory essentially has a method function. The method, in turn, becomes a tool for the discovery of new scientific theories and laws. Educational methods are understood as a set of methods of organizing the teaching work of the teacher and students' learning activities to solve various didactic tasks aimed at mastering the studied material. Educational methods first appear in the pedagogue's mind in the form of a general project of activity in a certain direction. The method does not appear in other forms, because of this, the educational method represents the didactic model of activity in general. In didactics, the term educational methods is also widely used. Teaching methods determine the activity of the teacher and student in the educational process, how to organize and conduct the educational process, and what activities the students should perform in this process. Also, the educational method is a way of theoretical and practical cognitive activities aimed at the fulfillment of the learning tasks of teachers and learners. Educational methods depend on understanding the general laws of knowledge of the surrounding world, that is, they have a philosophical methodological basis and are the result of a correct understanding of the contradictions in the educational process, the essence and principles of the educational process. Educational material depends on the logic of scientific thought expressed in the educational content. The less the theory is expressed in pedagogical views, the less educational methods depend on this theory. The science of pedagogy summarizes the best practices of schools and educators, and the scientific foundations of traditional education. shows, helps to creatively search for modern and effective methods of teaching.

Methods consist of several main groups, each of which is divided into subgroups and individual methods included in them. Considering that the process of organization and implementation of educational activities itself involves information transmission, acceptance,

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understanding and memorization of educational information and practical application of acquired knowledge and skills, it corresponds to the methods of the first group. Oral methods of transmitting and receiving information through hearing; story, lecture, conversation, etc.; the methods of the second group of methods of visual transmission and reception of educational information by viewing - visual methods: visual, demonstration, etc.; the methods of the third group include providing educational information through practical work activities (practical methods, exercises, laboratory experiments, work activities, etc.). So, the educational methods that are widely used in practice can be expressed as follows. Educational methods consist of reading methods and teaching methods. If the teacher assigns independent work, the students will do it. In order to increase the effectiveness of educational methods in the educational process, a set of reading methods is used. When we say educational methods, it means the teacher's teaching work and training in solving various didactic tasks aimed at mastering the studied material. It is understood as a sum of methods of organizing learning activities of students. Educational methods first appear in the pedagogue's mind in the form of a general project of activity in a certain direction. This project is put into practice as a set of specific actions, actions or methods aimed at the interaction of teacher and student activities, teaching and learning. The method does not appear in other forms, because of this, the educational method represents the didactic model of activity in general. In didactics, the term educational methods is also widely used. The educational method means the joint activities of the teacher and students aimed at achieving the expected goal in the educational process. Teaching methods determine how the activity of the teacher and pupil-student will be in the educational process, how the teaching process should be organized and conducted. Educational method is a component or separate aspect of an educational method. Methods and method relations are interconnected. Method and method are connected to each other as a whole and a part. With the help of methods, only a part of the pedagogical or educational task is solved. Abu Nasr Farabi, if the theoretical foundations of all subjects are studied in education, moral and ethical rules, etiquette standards are studied in education, professional skills are formed. will be done. These are done by teachers and trainers using different methods. Farabi pays more attention to the implementation of educational work in a theoretical way. At the same time, he also put forward the ideas of using methods of encouragement, habituation and, when the time comes, coercion in education. He was engaged in mathematics, logic, medicine, astronomy, music, law, linguistics, poetics, studied various languages. According to sources, he knew more than 70 languages. Abu Rayhan Beruni's thoughts about the ways and methods of acquiring scientific knowledge are also relevant for the current era. In his opinion, the following should be paid attention to when teaching students: - not to bore students; - it is necessary not to teach the same thing or subject when imparting knowledge, this is one of the requirements for the lesson schedule; - integrity and consistency; - analysis and comparison; - repetition; - visual presentation of the material and so on. Abu Ali ibn Sina emphasizes that students should be taught as a team. He emphasizes that when teaching students, they should not be occupied with books at once. Also, in the opinion of the scientist, the content of the training sessions is suitable for the age characteristics of the students, and it is intended to develop the interest of the young students in science using various methods. According to Ibn Sina's teachings, the goal was to ensure the development of children's ability to think independently and the ability to express themselves verbally, explaining knowledge, organizing conversations in various ways, regardless of the methods used in learning. The purpose of education is formed in accordance with the needs of society. Therefore, the goal

of education should be appropriate and proportionate. The goal of education in scientific literature is to create skills and competencies, develop logical-creative thinking, improve communicative literacy, inculcate the national idea, form oriental education, define personality it is emphasized that it consists of spiritual enrichment. Based on the educational goal, students' communication culture is improved by increasing their independent thinking, oral and written literacy, and developing logical thinking.

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**СОВЕРШЕНСТВОВАНИЕ КОНСТРУКЦИИ К РАСЧЕТ ПАРАМЕТРОВ
ПИТАЮЩЕГО СТОЛИКА ДИСКРЕТИЗИРУЮЩЕЙ ЗОНЫ В ПРЯДИЛЬНОЙ
МАШИНЕ**

**IMPROVEMENT OF THE DESIGN FOR CALCULATING THE PARAMETERS OF
THE NURSING TABLE OF THE SAMPLING AREA IN THE SPINNING MACHINE**

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Аннотация. В статье приведены конструктивная схема рекомендуемого дискретизирующего устройства с питающим столиком с упругим элементом. На основе теоретических исследований обоснованы основные параметры системы. Сравнительными технологическими сравнительными исследованиями обоснованы преимущества рекомендуемой конструкции дискретизирующего устройства с питающим столиком с упругим элементом.

Ключевые слово. Дискретизация волокон, питающий столик, цилиндр, пружина, барабанчик, равномерность, качество, утонение, узелки, технологические непсы.

Annotation. The article presents a structural diagram of the recommended sampling device with a feeding table with an elastic element. Based on theoretical studies, the main parameters of the system are substantiated. Comparative technological comparative studies substantiate the advantages of the recommended design of a sampling device with a feeding table with an elastic element.

Key words. Discretization of fibers, feeding table, cylinder, spring, drum, uniformity, quality, thinning, nodules, technological neps.

В настоящее время повышение эффективности производства и сравнительное качество выпускаемой продукции в текстильной промышленности очень связано с совершенствованием технологических процессов, особенно с повышением прочности и качества пряжи, снижения неровно ты и обрывности в течении процесса прядения.

Одним из важнейших задач пневмомеханического прядения является улучшение условий подготовки работ зон питания ленты к формированию из него пряжи. Требуется анализ различного типа факторов, влияющих на процесс питания и дискретизации. Особенно важным является разработка технологий, оборудования, принципиально новых

узлов и усовершенствования механизмов. Надо подробный анализ различных факторов, влияющих на процесс зон питания и дискретизации [1,2].

Большое значение на процесс дискретизации оказывает сила зажима волокон при извлечении их из питающей пары. Если эта сила недостаточна, то нарушается переход волокон со скорости питающего цилиндра на скорость дискретизирующего барабанчика. Это приводит к увеличению неровноты дискретного потока и повышению неровноты пряжи. Если сила извлечения волокон из питающей пары больше силы их зажима и больше разрывной нагрузки волокна, то происходит обрыв волокон. Зависимость между силой зажима и обрывностью волокон приведена в таблице 1 [3,4,5].

Таблица 1.1

Зависимость между силой зажима и обрывностью волокон

Нагрузка на питающий столик, Н	12,5	21,4	27,5
Средняя сила зажима волокон, Н	0,0104	0,0129	0,0218
Количество волокон, прочность которых меньше силы зажима, %	2,0	4,5	10
Количество оборвавшихся волокон	29	70	110
То же, % количества извлекаемых из зажима волокон	11,5	28	44

Данные табл.1 показывают, что средняя сила зажима меньше средней прочности волокон. Поэтому, при вытаскивании из питающей пары будут обрываться только волоконца, имеющие прочность, с меньшей силой зажима. Однако число волокон, обрывающихся при вытаскивании их из питающей пары, значительно больше числа волокон, имеющих прочность с меньшей силой зажима. Это можно объяснить наличием комплексов в питающей паре. В комплексах волокна связаны друг с другом силами сцепления, и при извлечении таких волокон сила зажима оказывается больше их прочности.

Для надежной и равномерной подачи ленты без проскальзывания с помощью питающего устройства, конструкция которого должна обеспечивать равномерный и постоянный зажим. При прохождении ленты через воронку плотность увеличивается, так как сечение воронки уменьшается. Возникающие поперечные деформации создают поперечные напряжения, которые вызывают силы трения на стенках уплотняющей воронки, предотвращающие перемещение крайних слоев в ленте. Однако силы трения могут создать скрытую вытяжку, для предотвращения которой необходимо выходное сечение уплотнительной воронки, приблизить к области сжатия питающего устройства.

Нами разработана новая конструкция питающего столика. [6,7,8]. Конструкция питающего столика прядильного устройства (см. рис. 1) включает рычаг 2 установленный на корпусе 1 прядильного устройства посредством шарнира. Шарнир выполнен составным и включает на ось 3 жестко соединенную с корпусом 1. На ось 3 надето упругая (резиновая) втулка 4, на которую установлен один конец рычага 2. На другом конце между рычагом 2 и корпусом 1 установлена коническая пружина 5. Над криволинейной частью рычага 2 установлен питающий цилиндр 6, а в конце зоны питания дискретизирующий барабанчик 7. В процессе работы волокнистая масса в виде ленты (хлопковые волокна) поступает в зону подачи, между питающим столиком (рычага) 2 и питающим цилиндром 6. Для обоснования

параметров столка просвезя моделирование процесса. [9,10,11]. Материал (лента) моделируем сплошной средой и рассмотрим процесс растяжения ленты в зоне вытяжка, реализуемой цилиндром. Обозначим через $T(s)$ натяжение ленты (s -длина дуги).

Вытяжка ленты происходит вдоль дуг цилиндра, начало отчета дуги считаем точку B . Стационарного движения в произвольной дуге контакта ленты на поверхности цилиндра записываем в виде [12].

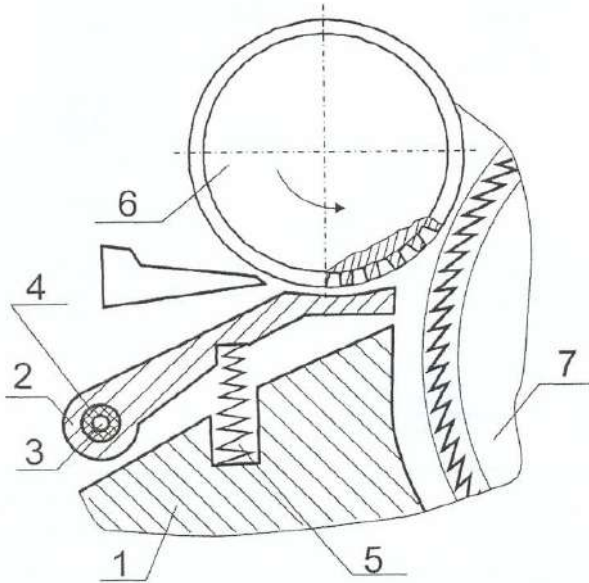


Рис. 1. Питающий столик с упругой втулкой

$$L(T) \frac{\partial T}{\partial s} - \tau = 0 \quad L(T) \frac{T}{R} - q = m \frac{v^2}{R}. \quad (1)$$

где $L(T) = 1 + \varepsilon$, $\varepsilon = \frac{T}{ES}$ деформация ленты при растяжении. τ, q – касательное и нормальное усилие (за единицу длины дуги) на поверхности столика AD , m – линейная плотность ленты, $v = R\omega$ линейная скорость цилиндра, R – радиус питающего цилиндра, ω – угловая скорость цилиндра; S – площадь поперечного сечения ленты, E – модуль Юнга материала ленты. На поверхности контакта выполняется закон сухого трения Кулона, тогда имеем:

$$\tau = fq \quad (2)$$

где f – коэффициент трения. Вводя переменную $\varphi = \frac{s}{R}$, с учетом (2) из (1) получим одно уравнение для определения натяжения T . В стационарном режиме движения ленты выполняется условия $m_0 v_0 = mv$ где m_0 и v_0 – линейная плотность и скорость ленты в зоне подачи, тогда уравнения (1) записывается в виде

$$L(T)T - Rq = Q_0 R \omega \quad (3)$$

где, $Q_0 = m_0 v_0$ или

$$(1 + \varepsilon) \left(\frac{dT}{d\varphi} - fT \right) = -Q_0 R \omega f \quad (4)$$

Полагая $S_0 = lh_0, S = Lh$, (l – ширина отверстие зоны подачи, L – длина цилиндра, h_0 и h – соответственно толщина слоев зоне подачи и сжатия), получаем

$$h = h_0 \frac{l}{L} \frac{v_0}{R\omega} (1 + \varepsilon) \quad (5)$$

Рассмотрим равенство $T = ES\varepsilon = ES_0 \frac{v_0}{R\omega} (1 + \varepsilon)\varepsilon$ и полагая $\varepsilon^2 \approx 0$ получаем

$$T = ES\varepsilon = ES_0 \frac{v_0}{R\omega} \varepsilon$$

перепишем последнее уравнение относительно ε

$$(1 + \varepsilon) \left(\frac{d\varepsilon}{d\varphi} - f\varepsilon \right) = -f \frac{Q_0 R^2 \omega^2}{ES_0 v_0} = -f \frac{\rho_0 v_0 S_0 R^2 \omega^2}{\rho_0 a^2 S_0 v_0} = -fn^2 \quad (6)$$

где, $n = R\omega/a$, $a = \sqrt{E/\rho_0}$

Уравнение (6) при $\varepsilon^2 \approx 0$ представим в виде:

$$\frac{d\varepsilon}{d\varphi} - f(1 + n^2)\varepsilon = -fn^2 \quad (7)$$

При интегрировании уравнения (7) считаем, что деформация продукта при поступлении в зону зажима известной, т.е. полагаем $\varepsilon = \varepsilon_1$ при $\varphi = 0$ Решение уравнения (7) при этом условии имеет вид:

$$\varepsilon = (\varepsilon_1 - \lambda^2) \exp f(n^2 \varphi / \lambda^2) + \lambda^2 \quad (8)$$

$$\lambda^2 = n^2 / (n^2 + 1)$$

Из формулы (8) видно, что при $\varepsilon_1 > \lambda^2$ деформация продукта в зоне зажима с ростом угла φ увеличивается, что может привести к неравномерному распределению волокон в зоне и сильному расхождению волокон друг от друга В дальнейшем рассмотрим случай уменьшения деформации по углу φ , где выполняется $\varepsilon_1 < \lambda^2$. Кроме того деформация продукта при выходе из зоны зажима $\varphi = \varphi_s$ должно быть положительной, чтобы соблюдалось условие отсутствия накопления волокон при выходе из зоны зажима. Таким образом требуется выполнения условия:

$$(\varepsilon_1 - \lambda^2) \exp f(n^2 \varphi_k / \lambda^2) + \lambda^2 > 0$$

Пользуясь зависимостью (5), установим

$$h < h_k = h_0 \frac{v_0}{R\omega} \frac{l}{L} \{ \lambda^2 [1 - \exp(-fn^2 \varphi_k \lambda^2)] + 1 \} \quad (9)$$

Неравенство (9) устанавливает выбор расстояния между питающим столиком и цилиндром при известных значениях скорости подачи v_0 , угловой скорости цилиндра ω , а также геометрических параметров R , h_0 , l и L . Для обеспечения движения потока продукта через зону зажима без нарушения равномерности ленты, на практике используются вращающиеся питающие столики с упругими элементами.

На рис. 2 представлены графические зависимости величины h_k от отношения $n = R\omega/a$ для различных значений коэффициента трения f и угла $\varphi = \varphi_k$. В расчетах принято: $h_0 = 2\text{мм}$, $l = 9\text{мм}$, $R = 10\text{мм}$, $L = 21\text{мм}$, $\omega = 0.9\text{с}^{-1}$

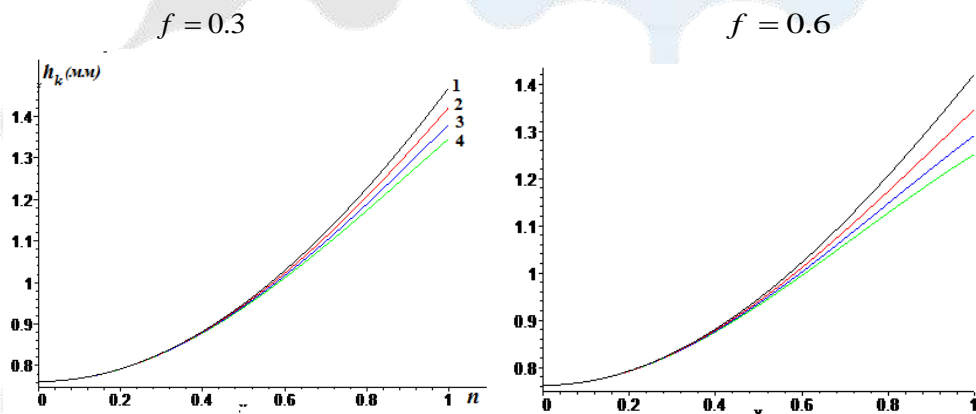


Рис. 2. Зависимости величины h_k от отношения $n = v_0/a$ при различных значениях коэффициента трения f и угла φ_k (град): 1 – $\varphi_k = 15$, 2 – $\varphi_k = 30$, 3 – $\varphi_k = 45$, 4 – $\varphi_k = 60$

Плотность продукта и его толщина определяются по формулам:

$$\rho = \frac{\rho_0}{1 + \varepsilon} \approx \rho_0(1 - \varepsilon), \quad h = h_0 \frac{l}{L} \frac{v_0}{R\omega} (1 + \varepsilon) \quad (10)$$

На рис. 3 представлены графические зависимости деформации ε плотности ρ и толщины слоя в зоне зажима от угла охвата ее питающим цилиндром при различных отношениях $n = v_0/a$. В рекомендуются: $E = 5\text{Па}$, $\rho_0 = 8.5\text{кг/м}^3$, $\omega = 0.9\text{с}^{-1}$, $v_0 = 0.006\text{м/с}$, $R = 0.01\text{м}$, $h_0 = 0.002\text{м}$, $l = 0.009\text{м}$, $L = 0.021\text{м}$, $\varphi_k = 40^\circ$, $f = 0.3$

$$\varepsilon_1 = 0.1$$

$$\varepsilon_1 = 0.05$$

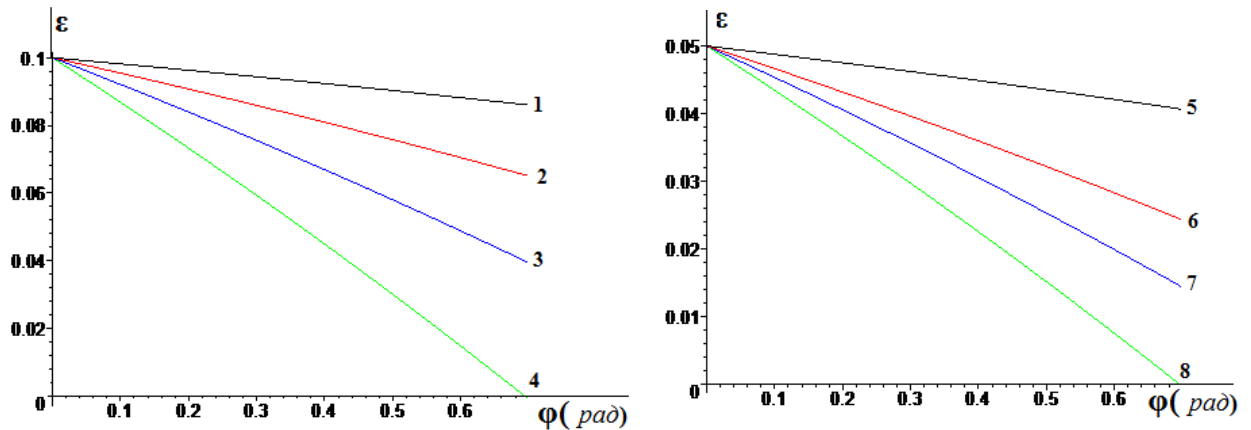


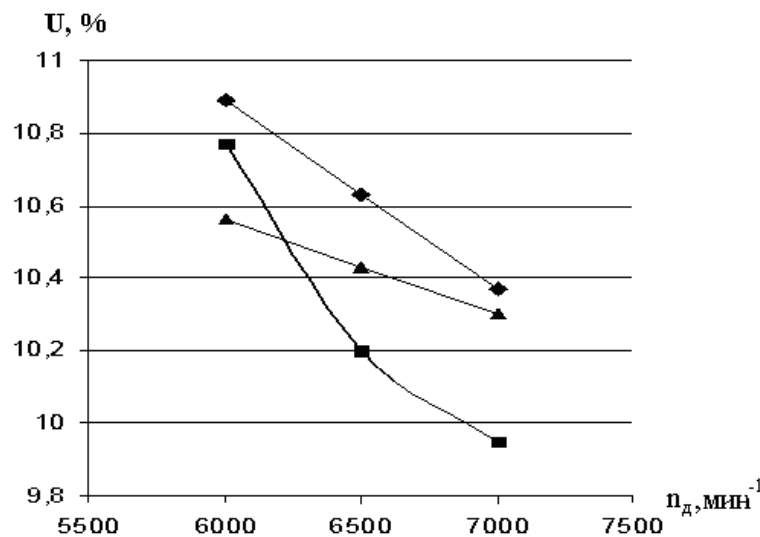
Рис.3. Изменение деформации вдоль дуги контакта продукта с питающим столиком при различных значениях начальной деформации ε_1 отношения n :

1 – $n = 0.4$, 2 – $n = 0.5$, 3 – $n = 0.6$, 4 – $n = 0.73$, 5 – $n = 0.3$, 6 – $n = 0.4$, 7 – $n = 0.45$, 8 – $n = 0.512$

На основе рекомендованных расчетных значений параметров был изготовлен опытный образец дискретизирующего устройства и были проведены сравнительные эксперименты. Неровнота пряжи всех вариантов по сечению и пороки её внешнего вида определены на приборе PREMIER.

Результаты тестирования приведены в таблице 2. Из таблицы 2 видно, что линейная неровнота по сечению пряжи:

-снижается во всех вариантах по мере увеличения частоты вращения дискретизирующего барабанчика;



где,
 ◆ — однозаходная
 ■ — двухзаходная
 ▲ — трехзаходная

Рис.4. Линейная неровнота по сечению пряжи

-при одинаковой частоте вращения дискретизирующего барабанчика наименьшая линейная неровнота по сечению пряжи в вариантах с рекомендуемым столиком.

О преимуществе рекомендуемого столикам говорит также снижение количества утолщений и узелков размером +280 % на 1 км пряжи, что свидетельствует о высокой равномерности разделения массы волокна на отдельные волокна (таблица.2).

Таблица 2

Пороки внешнего вида пряжи

№	Наименование показателей	существующей столика			Рекомендуемый столик		
		6000	6500	7000	6000	6500	7000
1	Линейная, неровнота, U	10,89	10,63	10,37	10,77	10,20	9,95
2	Коэффициент вариации, С	13,78	13,43	13,08	13,24	12,88	12,55
3	Утонения(-50%) ед/км	0	1	1	1	1	0
4	Утолщения (+50%) ед/км	23	16	9	7	9	7
5	Узелки(Neps) +280% на км.	7	3	3	1	2	4
6	Всего(утонений, утолщений, узелков)	30	20	13	9	12	11
7	Технологичес-кие непысы, р/Neps/ км	351,99	343,3	299,33	388,67	322,67	297
8	В том числе:						
	+140%	325,33	325,33	281	366,33	305	276,67
	+200%	18,33	15,33	16,0	21,67	15,67	15,33
	+280%	6,0	2,0	2,33	0,67	1,33	3,33
	+400%	2,33	0,67	0	0	0,67	1,67

Из таблицы 2 видно, что с увеличением интенсивности воздействия гарнитуры дискретизирующего барабанчика (частоты вращения) в первую очередь снижается количество крупных непысов размером +280% и 400%. По совокупности меньшее число непысов в пряжи с существующей столика и частотой вращения дискретизирующего барабанчика 7000 мин⁻¹ и в пряже с рекомендуемым столиком с частотой вращения барабанчика 6500 и 7000 мин⁻¹ (299,33 р/Neps, 322,67 и 297 р/Neps на 1 км соответственно). Но, так как при высокой частоте вращения барабанчика снижается срок службы опоры и гарнитуры и увеличивается потребление электроэнергии, то оптимальным является вариант с рекомендуемым столиком и частотой вращения 6500 мин⁻¹.

Выводы. Разработана эффективная конструкция питающего столика с упругим элементом. Теоретически обоснованы основные параметры системы. На основе сравнительных технологических экспериментов обоснованы преимущества рекомендуемой конструкции питающего столика.

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МАТЕМАТИЧЕСКИЕ МОДЕЛИ УПРАВЛЕНИЯ ЗАПАСАМИ, ПРОГРАММНОЕ
ОБЕСПЕЧЕНИЕ ДЛЯ УПРАВЛЕНИЯ РЕЗЕРВНЫМ КОПИРОВАНИЕМ

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Аннотация: в статье рассматривается простейшая модель управления запасами – модель Уилсона. Она лежит в основе более сложных и развитых моделей управления запасами. Задачи управления запасами заключаются в отыскании точки заказа и размера заказа. Особенностью таких задач является то, что с увеличением уровня запасов, во-первых, увеличиваются затраты на их хранение, во-вторых, снижаются потери из-за возможного дефицита запасаемого продукта. Таким образом, задача управления запасами – комплексная задача по решению уменьшения суммы ожидаемых издержек.

Ключевые слова: запасы, управление запасами, модель Уилсона, задачи управления запасами, уменьшение издержек.

В традиционной экономике материальных товаров на содержание складских запасов предприятия затрачивают значительные ресурсы. Поэтому перед ними встает важная проблема по управлению запасами с целью недопущения, как избытков, так и дефицита.

Основной целью модели управления запасами является определение оптимальной частоты заказов и оптимального размера заказываемой партии [2].

Самой простой моделью управления запасами является модель Уилсона [1]. При решении задачи без учета скидки данная модель принимает следующие допущения:

1. Существует внешний неограниченный запас товара.
2. Известна скорость потребления, не меняющаяся со временем.
3. Известно время поставки заказа, как постоянная величина.
4. Отдельный заказ доставляется в виде одной партии.
5. Издержки на осуществление заказа не зависят от количества заказа.
6. Издержки на потери запаса и хранение пропорциональны размеру хранимого запаса и времени хранения.
7. Дефицит товара недопустим. Следовательно, будет справедливо следующее:

$$L_{\text{оф}} + L_{\text{дост}} = K \cdot n, \quad (1)$$

$$L_{\text{пр}} = C \cdot v \cdot T = \text{const}, \quad (2)$$

$$L_{\text{хр}} + L_{\text{пот}} = s \cdot \bar{z} \cdot T, \quad (3)$$

$$L_{\text{деф}} = 0, \quad (4)$$

где K – затраты на обработку и транспортировку единственной партии товара (руб.);

n – количество частичной продукции за известное время;

C – стоимость единицы товара (руб./ед. тов.);

–интенсивность расходования запаса (ед. тов./ед. времени);

T – длительность изучаемого промежутка времени (ед. времени);

s – издержки на хранение единицы продукции в единицу времени (руб./ед. тов./ед. времени);

\bar{z} – средний объем запасов (ед. тов.);

$L_{оф}$ – издержки по обработке заказа;

$L_{пр}$ – затраты на приобретение заказа;

$L_{дост}$ – затраты на доставку заказа;

$L_{хр}$ – затраты на хранение заказа;

$L_{пот}$ – издержки при потере заказа;

$L_{деф}$ – издержки при дефиците.

Анализируя модель Уилсона, можно прийти к следующему заключению, что лучше поставлять груз одинаковыми партиями, размер которых равен Q . Тогда будет поставлено товара $Q \cdot n$ за исследуемый промежуток времени T . Продукция будет расходоваться в размере

$v \cdot T$. По условию недопустимости дефицита и нерациональности поставок, которые превышают спрос, следует:

$$Q \cdot n = v \cdot T \quad (5)$$

Ниже на графике представлен уровень запаса товара (рис. 1.2).

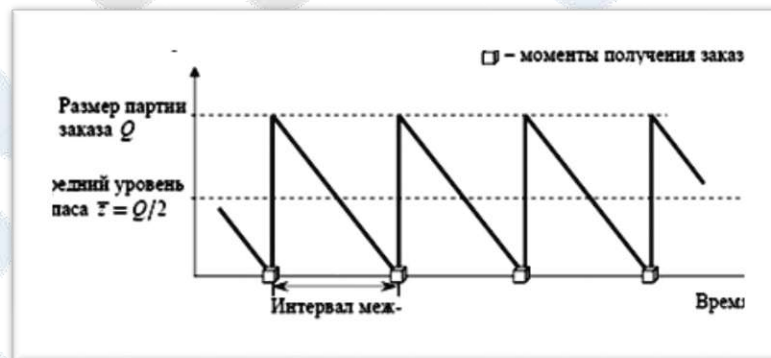


Рис. 1.2 График изменения запасов по модели Уилсона

Видно, что средний уровень запаса равен

$$\bar{z} = \frac{Q}{2}, \quad (6)$$

тогда издержки за рассматриваемый промежуток времени равны

$$L_{оф} + L_{дост} = \frac{KvT}{Q}, \quad (7)$$

$$L_{пр} = C \cdot v \cdot T, \quad (8)$$

$$L_{хр} + L_{пот} = \frac{sTQ}{2}. \quad (9)$$

Сумму затрат системы управления запасами можно выразить как:

$$L = L_{оф} + L_{дост} + L_{хр} + L_{пот} + L_{пр} = \frac{KvT}{Q} + \frac{sTQ}{2} + CvT. \quad (10)$$

Если потребовать минимума величины совокупных затрат $L = L(Q) \rightarrow \min$, то из условия экстремума

$$\frac{\partial L}{\partial Q} = -\frac{KvT}{Q^2} + \frac{sT}{2} = 0 \quad (11)$$

определяем объем оптимальной партии (формула Уилсона):

$$Q_{опт} = \sqrt{\frac{2Kv}{s}} \quad (12)$$

и определяем минимальные общие затраты интервал времени:

$$L_{\min} = T\sqrt{2Kvs} + CvT. \quad (13)$$

Из формулы Уилсона определяем оптимальное количество поставок за известный промежуток времени:

Оптимальная частота заказа: $n_{\text{опт}} = T \cdot \sqrt{\frac{vs}{2K}}. \quad (14)$

Интервал между поставками: $\omega_{\text{опт}} = \sqrt{\frac{vs}{2K}}. \quad (15)$

Точка заказа: $\tau_{\text{опт}} = 2Kvs. \quad (16)$

$q_{\text{зак}} = t_d \cdot v, \quad (17)$

где t_d – время выполнения и доставки заказа.

При этом можно сделать вывод, что постоянная закупочная цена не зависит от оптимального размера партии товара.

Зачастую при закупках используются скидки – если размер заказанного товара преобладает над некоторой величиной, то стоимость единицы товара изменяется. При решении задачи с учетом скидки модель Уилсона предполагает те же допущения что и модель без скидок. Однако добавляется дополнительное условие – цена по закупке на товар претерпевает разрывы. Другими словами, стоимость единицы товара снижается неравномерно при условии, что известны размеры товара.

Таким образом, справедливо:

$$L_{\text{оф}} + L_{\text{дост}} = K \cdot n, \quad (18)$$

$$L_{\text{пр}} = C(Q) \cdot v \cdot T = \text{const}, \quad (19)$$

$$L_{\text{хр}} + L_{\text{пот}} = s \cdot \bar{z} \cdot T, \quad (20)$$

$$L_{\text{деф}} = 0, \quad (21)$$

где K – затраты на обработку и транспортировку единственной партии товара;
 n – количество частичной продукции за известное время;
– интенсивность расходования запаса (ед. тов./ед. времени);
 T – длительность изучаемого промежутка времени (ед. времени);
 s – издержки на хранение единицы продукции в единицу времени (руб./ед. тов./ед. времени.);

\bar{z} – средний объем запасов (ед. тов.);

$L_{\text{оф}}$ – издержки по обработке заказа;

$L_{\text{пр}}$ – затраты на приобретение заказа;

$L_{\text{дост}}$ – затраты на доставку заказа;

$L_{\text{хр}}$ – затраты на хранение заказа;

$L_{\text{пот}}$ – издержки при потере заказа;

$L_{\text{деф}}$ – издержки при дефиците;

C – стоимость единицы товара, (руб./ед. тов.), выражаемая с учетом скидок как:

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$$C(Q) = \begin{cases} C_0, \text{ при } 0 \leq Q \leq Q_1 \\ C_1, \text{ при } Q_1 \leq Q \leq Q_2 \\ C_2, \text{ при } Q_2 \leq Q \leq Q_3 \\ \dots \dots \dots \\ C_n, \text{ при } Q_n \leq Q \leq \infty \end{cases} \quad (22)$$

где $Q_1, Q_2, Q_3, \dots, Q_n$ – точки разрыва цен, $C_0, C_1, C_2, \dots, C_n$ – цена без скидки, с первой, второй и последующими скидками [3].

Существует несколько причин создания запасов на предприятиях. Одна из них заключается в том, что если в какой-то момент времени на производстве потребуется тот или иной вид деталей, поставляемый другим предприятием, и он будет отсутствовать на складе, то процесс производства может остановиться [4]. Чтобы избежать таких проблем, необходимо иметь нужное количество деталей данного вида на складе. Однако если размер запасов увеличить, то вместе с ним и возрастает стоимость их хранения. Поэтому главной задачей управления запасами является нахождение и выбор подходящего, рационального решения для предприятия.

Модель линейного программирования задачи управления запасами

Рассмотрим случай, когда математическая модель задачи управления резервами приходит к задаче линейного программирования. Для этого достаточно рассмотреть следующий пример соды. На производственном предприятии производится несколько изделий. Владелец предприятия хочет уточнить уровень производства, каким он должен быть для каждого продукта в течение заранее заданного периода времени. Эти уровни ограничены технологическими и другими условиями, и это показано в таблице ниже.

	Единичный продукт А		Единичный продукт В		В наличных
	А	В	А	В	
Количество Людей	1	1	1	1	15
Количество материалов Y	7	5	3	2	120
Количество материалов Z	3	5	10	15	100
Преимущества (на один продукт относительно)	4	5	9	11	максимальный
Производимый размер материала	x_1	x_2	x_3	x_4	

Принимая во внимание эти ограничения, руководство предприятия хочет оптимизировать какую-то конкретную функцию *max*. Целевая функция в рассматриваемом здесь вопросе заключается в получении максимального дохода. Математическая модель этой задачи сводится к линейной задаче. Теперь посмотрим на другую фирму. Эта фирма имеет возможность осуществлять четыре производственно – технологических процесса, выбирая один технологический процесс, относящийся к первому и второму типам, ориентированный на производство продукции типа А, и пять типов технологических процессов, ориентированных на производство продукции типа Б. Затраты на каждый из технологических процессов зависят от еженедельно необходимого

количества материала Y и количество требуемого второго материала Z и расход запаса, состоящего из сжигания рабочей силы, зависят от того, насколько они различны для разных технологических процессов несмотря на то что польза от процессов будет разной. Даже при получении одного и того же вида продукции фирма имеет ограничения по запасам рабочей силы и необходимого сырья (Y -и Z -материалы) для планирования производства на неделю выше. Уровни производства и ограничения на продукцию указаны в таблице вверху.

На этой диаграмме можно построить три линейных неравенства коры. Эти границы на рабочую силу Y и Z границы на рабочую силу и прибыль на материалы выражаются линейным отношением. Таким образом, математическая модель задачи выглядит следующим образом:

$$\text{Max: } Y=4x_1+5x_2+9x_3+11x_4 ;$$

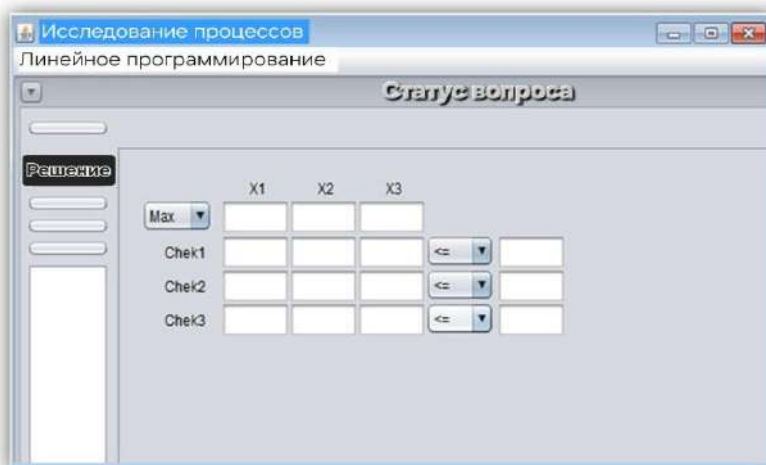
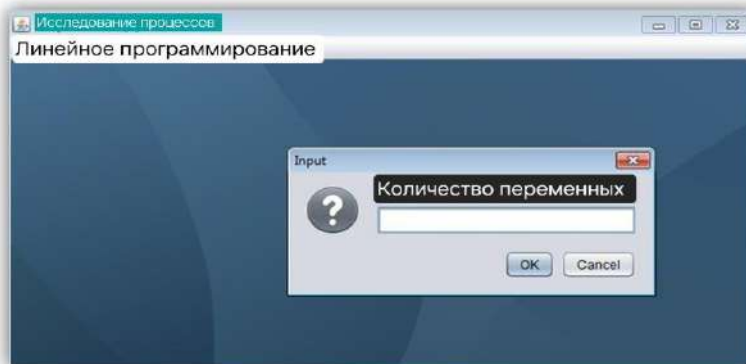
$$x_1+x_2+x_3+x_4 \leq 15;$$

$$7x_1+5x_2+3x_3+2x_4 \leq 120;$$

$$3x_1+5x_2+10x_3 \leq 100;$$

1. Программное обеспечение для модели линейного программирования задачи управления запасами

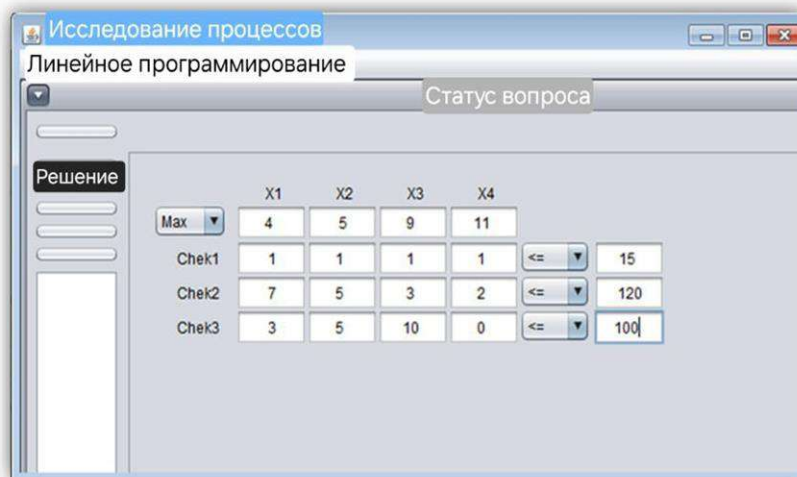
В этом разделе мы приводим краткое представление о программном обеспечении, для которого математические модели задач управления резервами были созданы для моделей, которые подходят к задаче линейного программирования. Обзор программного обеспечения:



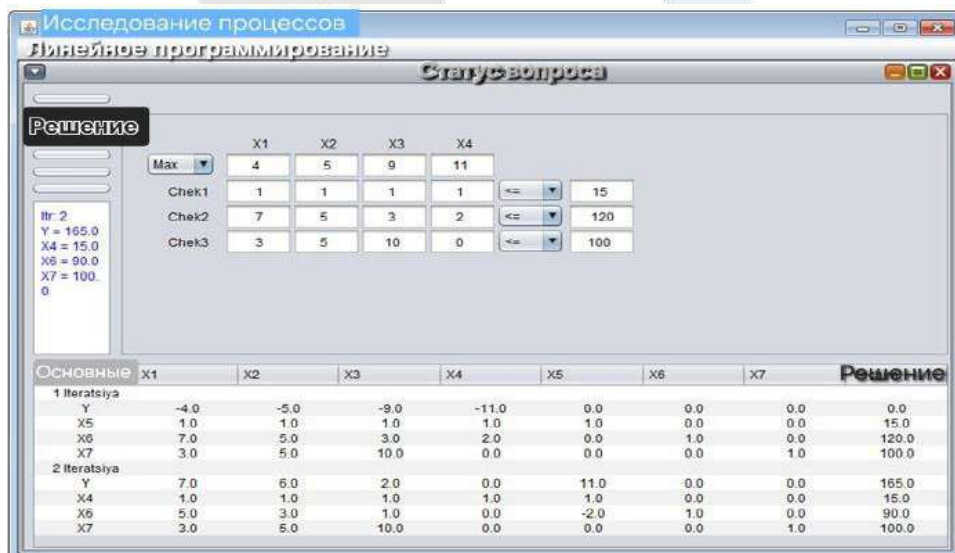
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Мы решим вышеуказанную проблему с помощью этой программы, которую мы создали



Величины, указанные для проблемы, указаны в окне выше. Решение находится в следующем окне.



Итак, оптимальное решение $Y=165$.

Заключение

В данной работе были рассмотрены задачи эффективного планирования производства и математические модели, полученные для их решения, а также создано программное обеспечение, основанное на решении одной из этих моделей-задачи линейного программирования симплексным методом.

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**IMPROVEMENT OF THE MECHANISM FOR PROTECTING PERSONNEL SAFETY
AT INDUSTRIAL ENTERPRISES' PRODUCTION FACILITIES**

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Annotation

This article will talk about methods and means of improving the mechanism for protecting the safety of employees in the production of industrial enterprises, methods of using Technical Safety in the process of work, rules and procedures on labor protection and Technical Safety. Directions for improving the mechanism for protecting the safety of employees are indicated in the production of industrial enterprises. The impact of the mechanism for protecting the safety of employees on the development of industrial production and its practical results are expressed. The main purpose of the mechanism for protecting the safety of employees is to provide employees with information on dangerous factors that occur during the period of human labor activity in production, their causes and ways of elimination, ensuring labor frustration and creating safe and healthy working conditions, protecting employees from various risks and generating practical skills. The main issue of the author's research is aimed at highlighting the issues of improving the mechanism for protecting the safety of employees in the production process at enterprises, explaining the procedure for labor protection and providing instructions on how to put them into practice, establishing the rules of Technical Safety.

Keywords: Industrial enterprises, employee safety, employee safety protection, labor protection, Technical Safety, production process.

Introduction

Nowadays, industrial enterprises all over the world are developing and improving. Therefore, various modern technologies are used in industrial enterprises in order to improve the efficiency and productivity of the production process. These can include fully and semi-automated production technologies, information and communication technologies and production devices, as well as equipment running on various software media. Because as the production environment in industrial plants, i.e. production technologies and methods, develops, the problems and important issues regarding the protection of personnel safety increase. Because during the production process, employees may experience cases of mental and physical injuries. In order to prevent this from happening, it is necessary to improve the personnel safety protection mechanism in the production of industrial enterprises.

In order to improve the mechanism of personnel safety protection mechanism in the production of industrial enterprises, it will be necessary to realize a number of tasks. They include ensuring high qualification and experience of employees at the enterprise, achieving high intellectual potential of employees, ensuring technical and technological safety of the enterprise, achieving high efficiency of enterprise management, ensuring sufficient environmental level of

enterprise activities, ensuring legal labor protection of employees at the enterprise, protecting information and communication environment of the enterprise.¹⁹

In order to protect the safety of workers at industrial enterprises in Uzbekistan, the State has developed various decisions and decrees. In order to ensure the industrial safety of hazardous production facilities, to establish the procedure for recording and maintaining the State register of hazardous production facilities, and to exercise industrial control over compliance with industrial safety requirements in accordance with the Industrial Safety of Hazardous Production Facilities Act, the Cabinet of Ministers has decided: In accordance with it, the maintenance of the state register of hazardous production facilities involves the creation of a database on hazardous production facilities, the implementation of state policy in the field of industrial safety, the implementation of monitoring of the provision of industrial safety requirements at hazardous production facilities, as well as the collection, analysis and systematisation of information on registered hazardous production facilities and organisations using these facilities. is done in order to preserve²⁰.

Safety and health management is an integral part of business management. Companies must conduct risk assessments to identify hazards and risks in their workplace and take measures to effectively control these risks and hazards to ensure that they cannot harm employees. Employee safety refers to providing a safe working environment for employees by implementing safe equipment and safe procedures in the workplace to ensure employee safety.

Employee safety is important to maintain a good safe working environment to improve morale and productivity. This in turn contributes to the growth and profitability of the company. Failure to follow safety rules for employees can have legal and financial consequences. Safety training, periodic safety checks and provision of proper personal protective equipment are part of the employee safety mandate that an organisation must comply with²¹.

Providing a safe and healthy working environment is not only a measure to protect workers from injury and illness, but safety measures can also reduce the costs of injury and illness, reduce redundancies and improve employee morale in an organisation. Simply put, protecting employee safety is good and profitable for industrial companies. Employee safety extends to other benefits as well, including:

- Improving employee retention
- Assist in continued compliance with the administration's health and safety requirements
- Creating a safe working environment to improve efficiency
- Protecting the company's reputation with customers, competitors and the general public.

LITERATURE REVIEW

Исследования по обеспечению безопасности сотрудников проводятся с момента зарождения корпоративной отрасли. Обеспечение безопасности труда человека и охраны

¹⁹ Беляков, Г. И. Охрана труда и техника безопасности : учебник для среднего профессионального образования / Г. И. Беляков. — 5-е изд., перераб. и доп. — Москва : Издательство Юрайт, 2024. — 740 с.

²⁰ Decision of the Cabinet of Ministers of the Republic of Uzbekistan “on industrial safety of hazardous production facilities” dated May 19, 2020

²¹ Девисилов В. А. Охрана труда: учебник. — 3-е изд., испр. и доп. — М.: ФОРУМ: ИНФРА-М, 2013. — 448 с.

безопасности персонала в первую очередь требует изучения процесса его трудовой деятельности и опасных факторов, возникающих при ее осуществлении. Поэтому исследовательская работа по обеспечению безопасности трудовой деятельности человека встречается и в трудах Аристотеля, жившего в 384-322 годах до нашей эры, Гиппократ, жившего в 460-377 годах до нашей эры.

As a result of intensive industrial development in the nineteenth century, several scientists who conducted scientific research on the problems of personnel safety protection grew up. In particular, V.L.Kirpicheva (1845-1913.), A.A.Bess (1857-1930-U.), D.R.Nikolsky (1855-1918-um.), V.A.Levitsky (1867-1936-U.), A.A.Skochinsley(1874-1960.), S.I.Kaplun (1897-1943-U.) are among them. Ensuring personnel safety has been considered one of the most important aspects of human activity from ancient times to the present day²².

Qilong Chen, Hongliang Li and Xiao Pan said that, the sustainable environmental development strategy of the enterprise can well control the risk factors that jeopardise the occupation of the enterprise's employees, and promote the health and safety of the enterprise's employees and enterprises.²³

V. Weale, Y. Wells, J. According to Ockman's work, advances in technology and engineering, as well as economic progress, have led to many different risks, including occupational risks. Technological and technological advances have certainly improved work processes. Thanks to them, among other things, static movement, excessive signalling stimuli and noise have replaced physical overload. On the other hand, the automation of many work processes has led to monotony and monotony, which are dangerous to the musculoskeletal system²⁴.

Xabier Irastorza says that assessing how certain risks affect our health and safety at work depends on many factors, but the starting point is clearly the type of industry and the size of the company. A reliable and realistic identification of occupational risks in the work environment provides the basis for further processes related to health and safety management in the enterprise. These include: assessing occupational risks, preventive measures, ensuring employee safety and encouraging accidents. sh, or need to improve working conditions²⁵.

МЕТОДОЛОГИЯ ИССЛЕДОВАНИЯ

In the course of the study, the issues of improving the mechanism of protection of personnel safety in the production of industrial enterprises, scientific research on occupational health and safety were studied. In the process of formation of the article the methods of observation and selection, scientific-theoretical, empirical observations were used. The reliability of the research results is explained by the use of foreign and national statistical official sources used in the study.

ANALYSIS AND RESULTS

²² Юлдашев О.Р., Рахимов О.Д., Ходжакулов Р.Т., Гасанова О.Т. Охрана труда и безопасность техники. – Т.: ООО «периодиздат», 2013, 200 стр.

²³ Qilong Chen, Hongliang Li and Xiao Pan. Occupational Health Development and Safety Management of Enterprise Employees Based on the Perspective of Sustainable Environment. National Library of Medicine, 2022

²⁴ Weale, V.P., Wells, Y., Oakman, J. (2018). Self-reported musculoskeletal disorder pain: The role of job hazards and work-life interaction, American Journal of Industrial Medicine, 61, 130-139, DOI: 10.1002/ajim.22793

²⁵ Xabier Irastorza (2019). European survey of enterprises on new and emerging threats, <https://osha.europa.eu/pl/publications/european-survey-enterprises-new-and-emerging-risks-esener-2019-background-briefing/view>, (07.05.2020)

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One of the main tasks of personnel safety protection is to provide employees with safe working conditions. Safe working conditions, i.e. labor safety is a state of working conditions in which the impact on workers of all dangerous and harmful factors in production conditions is eliminated.

Occupational injuries occur when many physical and chemical factors are exposed in the production environment. The occurrence of such hazardous factors will depend on the nature of the technological process, the design of working equipment, the level of work organization and a number of similar factors.

Hazards can be manifest or latent, depending on the nature of their occurrence. A manifest hazard is characterized by visible external signs. For example, a moving machine part, a lifted load, etc. Hidden danger is characterized by the presence of hidden defects, faults in machines, mechanisms and working equipment, leading under certain conditions to a dangerous condition, destruction. Hidden hazards also include such as disorder at the workplace, pollution, non-compliance with safety requirements, improper, that is, other use of work equipment and devices, broken electrical wiring, error and incorrect behavior of the employee.

The prevention of occupational injuries is a complex problem that requires, above all, close attention to safety requirements at the design stage of machines and mechanisms.

The place where permanent or temporary hazards in human activity occur is called hazardous areas. A person may be exposed to hazards either by direct contact or by approaching at a distance less than the specified distance. Hazardous areas can occur around moving and rotating machinery mechanisms, around cargo lifted during the operation of loading and unloading machines. Areas where mechanisms rotating or moving at high speed may entangle work clothing or hair are considered particularly hazardous. The size of hazardous areas will be constant or variable. Therefore, the size of hazardous areas must be determined and considered when designing protection measures against hazards.

In accordance with the above, safety requirements are set for the design of all machines and mechanisms, taking into account the tasks they perform. The safety requirements for the design of machines and mechanisms in general can include: the presence of protective guards on all moving and rotating mechanisms of machines and mechanisms; the absence of sharp edges, uneven surfaces of the mechanism or parts (except for parts manufactured by the requirement of the technological process); the dimensions of the machine should provide a safe and comfortable transport position; be comfortable in the steering columns; have comfortable and convenient conditions for the worker in the cabs; be provided with appropriate safety equipment; have a comfortable and convenient transport position; and have a safe and comfortable working environment. Special technical requirements are also imposed on individual mechanisms of machines and mechanisms²⁶.

Industrial safety is also crucial to protect the safety of employees. This is stated in the Law of the Republic of Uzbekistan "On Industrial Safety of Hazardous Production Facilities":

²⁶ Uktamov X.F. Ways to ensure the economic security of industrial enterprises. Proceedings of the 33rd conference on "ilmfan and educational issues in Uzbekistan: problems and solutions". 171-173 P.

- Industrial safety is the state of protection of vital interests of individuals and society from accidents and unfavorable phenomena at hazardous production facilities and their consequences.
- An accident at hazardous production facilities is the destruction of structures and (or) technical devices used at hazardous production facilities, uncontrolled explosion and (or) release of hazardous substances.
- An adverse event at hazardous production facilities is the failure or damage of technical devices used at hazardous production facilities, deviation from the technological process regime, violation of the requirements set forth in legislative acts in the field of industrial safety, as well as normative technical documents.²⁷

In improving the personnel safety protection mechanism in the production of industrial enterprises, the occupational health and safety policy of enterprises shall be implemented in accordance with the requirements of the period. In implementing the health and safety policy, the employer, in consultation with the employees and their representatives, shall define the health and safety policy in writing, and the policy shall be communicated to all employees.

Staff must ensure that they use safe tools and equipment and this equipment must be stored properly. Color codes, posters, labels or signs should be used to warn employees of potential hazards. Work procedures should be established or updated. Employees should be informed of health and safety compliance. Occupational safety is mainly accomplished through the following measures:



Figure 1: Measures to ensure safety at work²⁸

We can look at 4 basic steps to improve the employee safety protection mechanism in the manufacturing industry. It may seem like a process but occupational health and safety in manufacturing plants can be categorized into four basic steps. These include creating a culture that promotes health and safety, providing employees with the appropriate safety equipment and training in a comprehensive safety program, and implementing them. If these steps are done correctly, employee safety will be assured, which will increase productivity as well as save financial resources (Table 1):

Table 1.

Mechanisms for protecting the safety of employees in the manufacturing industry²⁹

²⁷ Law of the Republic of Uzbekistan No. 57 "on industrial safety of hazardous production facilities" dated September 28, 2006

²⁸ Official Occupational Safety and Health Administration www.osha.gov the information on the site was prepared by the author in the framework.

²⁹ "Evotix For Business, EHS&S For People" ning rasmiy www.evotix.com saytidagi ma'lumotlar asosisda muallaf tomonidan tayyorlandi.

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<p>Creating a culture of occupational health and safety</p>	<p>Creating a health and safety culture is an important step towards improving safety practices. This can be done by regularly training employees in health and safety, optimizing practices and procedures, encouraging positive behavior, maintaining an open dialogue and engaging management.</p>
<p>Proper use of safety equipment</p>	<p>Safety equipment” does not only mean personal protective equipment. It is important that personnel are provided with appropriate personal protective equipment such as clothing, special accessories and work tools. In addition, protective equipment against various techniques can be used during work.</p>
<p>Conducting occupational health and safety trainings</p>	<p>When there is a high level of risk in the work of production personnel, managers should ensure that employees receive proper safety training so that they can perform their jobs safely. A system should also be available to allow the employer to track which training courses have been completed and provide employees with easy access to training resources.</p>
<p>Establishment of an employee protection program</p>	<p>A detailed and comprehensive safety program should be available to ensure that employers have a holistic view of their workplace safety practices and measures. Modern software tools provide an approach where every aspect of safety in the enterprise is monitored accordingly.</p>

From the above table, we can see that as the mechanism to protect the safety of personnel in industrial enterprises improves, the efficiency and development of activities in the enterprise also increases.

Creating a safe and efficient work environment is a complex process that requires continuous commitment and adherence to best practices. Occupational health and safety measures implemented in industrial plants include enterprise risk management, staff training, and the development of a sustainable safety culture. Provides a comprehensive roadmap to a safer and more comfortable workplace (Table 2).

Table 2

Measures for the implementation of Labor security practices³⁰

<p>Development of a comprehensive security policy</p>	<p>Clear security policies defining the organization's commitment to security, as well as the responsibilities of management and employees, should be established and publicized on an ongoing basis.</p>
<p>Employee training</p>	<p>Regular and complete training in safety procedures, hazards and proper use of personal protective equipment is required.</p>

³⁰ Santhosh (2024). What is a safe working environment: Benefits, best practices, and examples // CultureMonkey – Published with Ghost & customized Penang. URL: <https://www.culturemonkey.io/employee-engagement/safe-working-environment/>

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Risk assessment and control	Regular risk assessments should be carried out to identify and reduce potential risks in the workplace. Control measures must be implemented to reduce or eliminate these risks.
Regular safety inspections	Frequent safety inspections and audits are needed to ensure safety standards are met and to identify areas for improvement.
Contingency plan	An emergency plan that includes procedures for fires, medical emergencies, natural disasters and other potential crises should be developed and regularly reviewed.
First aid and medical facilities	well-equipped first aid kits should be available, as well as easy access to medical facilities in case of more serious injuries.
Promoting a culture of safety	A safety culture in which employees feel comfortable dealing with safety issues, failures or incidents without fear of work should be encouraged.
Ergonomic workstations	Workstations should be designed to be ergonomically designed to reduce the risk of musculoskeletal problems and ensure employee comfort and convenience.
Protective gear and equipment	Personal protective equipment should be regularly checked and improved. Necessary safety equipment and facilities such as firefighting equipment, safety signs and protective equipment should be provided.

By following these safety best practices, organizations can maintain a safer workplace, reduce the risk of accidents and injuries, and enhance a culture of safety and well-being among employees.

In addition, it is necessary to create an ergonomic work environment when improving the safety protection mechanism of personnel in the production of industrial enterprises. Ergonomic work environment refers to a workspace designed to optimize employee comfort and productivity by adapting to the needs of the human body. This includes Thoughtful placement of furniture, equipment and tools to reduce physical strain and discomfort, thereby reducing the risk of musculoskeletal disorders and improving overall performance. Key elements of an ergonomic work environment include adjustable furniture to adapt to different body sizes and positions, proper lighting to reduce eye strain and fatigue, and ergonomic tools and equipment designed to provide a neutral body position and reduce repetitive motions. In addition, ergonomics principles emphasize the importance of regular breaks, proper posture, and ergonomic training to teach employees healthy work habits and self-care techniques. By prioritizing ergonomics in the workplace, organizations can create a more comfortable and supportive environment that improves employee health, safety and productivity³¹.

Conclusion

³¹ Santhosh (2024). What is a safe working environment: Benefits, best practices, and examples // CultureMonkey – Published with Ghost & customized Penang. URL: <https://www.culturemonkey.io/employee-engagement/safe-working-environment/>

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To summarize, the personnel safety protection to safeguard and promote the health of workers should meet the special needs of the enterprise and the workers working in the enterprise. Industrial enterprises should establish a detailed activity program or organization chart and working conditions on the personnel safety protection mechanism, which should be appropriate for all.

The tasks of the personnel safety protection mechanism are to protect and promote the health of workers, improve the working environment and working conditions and maintain the health of the enterprise as a whole, provide occupational safety services to workers, and provide expert advice to the employer.

In order to improve the mechanism for protecting the safety of personnel in the production of industrial enterprises, the following work should be carried out:

- It is necessary to analyze the type of production and organize a safety system appropriate to it. An analysis of the type of production shows the types of risks inherent in the business activity, job or profession, and therefore helps to identify the risks that can be expected to be encountered in the enterprise and that require special attention.

- Consideration should be given to issues related to personnel safety at the enterprise. Consideration of problems identified by occupational health and safety specialists, management, workers or other professionals, and previous occupational health and safety activities in the workplace indicates the perception of the problems by the enterprise. This includes reviewing reports on occupational health and safety measures, industrial hygiene measurements, biological monitoring data, etc.

- The characteristics of the workforce should be considered. Workforce characteristics include age, gender, ethnicity, family relationships, occupational classification, work history and health-related problems, if any. A review of workforce characteristics can help identify vulnerable groups and those with special needs.

- Existing information on occupational illnesses and accidents, as well as medical separations, should be verified, if possible, grouped by department, occupation and type of work, causal factors, and type of injury or illness.

- Data on work practices, chemicals used on the job, measurements of recent exposures, and the number of workers at special risk are needed to identify critical problems.

- Employees' knowledge of occupational health and safety issues, their level of training in emergency response and first aid, and the prospects for an effective occupational health and safety committee should be examined.

- Expected plans to change production systems, install new facilities, machinery and equipment, introduce new materials and changes in work organization should be considered as a basis for changing occupational health and safety practices in the future.

Based on the information obtained from the initial orientation to the company, the workplace review is preferably conducted by a multidisciplinary occupational health and safety team staffed by employers and employee representatives. This should include interviews with managers, foremen and employees. Special safety, hygiene, ergonomics or psychological tests may be carried out if necessary.

Special checklists and guidelines exist and are recommended for such inquiries. Observations may indicate the need for special measurements or checks to be carried out by

specialists in occupational health, ergonomics, toxicology, safety or psychology, who may be part of the company's occupational health and safety team or may have to be procured externally. Such specialized measurements or checks may be beyond the resources of small enterprises, which must rely on qualitative or, at best, semi-quantitative observations during the survey.

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METHODS OF CHEMICAL EXPANSION OF ROOT CANALS

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Abstract: Chemical expansion techniques are integral to the success of root canal therapy, enhancing cleaning, shaping, and disinfection. This article explores prominent methods including sodium hypochlorite irrigation, ethylenediaminetetraacetic acid (EDTA) chelation, passive ultrasonic irrigation (PUI), sonic irrigation, and laser-activated irrigation (LAI). Sodium hypochlorite's antimicrobial properties dissolve organic matter, while EDTA chelates calcium ions, removing the smear layer. PUI utilizes ultrasonic energy for enhanced debris removal, while sonic and LAI employ sonic and laser energy, respectively, to improve irrigant dispersion. Understanding these methods enhances treatment efficacy and patient outcomes.

Keywords: root canal therapy, chemical expansion, sodium hypochlorite, EDTA, passive ultrasonic irrigation, sonic irrigation, laser-activated irrigation

Root canal treatment stands as a cornerstone in modern dentistry, offering a solution to preserve teeth afflicted by deep decay or infection. Within this realm, the concept of chemical expansion plays a pivotal role, representing a diverse array of techniques aimed at effectively cleaning, shaping, and disinfecting the intricate network of root canals. This introduction sets the stage for a comprehensive exploration of the various methods employed in chemical expansion within root canal therapy. Root canal treatment, also known as endodontic therapy, addresses the inner sanctum of the tooth – the pulp chamber and its intricate network of canals harboring nerves, blood vessels, and connective tissues. When this space becomes compromised due to infection, trauma, or deep decay, it can lead to severe pain, abscess formation, and ultimately, the loss of the tooth if left untreated. However, through the meticulous process of root canal therapy, dentists can salvage the tooth by removing the diseased pulp, cleaning the canal system, and sealing it to prevent reinfection. Central to the success of root canal therapy is the thorough cleaning and shaping of the root canal system. This involves the removal of infected or necrotic tissue, debris, and microbial pathogens, followed by shaping the canal to facilitate effective irrigation and subsequent filling. While mechanical instrumentation with files and reamers has long been the mainstay of root canal preparation, chemical expansion techniques have emerged as valuable adjuncts, enhancing the efficacy and outcomes of treatment. This dynamic process not only enhances the efficacy of

chemical agents but also reduces the reliance on mechanical instrumentation, potentially minimizing the risk of procedural errors and iatrogenic damage. Furthermore, the advent of newer irrigant delivery systems, such as sonic and laser-activated irrigation, has expanded the armamentarium of chemical expansion techniques in root canal therapy. These innovative approaches leverage sonic or laser energy to enhance the activation and distribution of irrigants within the root canal system, thereby improving their antimicrobial efficacy and overall cleanliness.

1. **Sodium Hypochlorite (NaOCl) Irrigation:** Sodium hypochlorite (NaOCl) stands as the most commonly used irrigant in root canal therapy, owing to its potent antimicrobial properties and tissue-dissolving capabilities. Derived from household bleach, NaOCl exhibits broad-spectrum antimicrobial activity against bacteria, fungi, and viruses, making it an indispensable agent in root canal disinfection. Its ability to dissolve organic matter facilitates the removal of necrotic tissue, bacteria, and debris from the root canal system, thereby promoting a clean and sterile environment conducive to healing. Despite its efficacy, NaOCl irrigation necessitates caution due to its cytotoxic potential when inadvertently extruded beyond the apex. This can lead to damage to periapical tissues, causing postoperative complications such as inflammation, pain, and even paresthesia. Hence, meticulous attention to proper irrigation technique and accurate determination of working length are paramount to prevent such adverse events.

2. **Ethylenediaminetetraacetic Acid (EDTA) Chelation:** Ethylenediaminetetraacetic acid (EDTA) serves as a chelating agent in root canal therapy, primarily employed to remove the smear layer – a thin film of organic and inorganic debris that coats the dentinal walls during mechanical instrumentation. By binding to calcium ions within dentin, EDTA facilitates the dissolution and removal of this smear layer, exposing the underlying dentinal tubules and enhancing the penetration of irrigants into the dentinal matrix. In addition to its role in smear layer removal, EDTA exhibits antimicrobial properties against certain microorganisms commonly found in infected root canals. However, its antimicrobial efficacy is inferior to that of sodium hypochlorite, necessitating its use in conjunction with other irrigants for comprehensive disinfection. Moreover, EDTA's ability to decalcify dentin can weaken the structural integrity of the tooth if left in contact for prolonged periods, highlighting the importance of thorough irrigation and removal following its application.

3. **Passive Ultrasonic Irrigation (PUI):** Passive ultrasonic irrigation (PUI) represents an innovative approach to augmenting chemical expansion within root canals through the use of ultrasonic energy. This technique involves the insertion of an ultrasonically activated file or tip into the canal space, where it

generates acoustic streaming and cavitation within the irrigant solution. These hydrodynamic forces enhance the penetration of irrigants into anatomical irregularities and facilitate the removal of debris, bacteria, and pulp tissue remnants adherent to canal walls. PUI offers several advantages over conventional irrigation methods, including enhanced debris removal, improved penetration of irrigants into lateral and accessory canals, and reduced procedural time. Furthermore, it minimizes the reliance on mechanical instrumentation, potentially reducing the risk of iatrogenic errors such as ledge formation, transportation, and perforation. However, PUI requires specialized equipment and operator proficiency to ensure safe and effective application, emphasizing the importance of proper training and technique mastery.

4. **Sonic Irrigation:** Sonic irrigation represents another innovative approach to enhancing chemical expansion within root canals, utilizing sonic energy to activate irrigants and improve their distribution within the canal system. Unlike ultrasonic irrigation, which relies on low-amplitude, high-frequency vibrations, sonic irrigation employs higher amplitude, lower frequency vibrations to agitate the irrigant solution. By generating acoustic streaming and fluid turbulence, sonic irrigation enhances the dispersion and penetration of irrigants into complex anatomical configurations, thereby improving their antimicrobial efficacy and debris removal capabilities. Additionally, sonic energy has been shown to disrupt microbial biofilms adherent to canal walls, further augmenting the disinfection process.

In conclusion, chemical expansion techniques play a crucial role in the success of root canal therapy, enhancing the cleaning, shaping, and disinfection of the root canal system. From traditional irrigants such as sodium hypochlorite and EDTA to innovative approaches like passive ultrasonic irrigation, sonic irrigation, and laser-activated irrigation, clinicians have a diverse array of tools at their disposal to achieve optimal treatment outcomes. However, successful implementation of these techniques requires thorough understanding, proper training, and meticulous attention to detail to ensure safe and effective application. By embracing the principles of chemical expansion, clinicians can elevate the standard of care in endodontic practice, ultimately improving patient outcomes and satisfaction.

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ARTIFICIAL INTELLIGENCE AND ITS ROLE IN HUMAN ACTIVITIES

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Keywords: Information and communication technologies, telecommunications, software, artificial intelligence.

ANNOTATION: This article covers the history of artificial intelligence systems, its role in human activities, the technology of artificial intelligence, and the importance of bringing artificial intelligence systems to life. What changes will happen after the introduction of artificial intelligence into human life and should people worry about these changes, or are these changes positive?

1. INTRODUCTION

Usually, when people think of robots, those who can speak like humans or those who can do all the chores for them come to many people's mind. But this is a relatively broader concept. In fact, applications on your mobile device: google-translator, dictionaries, various games, etc. are also clear examples of artificial intelligence. Only their coverage is smaller and can help you in a specific field. That is, you will use the appropriate program depending on the type of actions you want to perform.

2. RESEARCH METHODOLOGY

Artificial intelligence is a separate field of Informatics, which is usually concerned with the possibilities associated with the human mind: understanding the language, teaching, discussing, solving the issue, translating and creating computer systems with similar capabilities.

Currently, artificial intelligence consists of an algorithm and software systems designed to perform various actions, and it is able to cope with several tasks that the human mind can perform.

In the 1990s, a new page was opened in the development of artificial intelligence. In 1997, an IBM computer named Deep Blue became the first computer in history to defeat world chess champion Garry Kasparov.

Another notable example of artificial intelligence is the IBM Watson

supercomputer, which answers questions asked in a specific language based on its base. Also, applications such as the mobile assistant Siri, photo processing Prism, which has become a constant companion of many, can be noted as one of the achievements of artificial intelligence. By now, artificial intelligence has become widely popular and covers almost all aspects of our daily lifestyle. For example, residents of the Chinese city of Incheon do not need bank cards. All processes associated with calculations are carried out by artificial intelligence through the clarification of the face image of a person.

3. THEMATIC LITERATURE ANALYSIS

The debate about artificial intelligence has been going on for nearly 50 years. Experts have not yet come to a stop. Some are concerned that mass unemployment rates may increase as a result of their growing popularity and people taking over. Another group of experts is arguing that artificial intelligence should be treated positively. Even among billionaires in the IT field, there are different views. In particular, the founder of SpaceX, Elon Musk, is confident that artificial intelligence will destroy the entire-headed civilization. Musk believes that "Artificial intelligence is a major threat to human civilization. Artificial intelligence creates mass problems related to labor. The reason is, robots can do everything better than we do. As a result of the pursuit of advanced technology, companies may fail to see the danger that comes after artificial intelligence".

Also, head of the Microsoft Bill Gates dwells on its harm.

"After a few decades, when robots begin to do a large part of the work, artificial intelligence becomes so powerful that in the end it begins to worry us. In this regard, I agree with the opinion of the Elon Musk. But I can never understand why this question does not concern others," says Gates.

By 'others' Gates no wonder that he refers to Mark Zuckerberg, the owner of Facebook. Because, Mark expresses a positive attitude towards artificial intelligence: "New technologies can always be created for the purpose of doing good or evil. And the positive result that follows the prevalence of artificial intelligence, we will see in the next 5-10 years," objected to Elon Musk's opinion. Today, some countries have established the use of robotic nurses, unmanned vehicles, order delivery drones. Even some of the duties of police officers are performed by special robots. Scientists are trying to make their appearance as similar to that of people as possible.

Additionally, artificial intelligence has become a constant assistant to journalists. For example, robots that "work" at The Associated Press record financial statements. Its use increased the quarterly news coverage in this edition from 300 to 4,400.

According to information from the insurance company Swiss Re, 4.7 million residents are likely to be unemployed by 2020. It was also said that unemployment could threaten treasurers, postal workers, accountants and office clerks. Artificial intelligence can easily cope with their task.

4. ANALAYSIS AND RESULTS

In addition to the above, the fact that most consumers are not confident in robots is one of the obstacles that restrict the popularity of artificial intelligence. It takes some time for people to accept the service of cars or planes that they walk by themselves, of course. However, the opposite is true among the younger generation, who are growing surrounded by modern technologies, and there is no way that this process makes them so worried.

Despite all the objections and criticism, artificial intelligence does not stop from developing, helping people. Its importance is growing, especially in medicine. Robots are now also performing relatively complex surgeries. The specific collaboration of robotic doctors with medical personnel has greatly increased efficiency.

Medtronic, meanwhile, is working with IBM to develop a special program for diabetic patients. This software will be able to detect an emergency drop in blood sugar content 3 hours earlier. To do this, the medical data of 600 anonymous patients with this disorder was studied. This means that now people will have the opportunity to regularly monitor their health through special applications on mobile devices.

As you can see, the role of artificial intelligence in our lives is deepening day by day. The debate over the question of whether they are the achievement or defeat of humanity still lasts for a long time. Most importantly, in the words of the fantastic writer Ishoq Azimov, when creating robots, it should be taken as a slogan not to harm people.

Artificial intelligence is a separate field of Informatics, which is usually concerned with the possibilities associated with the human mind: understanding the language, teaching, discussing, solving the issue, translating and creating computer systems with similar capabilities.

While scientists are passionate about experimenting with artificial intelligence, many people are worried about this phenomenon. Even Tesla head Elon Musk called it a “fundamental threat” to humanity and a possible source of war and unemployment.

Let's take a look at 8 interesting facts related to artificial intelligence.

8 facts about artificial intelligence:

Fact 1. The absurdity of the service of artificial intelligence and the unlimited number of time criteria.

Fact 2. He can adapt to breakdowns.

American scientists experimented with a robot equipped with artificial intelligence. It was found that it would continue to operate even when severely damaged. During the experiment, the 'injured' robot was able to adapt to at least six different injuries, including the complete loss of two lower limbs, and the robot's 'arm' was able to adapt to at least 14 types of injuries, including the failure of its two engines.

Fact 3. Artificial intelligence inherits the beliefs and stereotypes of its creators.

Artificial intelligence draws its conclusions based on the data originally included in it, so it is characterized by racial and gender prejudices. Studies have shown that some computer systems for facial recognition have confused the sex of black women in 35% of cases, and only 0.8% of white men. This is because 75% of their photos in databases where artificial intelligence works are male, with 80% of them being white men in photographs.

Fact 4. Artificial intelligence can answer questions.

GPT - 2 from Open AI, the most powerful AI-powered text maker to date, can write entire paragraphs and does not make mistakes. At the same time, the system correctly answers questions if they belong to general knowledge.

Fact 5. Artificial intelligence is able to learn everything that a person can do. Researchers hope that artificial intelligence will be able to independently perform almost all human tasks by 2060. For example, scientists at the University of Oxford, in collaboration with Google's DeepMind artificial intelligence unit, taught the system better to lip-read than people. The Watch, Attend and Spell program identifies the difference between words with a similar lip movement and analyzes up to 50% silent speech.

Fact 6. Robots with artificial intelligence already work as announcers, fly into space, patrol ships and play football.

In China's Xinhua state news agency, a robotic announcer reads the news. It is based on the life prototype of Zhang Wanwei. The Robot can not only read news texts, but also learn from human colleagues, imitating their facial expressions and style of speech.

The CIMON 2 robot communicates with astronauts on the ISS: it uses the Watson IBM system as its artificial intelligence. An update with the Watson Tone Analyzer Service allows CIMON 2 to understand and respond to people's feelings. The CIMON project was developed by the Aerospace Center of Germany in collaboration with Airbus and IBM.

Norwegian oil company Aker BP uses a robotic dog called Spot (developed by

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Boston Dynamics) to guard one of its ships. Modern robots even know how to play football: such models are created in the artificial intelligence group under the Free University of Berlin.

Fact 7. Artificial intelligence will help to fight against the coronavirus.

Artificial intelligence-based systems around the world help monitor infected people, collect information about the virus, and search for a vaccine. For example, the Israeli company Vocalis Health has worked with the Israeli government to develop COVID-19 detection technology based on voice spectrum analysis. In addition, artificial intelligence robots are used to patrol public places (Singapore). Using Megvii ReID technology, a system has been developed in China that detects people with high fever in the human stream.

Fact 8. Artificial intelligence is saving the planet and providing people with food. Dedicated to covering bio diversity preservation in the United States, Canada, and Latin America, NatureServe has partnered with the analytics company SAS as part of its global Data for Good initiative. Artificial intelligence is used to collect data on plant and animal species, determine their location and concentration of populations.

The food and Agriculture Organization of the United Nations also recognizes the benefits of artificial intelligence: they believe that “intelligence” allows farmers to plan work more efficiently, taking into account information about weather conditions, pests, soil moisture and other important indicators.

CONCLUSION

The areas in which the artificial intelligence listed above is applied will not be an exaggeration to say the important areas of human activity in the present day. Artificial intelligence is widely used not only in the listed areas, but also in other fields and areas. In conclusion, the role of artificial intelligence in society, industry, science and human life activism is great.

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IMPORTANCE OF INNOVATIVE TECHNOLOGIES IN TOURISM

Under the Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan Tourism Committee Head of Department for Development of Education in the Tourism Sector

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Annotation. In this article, opinions and comments about the innovations and their effectiveness, which are newly used in tourism from year to year, and some suggestions are made. Several works on the use of innovative technologies in tourism and their implementation in real life and their impact were studied.

Key words: tourism, economy, innovation, tourist, industry, technology, innovative technologies.

Introduction. The tourism sector in our country is developing year by year and is becoming one of the leading sectors of the economy. For this reason, development of the tourism sector, full demonstration of its potential is appropriate. In particular, the President of the Republic of Uzbekistan, Shavkat Mirziyoyev, in his "speech at the meeting of the Council of Heads of the Shanghai Cooperation Organization" on July 4, 2023, touched on the issue of increasing the tourism potential in international cooperation issues and noted that "Cooperation in the field of tourism is one of the main priorities. Currently, there is a clear lack of regional tourism products of good quality and affordable prices. We support the activation of relations between tourism administrations, leading operators and airlines in the year of tourism development in the SCO region. We propose to hold a **joint scientific-practical conference on the development of the SCO tourism industry** within the anniversary session of the General Assembly of the World Tourism Organization, which will be held in October this year at the Silk Road International University in Samarkand. not for nothing.

In particular, tourism and innovation are seemingly contradictory concepts, but Tourism means recreation, travel, impression, history. Innovation is a concept close to technologies, industrial industry, IT network. How can the two be reconciled and what will it lead to? Regardless of the character, experience, motivation for travel, tourism for most people is associated with good mood, vacation, romantic road, sea, sun, mountains, delicious food, adventures in places rich in history. What comes to mind when we hear the word innovation? Ideas, application of technologies,

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industrial discoveries, infrastructures, rapid development, labor productivity, science, modernization, design, service, changes, rationality. Let's try to combine these two "clouds of associations" . So, history and modernization , labor productivity and vacation , adventure and rationality , How to integrate them is important for the production of a tourist product in y account ? Despite the fact that goods and services in the global economic market are based on the wishes of the customer, the starting point in tourism is always the product and its possibilities . That's why tourism is not a production, even if it has financial and administrative influence at the level of demand, it cannot be implemented without technological enthusiasm.

decided on the basis of natural factors, geographical and weather conditions, history, cultural heritage objects . Therefore, knowingly using them, combining various services, creating new products - this is the basis of the growth and development of this network. Of course, there are exceptions built at the expense of large investments and high technology, for example, the mountain dust track built at the Emirates Mall in Dubai . But he is an exception precisely for the sake of inspiration , and he consistently and thoughtfully calls for the creation of his own product. Besides, tourism is a small business, except for major infrastructure projects. In many cases, it is not even a business, but an activity and hobby of certain people - guides, guesthouse owners, artisans, painters, musicians. Uzbekistan has a wonderful climate, nature, rich history and is located on the Great Silk Road. Is this enough for the competitiveness of Uzbekistan as a tourist destination, even if modern technologies are not introduced? For example, the Egyptian temples attract millions of tourists. But there is a sea in Egypt, and tourists divide their vacation into two parts - a historical tour and a beach holiday. This is the case in Greece, Turkey, India, Thailand, Spain, Vietnam, and Israel.

No matter how serious the content of a trip to Uzbekistan is - historical, architectural, religious or ethnic - it should not be forgotten that tourism in general belongs to the entertainment industry. People spend their vacations on it, budget accordingly. This is what will leave an impression and a number of memories from the vacation . Therefore, in a place where there is no sea , it is necessary to plan the emotions of your guests with special consistency. Exhausting walks under the hot sun of Bukhara or from monument to monument in Khorezm are compensated by hoteliers, restaurateurs, transporters, tour operators and other participants of the tourism product, showing comfort and innovation to cheer up the tired tourist and prepare him for the next day. need Then it is not surprising that he wants to return to Uzbekistan again. Creators of the e-visa.gov.uz interface, border guards, city planners, people responsible for navigation in and between cities , and providers of services related to travel and tourism will join the ranks of tour organizers and those

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who feel the need for innovations . At the expense of what technology changes , products improve, competitiveness increases? How can innovations in the field of tourism differ from each other? The size . Innovation can be introduced at the scale of the entire network, individual enterprise, country, city, creation of a new tourist product or change of the whole , tourist object. Implementation area. In search and other applications that help tourists, manage people and provide them with work. This includes the opening of guest houses supported by light microcredit and private sector , technical service sector such as online check-in at the airport. Surface rate. Strategic innovations are implemented gradually (development of transport communications). The implementation of reactive innovations is accelerating (revocation of the visa for the country that sends tourists).

Development potential. From drastic changes like e-visa to improving some parts of the existing system (eg ATMs in tourist centers). At what level and composition of tourist products should be achieved in the country in order to attract tourists, but not destroy the delicate local ecosystem (objects, local traditions, ecology, nature conservation)? The concept of sustainable tourism development should serve as a beacon. Personnel policy includes the implementation of new profiles of specialists (tour directors) and professional requirements (tour-consulting), system of professional development, retraining and motivation of employees. The rationalization of financial activity implies the implementation of modern accounting and accountability forms that ensure the stability of the organization's status and development . Management innovation is often combined with process innovation. Marketing innovation is the improvement of pricing, offering, promotion, and payment approaches for tourism products. These innovations capture the changing needs of the target audience and attract new consumers. For example, preferential price formation for frequent customers of airlines and hotels, or "all-in" sales system, as in Turkey, are examples of this. Business model innovation is a new way of doing business to increase the value of the business to the consumer. For example, the creation of customer bases and data banks in hotels, which provides an opportunity for an individual approach to service . Or, to optimize transportation, the national airline joins the global alliance . A new business model in Russia is a system of mutual settlements for tourist services in the sale of routes, sanatorium-resort and wellness services through the Transport Clearing House .

Innovation in logistics – new solutions in supply, distribution, delivery systems and chains (including tourists). For example, airport hubs are a completely new concept of movement through a single connecting air transport hub . Air ticket search services can also be added to these . In Uzbekistan , taking into account that the main tourist route is Tashkent-Samarkand-Bukhara-Khiva, an open online system where

the owners of tourist vehicles can enter their empty trips can be an innovative product. Gap trips occur when tourists go from city to city by surface transportation and return by plane (or high-speed train). But air tickets and Afrosiyab train tickets are expensive, and finding a seat during the season is also a problem. For those who prefer less travel, it may be worth taking a half-price bus home from Khiva to Bukhara. As a result, it would have a positive impact on both the value of low-cost passenger travel and the pocketbook of the main customer of the bus. Resource innovation is the use of new types of resources to organize tourism and develop new destinations and services. The tourism network actively adds new resources to its economy and uses them to create new offers.

For example, the discovery of dinosaur fossils led to the opening of the Dinosaur Park in the United States, which has paleontological museums and routes that allow visitors to view archaeological discoveries. Another example is the opal mines in the Australian mining town of Coober Pedy. In Evenki, an open-air museum dedicated to the fall of the Tungus meteorite was established, and in the 20s of the last century, the first explorer along the path from the village of Vanavar to the place where the space body fell through swamps and taiga "Leonid Kulik trail" route is created. Conceptual innovation is the creation of new concepts of tourism, tourism services and their implementation in new forms of service, architectural engineering and technological solutions. For example, the construction of hotels and restaurants from ice in the Nordic countries (the famous Ice Hotel in Sweden), themed hotel-casinos in Las Vegas (for example, "Excalibur" - a medieval castle where knightly competitions are held). "Tourism of civilizations" can also be included in this category - they are a new form of specialized tourism. Civilization tourism provides a complete picture of the nature, history, culture, ecology, lifestyle, communication and cooperation of civilizations. For example - traces of Turkish civilization, tours along the roads of the Timurid and Baburi dynasties (apparently, they do not exist in a developed and marketable state). Combining previously incompatible points of status and geographical location (Turkey and Central Asian countries, Uzbekistan and North India) in one tour is a unique proposition. It satisfies the need for new knowledge and experience, which is characteristic of modern tourists.

Marketing differs from innovation only in that it requires conceptual innovation. Institutional innovations shape new rules and regulatory systems in tourism as well as related sectors. They create new systems and forms of cooperation between the administration, the private sector and the public in tourist destinations. For example, increasing the number of countries that are subject to a visa-free regime for up to 30 days freed tour operators from their responsibilities regarding a number of actions of tourists coming from these countries to the territory of Uzbekistan (Order

of the President of the Republic of Uzbekistan No. PF-5326 dated February 3, 2018 "O Decree on additional organizational measures to create favorable conditions for the development of tourism potential of the Republic of Uzbekistan). Only proposals based on an understanding of customer expectations, satisfaction and values can be in demand .

Innovations should be designed accordingly. The key word here is marketing. New solutions and innovations should always be available everywhere . The demand for tourism services shapes the supply. Tourists not only actively participate in the creation of tourism products, but also create their own tourism products (independent travel). As a marketer, the author would like to show the role of marketing in setting innovative directions in tourism . When conducting tourism research , marketers usually compare what tourist segments are like or what they do. In fact, you need to learn what they want . It is this information, especially in our areas such as agro-tourism and eco-tourism , that would be particularly important for the development of the tourism business. Strategies designed for the " average " consumer often result in unattractive products, unrealistic prices, and ineffective advertising messages.

For example, it would be difficult to build a hotel complex somewhere among the mountains or in the Charvok reservoir, which would attract both the residents of Tashkent and foreign tourists alike. Especially if we take into account that Uzbekistan is mainly visited by old people who are interested in history and prefer high comfort. Even more difficult would be to advertise and promote this facility to appeal to both types of vacationers. Therefore, marketing that has a small claim to the name of target should be based on market segmentation first of all. To understand what the segments might look like, let's look at two categories: The Actives and The Relaxers. Or "Want-it-all" and "Passive tourists". "Relaxers" are practically impossible to find in Uzbekistan and neighboring countries . They are mostly found in sea resorts. We mainly come across The Actives and The Relaxers. Therefore, we should develop our proposals and implementation vectors with them in mind. This means changing cities, attractions, and entertainment frequently. Having cooked an idea that does not yet exist in the market , doing marketing and conducting segmentation of future guests, it is necessary to be sure that the identified segments and their needs really exist. Not at all general categories of tourists, which can be mistakenly called the "Want-it-all" or "Passive Tourists" segments . In order to sell products and services in different segments, the company should base its marketing scheme not only on the existing products, but first of all on the wishes of the customers. The key is to be ready to move from product segmentation to customer segmentation . Examples of innovation in tourism A four- star prison-hotel with luxury rooms in Roermond, Netherlands, opened in 2007, a few years after the prison was closed. The internal layout of the

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floors and rooms has not changed - all rooms open onto the former prison corridor (which has been converted into a recreation area), where, upon request of the residents, the hoteliers can organize prison-style dinners. Virtual concierge. The development has been implemented in 12 hotels in Great Britain. Communication with the robot is controlled using a mobile application through voice commands or correspondence. The concierge bot is called Edward, who tells customers about the hotel, helps them choose and order rooms, and helps them identify additional services, and advises on where to go in the city. Film tourism - organization of excursions to places where famous films were shot. This type of recreation gained wide popularity abroad in the 2000s, and has been developing in Russia in recent years. For example, after the release of the film "The Da Vinci Code", the number of visitors to the Louvre in France reached a record level. In Spain, tourism companies have developed routes for the locations where the series "Game of Thrones" was filmed.

Ecotourism. Tourists live in a small house or family in the countryside, surrounded by nature. The owners of such houses create all conditions for receiving vacationers. There are different forms of ecotourism: historical, scientific, trips to untouched and inaccessible places. It is actively developing in Asia (Laos, India), South America (Peru, Ecuador), Africa (Kenya) and other countries. Ecotourism is also gaining popularity in Russia. Virtual museums - circulation of expositions of famous museums through the Internet. Most often, these are museums that have developed interactive opportunities, which allow you to walk through the halls, see three-dimensional images, learn information about exhibits without coming to the museum in person. For example, the Van Gogh Museum in Amsterdam, the State Tretyakov Gallery in Moscow, the Vatican Museum and many others. In the application and introduction of new innovative systems in tourism and new knowledge and skills will be an economic part of the future generation and our developing country. PQ-135 No. 26.04.2023. The new decrees on the rapid development of the tourism potential of the Republic and additional measures to further increase the number of local and foreign tourists also focus on the creation and implementation of new technologies in the field of tourism. PQ-238-No. 27.07.2023 on measures to further accelerate reforms in the field of tourism and effective organization of the state management system in the field, measures aimed at training young personnel in tourism and improving their knowledge and skills some tasks have been given and practical works are being carried out in this regard as well. has a positive effect on any industry. Innovative technologies used in the field of tourism have a positive effect on the modern implementation of the activities of all subjects related to the field, such as a tourist company, insurance company, transport company,

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tourist bureau, hotels, catering establishments. The use of these technologies consists in the creation of tourism products in the form of information, that is, services that allow the consumer to choose a service via the Internet . This situation is of great importance for companies in the period when the current digitization process is rapidly progressing in the implementation of important processes such as competitive product, price formation, investment utilization and sales policy. A documentless travel ID is believed to benefit travelers. Thus, it will change the way people prepare for travel .

Mobile technologies in tourism	App
Connect on demand	Connect users and providers before, during and after the trip
Conversations on demand	AI, chatbot, instant messaging, virtual assistant
Progressive Web Apps	API bundles transform a web application into a native mobile application
Personalized offers	AI and big data create custom packages for each account
Fast mobile payments	NFC, e-wallet and one-click booking
Last minute bookings	Explore inventory at a lower price

In order to increase the tourism potential, IT programmers are conducting research on the adaptation and creation of mobile technologies in business development. For example, "2019 - 2025 Concept of the development of the tourism industry in the Republic of Uzbekistan defines the task of implementing new types of services necessary for the development of the tourism industry with the help of innovative technologies." Innovative technologies play an important role in the development of tourism in Uzbekistan . With the increased use of technology in the travel industry,

travelers are relying more than ever on the internet, mobile apps and other technological advances to plan, book and experience travel destinations.

Institutional innovations shape new rules and regulatory systems in tourism as well as related sectors. They create new systems and forms of cooperation between the administration, the private sector and the public in tourist destinations . For example, increasing the number of countries entering the visa-free regime for up to 30 days freed tour operators from their responsibilities regarding a number of actions of tourists coming to the territory of Uzbekistan from these countries (Decision of the President of the Republic of Uzbekistan No. PF-5326 of February 3, 2018 "Republic of Uzbekistan" Decree on additional organizational measures to create favorable conditions for the development of tourism potential).

In the future, mobile technologies will be of great importance in making and booking trips . Mobile communication devices with a modern operating system, combined with packages of useful programs for tourists, save their time and expenses, and become a happy companion on trips. However, it is possible to point out several factors that hinder the development of mobile technologies today . These include the fact that users do not know how to fully use smartphones, and complexities in the payment system and underdeveloped infrastructure. Many mobile phone owners, especially the elderly, cannot use some of the functions of the phone, using it only as a means of communication. In addition, there are problems in the implementation of electronic payments : the presence of situations such as the lack of service, lack of internet connection or low speed, risks related to ensuring the security of personal data, and the presence of cybercrime cases. shows the relevance of the topic. From this point of view, the article is based on the possibilities and ways of using mobile innovative technologies to increase the tourism potential of our country and to increase the attraction of foreign and domestic tourists . Analysis and results The use of innovative information technologies has a positive effect on any industry . Innovative technologies used in the field of tourism have a positive effect on the modern implementation of the activities of all subjects related to the field, such as a tourist company, insurance company, transport company, tourist bureau, hotels, catering establishments. The use of these technologies consists in the creation of tourism products in the form of information, that is, services that allow the consumer to choose a service via the Internet . This situation is of great importance for companies in the period when the current digitization process is rapidly progressing in the implementation of important processes such as competitive product, price formation, investment utilization and sales policy. –

The use of innovative technologies in the field of tourism or the implementation of innovative activities in general is carried out on the basis of directions established by

the government and they are classified as follows: - allocation of funds for the implementation of targeted programs in the regions; - creation of a network of information centers that provide free services to travelers and contribute to the education of local residents in the field of tourism; - providing financial support in the form of grants, subsidies and investments for service provision and introduction of scientific developments used in related sectors of the economy. The directions intended for the introduction of innovations, such as the above, directly provide for their financial support. When using new technologies in the field, experts with experience and qualifications determine the need to provide technical service during the use of technology, to carry out analyzes necessary for more effective use of its capabilities.

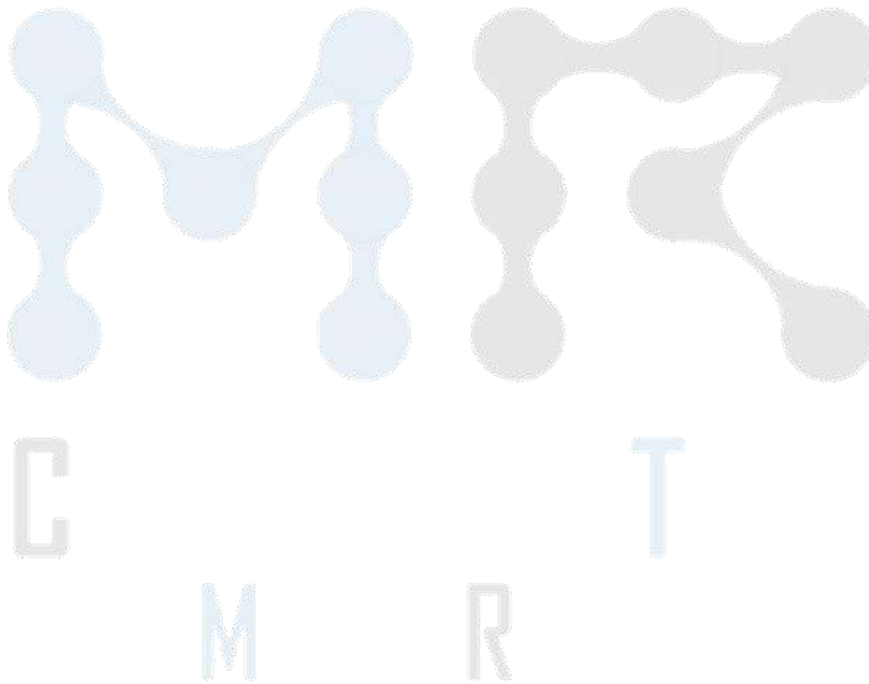
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THE CHARACTERISTICS OF ONE-PART SENTENCES AND THEIR POSITION
WITHIN THE SIMPLE SENTENCE TYPE SYSTEM

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Abstract. this article gives information about the features of one-part statements and their places in simple sentences as well as provides with vivid examples from prominent linguists.

Keywords: *single-part sentences, certainty, uncertainty, axis, figure.*

Typical syntactic models with an ideal concentration of grammatical and semantic qualities constitute the heart of one or more semantic-structural groups of short sentences.

Clear subject-predicate relationships and the certainty of the topic of thought - which establishes the subject character of the subject - are characteristics of typical two-part sentences. Because of the logical and psychological foundation of the conveyed judgment, most one-part sentences comprise one major word with a clearly defined syntactic function and are characterized by the subject's ambiguity. The absence of logicegrammatic articulation and the highest level of topic confusion describe typical non-articulate sentences.

Single-part sentences are distinguished by a single primary phrase and a specific manner of expressing it, according to the grammatical principle of categorization. The semantics of a single-part statement determines its structural characteristics. Semantic and grammatical qualities must be considered in their whole when differentiating single-part sentences from other simple sentence types as well as across different variants of single-part sentences.

Sentences with one part converge with sentences with two parts on the one hand, and sentences with no parts on the other. This is based on the diverse ways in which the thinking contained in them is articulated in terms of logic and psychology, as well as the characteristics of the topic of judgment. Sentences conveying judgments with an active figure as the subject better characterize the division of thinking. Sentences that communicate judgments about things and phenomena of reality—the condition of nature and humanity, for example—have a less distinct division of thought because they do not describe the activities of the subjects.

In some variations of single-part sentences, the syntactic structure, the characteristics of the secondary parts, and the lexical and grammatical nature of the major elements are determined by the nature of the judgment's subject.

One-part sentences are classified as verbal or nominal depending on the type of judgment, the subject matter, and the manner in which the primary element is expressed. Sentences discussing an activity whose producer is not spoken out loud are known as verbal one-part sentences. Distinct linguistic forms elicit distinct feelings on the relationship between the action and the individual (the action's creator). Conjugated verb forms have the closest relationship to the actor; impersonal verbs and the infinitive have the least relationship.

The grammatical (morphological) and semantic characteristics of verbal one-part phrases (certainly personal, indeterminately personal, generically personal, impersonal verbal, and infinitive) vary widely. Their positions on the certainty—uncertainty axis - which is in this case caused by varied degrees of action producer distraction - motivate the semantic difference between them.

The strongest degree of definiteness in the figure (“The boy reads”) distinguishes the two-part sentences with a specified subject, expressed noun. When an activity is considered without

the producer's knowledge, it is characterized by an impersonal verbal statement with the maximum degree of uncertainty (it's getting light, it's pouring, etc.) [1].

The actor's assurance fluctuates in linguistically (formally) two-part phrases based on the lexical and syntactic characteristics of the words acting as the subject.

John is reading; A boy is reading; Someone is reading; Everyone is reading, etc.

One-part verbal sentences are put between two-part and impersonal verbal phrases to generate transitional formulations that are marked by a progressive rise in uncertainty and a gradual weakening of confidence. The figure is defined in definite-personal sentences nearly as much as in two-part sentences with 16 subject-personal pronouns. The action of vaguely personal statements relates to some people who can be and are defined; the actor is thought of, if hazily, in these sentences. In generalized personal statements, any individual can be identified as the actor since the action is generalized. Definitely, indeterminately, and generically personal sentences can be distinguished into a unique category of one-part sentences that are personal due to the character of the action's producer when an actor is present in the mind.

Some writers view personal one-part sentences as reduced two-part sentences with a reduction of the subject matter, or as sentences with a specific grammatical subject, in light of the existence of a figure. Even though indeterminately personal and generically personal sentences are frequently close to two-part sentences, they cannot be categorized as a type of two-part sentence because they only specify the location or position of the action's leader; verbalizing the figure would alter the sentence's semantic and grammatical structure.

Single-compound verbal sentences in language are formed by typical syntactic models of indefinite-personal and generalized-personal sentences. These sentences serve the communicative function of expressing the action of an indefinite and generalized person who is a part of the structure of expressed judgments in the form of representations.

A breach of the action's direct relationship to the actor is linked to the person's ambiguity and generality.

The recognition of the necessity to express a certain figure to varying degrees, rather than the breakdown of the sentence's ambiguity, "elimination of the subject" (A. A. Potebnya), "decrease in grammatical apperception of the subject" (D. N. Ovsyanniko-Kulikovskiy), or an ellipse (N. K. Grunsky et al.), explains the existence of syntactic constructions in language in which the actor is not clearly defined [2].

The juxtaposition of two-part and one-part sentences, which originated in the early Indo-European era, "remained basically unchanged, despite partial transformations and mutual transitions", reveals these shades through logical and grammatical analysis [3].

In the system of one-part sentences, the most characteristic and well-defined types—definitely personal, indeterminately personal, generalized, and impersonal verbal sentences—are distinguished as the means of expressing different degrees of distraction of an action from its producer.

Nominal one-part sentences integrate vocative, nominative, and impersonal nominal sentences. In terms of form and meaning, they are more varied than verbal ones.

Evaluation-based nominal sentences like "Beautiful!" and "Beauty!" and a few others have a distinct binomial notion; in most nominal one-part phrases, there is very little logical and grammatical articulation. This is the reason for disagreements over the nature of the principal

element of these sentences' undifferentiated syntactic role. Grammatically speaking, is it a subject or a predicate?

The distinction between nominal and verbal one-part sentences is not well-defined. Semantic properties—which might refer to the condition of nature, humanity, etc.—unite verbal and nominal phrases in impersonal sentences, where their convergence occurs.

Infinitive sentences, in which the major component, an independent infinitive, combines the qualities of a verb and a noun, have a unique place among verbal and nominal sentences.

The different degrees of logical and grammatical articulation of one-part sentences define their intermediate place in the system of kinds of a simple phrase. One-part statements provide dissected judgments, in contrast to non-articulate sentences that convey implicit assessments. The primary member's syntactic function is more evident the more obviously the concept is divided into two parts, and vice versa. Put another way, the primary element of a variety of one-part sentences has a more distinct syntactic role the closer it is to a two-part phrase, and vice versa.

Certain forms of nominative and vocative sentences, which are distinguished by their ambiguous grammatical and logical articulation, resemble non-articulate “applications”. However, they are not the same as the latter in that their major term is expressed by a significant word, meaning a word associated with the concept.

The following primary categories of single-component sentences can be distinguished thanks to a combination of semantic and grammatical properties; the order in which these categories are analyzed depends on where they fall on the certainty-uncertainty axis: unquestionably personal, indeterminately personal, generically personal, impersonal, infinitive, nominative, and vocative sentences.

The regularity and efficiency of differentiating between transitional (intermediate) and peripheral constructions that combine the characteristics of typical syntactic models depends on the relationships and interactions between the main semantic and structural types of a simple sentence and between the chosen varieties of single-component sentences.

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TRANSPORTATION OF PERISHABLE GOODS ON RAILWAYS.

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Abstract: Railway transport is part of the transport system of our country forming the basis and a leading place in the unified transport system occupies. The role of the railway in the power of the state, national economy and defense is important. Transportation of the population and the national economy fully meet all the needs, transportation is high quality and timely performance is required. A little delay in orders for transportation is also the business causes serious damage to the normal operation of the contract economy. This article provides information on the transportation of perishable goods on railways.

Key words: Railway transport, Perishable goods, refrigerator train, autonomous refrigerated wagons (ARV) produced in the GDR, Isothermal moving content.

Food products, which are mainly perishable goods, require compliance with special conditions. Refrigeration technology ensures the integrity of perishable goods. This concept covers methods of obtaining lower temperatures and their practical application for industrial, transport and domestic needs. The development of refrigeration technology and its development is of primary importance in the modern economy. Objects can be artificially cooled below ambient temperature. In this case, first the temperature is lowered, and then it is required to maintain it against external and internal events that try to restore the initial temperature state. In this case, the heat obtained from bodies that are colder than the environment is called cold. Artificial cold is used in various sectors of the national economy for technological processes, product quality improvement, for example, improving working conditions in the storage and transportation of perishable food products, steel processing, fruit freezing, seawater desalination, air exchange (air conditioning), as well as in life, military widely used in technology and scientific research.

The main development history of refrigerated transport. Ice and salt cooling in Russian railway transport began to be used in 1860 (approximately at the same time as abroad) for the purpose of cooling the simplest-designed ice-cars. In 1868, the American Davis refrigeration equipment creates a wall-mounted

refrigerator. In 1881, a similar wagon appeared in Russia. The increased volume of transportation of perishable goods has created a new problem of refrigeration. From 1830 to 1861, inventors proposed all the principle schemes of refrigeration machines in use today. As early as 1876, meat was transported on refrigerator ships. In 1877, the first machine-cooled refrigerator was launched in Russia. In 1888, the first air-cooled barge-refrigerator was first used for the purpose of transporting fish. In 1903, a refrigerator train was created in Russia, consisting of six freight cars and a machine compartment car. Railway refrigeration transport is an integral part of railway transport. The reason for isolating cooling transport as a separate network is related to a number of features: when transporting perishable goods, it is necessary to provide conditions equivalent to or similar to the storage of these goods in stationary refrigerators and warehouses. This requires isothermal wagons with cooling and heating devices; loss of mass (in some cases 2% or more of the net (net) weight) and quality of expensive perishable goods. These losses are directly related to the duration of transportation and other factors. In this case, it is necessary to follow the limit periods of transportation; seasonality of transportation related to the characteristics of food production and preparation; the need to create special conditions related to reducing the impact of adverse factors on perishable cargo during loading and unloading operations.

Preparation for transportation of perishable goods. The main task of transporting perishable products is to ensure that they are not exposed to the harmful effects of physico-chemical and bacteriological factors. The environment in which they are located should also be protected from this effect. Shipping results are affected by: - the quality and condition of the product, its preparation for transportation, its container and packaging; - temperature, humidity of the room where the product is transported, air circulation and exchange there, as well as air cleanliness in the chambers and wagons (absence of germs, mold, gases and odors from the products); - sanitary condition of chambers and wagons, methods of placing products in them and duration (duration) of transportation. Special attention is paid to veterinary-sanitary control. When assessing the quality of food products, its nutritional qualities, harmlessness and virus characteristics are determined. The following are determined by inspection: whether it is possible to allow this product to be transported or stored in a refrigerator, under what conditions, its condition and durability during long-term transportation, the presence of documents confirming its quality, the standard of the product and its container. Chemical and physical properties of perishable goods. Perishable cargo includes cargo that requires protection from high or low temperature and humidity during storage and transportation, that is, special transportation conditions, namely, cooling or heating

and air exchange of wagons, special control (care) of the cargo. 98 types of plant and 88 animal products and a large number of preserved products are transported by railways. Organic substances include proteins, carbohydrates, fats, vitamins, acids. Protein is a high molecular substance. The largest group of proteins are enzymes. Today, more than 1,000 of their types are known, each of which is a catalyst for a specific, well-defined chemical reaction. Enzymes cause all biochemical processes in both living and decaying cells. Preservation is associated with slowing down the effect of enzymes in the cell (for example, during sterilization) or increasing their activity (aging). The second group of proteins is involved in the construction of structural elements of cells.

Carbohydrates are formed in the green part of plants from inorganic substances - carbon dioxide and water through photosynthesis. The taste depends on the quantity and quality of carbohydrates. The following are carbohydrates: starch, sugar (glucose, sucrose, fructose), pectin and fiber. Carbohydrates are involved in the formation of cell walls. Pectin substances have the ability to gel, that is, they form a studio and give firmness to unripe fruits. Fats are composed of glycerol and fat cells. The properties of oils depend primarily on the acids they contain. Stearic and palmitic acids make them firm, while oleic acid gives them a fluidity. Fats are a source of energy, and when one gram of fat is acidified, 9.3 kcal of heat is released. For comparison: 1 gram of protein and carbohydrate provides 4.1 kcal of heat. Waxes and essential oils are also fatty substances. Leaves, branches, fruits are covered with wax in a thin layer, protecting them from moisture and damage by microorganisms. Heat capacity is the amount of heat absorbed by the product when it is heated to one degree. It largely depends on the amount of water in the product and the heat capacity of its components. Thermal conductivity is the intensity of transfer of heat in the mass of the food product. It is necessary to know it in order to determine the duration of the cooling, freezing and thawing processes. Heat gain or enthalpy indicates how much heat is contained in 1 kg of product. The freezing temperature describes the beginning of the freezing process of product juice(s) containing salts. This temperature is called the cryoscopic temperature, which is 0.4 - 4.2 °C lower than the freezing temperature of water.

Basic conditions for storage of perishable goods. All methods of food preservation are based on the following principles: preservation (preservation) of vital processes in living tissue products (freshly picked fruits and vegetables, live fish, eggs, crabs, etc.); weakening of the vital activity of microorganisms and the activity of tissue enzymes under the influence of various physical and chemical factors; stopping the vital activity of microorganisms and the activity of tissue enzymes (pasteurization and sterilization). The following methods of conservation

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are based on two final principles: physical conservation - drying of products and conservation using high and low temperatures (cold); biological preservation - based on the incompatibility of milk-fermenting and putrefying bacteria, for example, making yogurt, salting cabbage (kvashenie), canning apples, etc.; chemical preservation - based on the addition of nutritional preservatives (salt, sugar, alcohol, vinegar, etc.) to the product, that is, salting, preservation, smoking. The application of one or another method of processing products is associated with changes that can damage their quality. The best method is the one that allows you to preserve the product for the longest time with the least losses while preserving all its taste and nutritional properties. These requirements are met by conservation at a lower temperature (cold), which allows to preserve not only the taste and nutritional properties of products, but also their vitamin content and natural appearance. Causes of nausea of perishable goods Physico-chemical and biological processes take place in food products under the influence of microorganisms and enzymes produced by microorganisms. In addition, the water contained in the products leads to faster passage of chemical and other processes. All this creates favorable conditions for the development of various microorganisms (bacteria, fungi, actinomycetes, yeasts).

Bacteria are single-celled organisms that can be spherical, rod-shaped, or spiral in shape. Bacterial cell consists of protoplasm and shell. Under favorable conditions, bacteria multiply rapidly by simple division, forming a mass (colony) of cells in the product that can be seen with the naked eye. Together, the colonies form a film of slime or other appearance. Molds can be unicellular or multicellular; they develop on the surface of the product and form a fluffy coating. There are gaps inside the product, and mold can develop inside if air is allowed to enter. Papanik fungi produce various enzymes that break down complex organic substances (proteins, fats and carbohydrates) and make them soluble. Most budding fungi degrade food products. Actinomycetes, or light fungi, are similar to bacteria in one way, but in another they resemble a bud. The body of actinomycetes is a filamentous structure that radiates from a central point like rays. The development of many actinomycetes is known by their characteristic earthy smell. Yeasts (yeast) are single-celled, often ovoid or round organisms. Wild yeasts are often round in shape and are found in refrigerated and transported products; they reproduce by pochkovanie. Cultured yeasts are more commonly used in the fermentation industry. Yeast cells are larger than most bacterial cells; they are able to break down sugar into alcohol and carbon dioxide. Control of perishable cargo transportation conditions. Proper handling of perishable cargo must be checked daily. Measures taken in time to eliminate malfunctions of RHT equipment allow to prevent damage to transported perishable goods. The temperature regime is checked using control measuring devices. Local

and remote control methods differ depending on the temperature measurement method. In local control, the temperature is measured at least every 12 hours directly near the car-refrigerator, using a portable metric station, connecting to it the resistance thermometers installed in the car, and in remote control - every 4 hours, from the central control panel of the telemetric station installed in the car-machine compartment of the section. is measured. When transporting bananas and pineapples, local temperature control is carried out every 6 hours. When the temperature is measured in freight cars, the temperature of the outside air is checked at the same time, and thermometers installed on both sides of the service car are designed for this.

Summary: Technical processes of processing perishable goods. Cold processing of perishable products includes chilling, freezing and defrosting (thawing process). When cooling the products to a temperature close to 0 C, the cold becomes a factor that slows down the exchange processes without disturbing the natural chemical balance in the substance, because the speed of chemical reactions is directly proportional to the temperature. During freezing, water separates from the cooled system in the form of ice, and the non-liquid substance becomes inert, i.e. resistant to long-term storage. Ice formation in food products leads to mechanical damage and tissue disruption. In addition, as a result of the release of water, strongly concentrated salt compounds appear, which have a negative effect on the chemical composition of tissues, which causes a change in the quality of food products after freezing.

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DIE ROLLE DER FRÜHFORDERUNG BEIM FREMDSPRACHENLERNEN.

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Zusammenfassung: Sprachenlernen ist einer der wichtigsten Bereiche in der menschlichen Gesellschaft. Sprache als Kommunikationsmittel in der natürlichen Umwelt (in der Familie, in der Gemeinschaft) oder organisiert (im Unterricht) können praktisch erworben werden. Das Wissen über Sprachphänomene wird theoretisch untersucht. Die Kenntnis einer Sprache, insbesondere der Mehrsprachigkeit (Polyglossie), ist in unserer Zeit zunehmender internationaler Beziehungen wichtig gewinnt große Bedeutung.

Schlüsselwörter: Deutsche Sprache, methodische Methoden, didaktische Spiele, wirksame Ziele; interaktive Methoden.

Interesse der Studierenden am Bildungsprozess an der Methodik des Fremdsprachenunterrichts, Die Frage „ihrer tatsächlichen Teilnahme an verschiedenen Veranstaltungen“ wird immer akuter. Denn die Hauptaufgabe beim Erlernen einer Fremdsprache sind Muttersprachler Die Fähigkeit zur Kommunikation wird in der Schule oft nicht erreicht. Studenten Einige von ihnen haben nicht genug Interesse am Erlernen einer Fremdsprache Es gibt Gründe, warum es die Aufgabe jedes Lehrers ist, „die Schüler zum Unterricht zu bringen“. Interesse stets aufrechterhalten und steigern“. Erregen Sie die Aufmerksamkeit von Schulkindern Eine Möglichkeit, dies zu erreichen, sind nicht standardisierte Lehrformen – sie sind „Studenten“. Erregt Aufmerksamkeit, steigert das Interesse an der Wissenschaft und eine bessere Beherrschung des Stoffes Zu den atypischen Unterrichtsformen zählen Exkursionsunterricht, Themenunterricht, didaktische Spiele und natürlich Gruppenarbeit. Wird hier immer beliebter Aktive Methoden des Sprachunterrichts sind wichtig. Im aktuellen phonologischen System der deutschen Sprache machen Monophthonge und Diphthonge 45 Prozent aus (16 Vokalphoneme und 3 Diphthonge); Konsonantensystem 18 Konsonantenphoneme und 2 Konsonanten besteht aus Ton. Alle Phoneme sind hinsichtlich des Entstehungsorts, der Methode und der Aussprache wechselseitig unterscheidet sich, hat bestimmte Eigenschaften. Der Begriff Spracherfahrung ist eine in europäischen Sprachen veröffentlichte Methodik. Es ist in der Literatur kaum zu finden, da es in russischen (gemeint ist die Russische Föderation), englischen, deutschen und französischen Schulen existiert Beim Erlernen einer Fremdsprache wird die einzige Muttersprache berücksichtigt. Usbekistan in der Schule im Hinblick auf die integrierte Spracherfahrung der Muttersprache und der Zweitsprache sowie der Fremdsprache selbst Denken ist angemessen.

Die grammatikalische Konstruktion ist ein analytisches und synthetisches Merkmal zeichnet sich aus durch Zum Beispiel Geschlecht und Übereinstimmungsformen in Substantiven, hauptsächlich analytisch, Numerus und die Kategorie wird synthetisch ausgedrückt. Dies ist bei anderen Wortgruppen der Fall wird auch im Ausdruck von Formen beobachtet. Der Hauptsatztyp ist der verbzentrierte Satz ran. Nicht die Verwendung von Partizipien, die aus zusammengesetzten Verben in der entfernten Position in ran ausgedrückt warden Es ist ein Merkmal der deutschen Sprache. Das System der Wortbildungswerkzeuge ist gut entwickelt; Es wird häufig verwendet, um ein Substantiv (hauptsächlich einen Begriff) durch Hinzufügen eines Wortes zu bilden. Wörterbuch enthält originale deutsche Wörter aus Latein, Französisch, Italienisch, Englisch und anderen Sprachen Es gibt auch viele Lehnwörter. Die Schrift basiert auf lateinischen Grafiken Die österreichische und die schweizerische Variante des Deutschen sind von der deutschen Variante abgeleitet unterschiedliche Verwendungen der Literatursprache und ihre Beziehung zu Dialekten

und Umgangssprache unterscheiden sich voneinander hinsichtlich. Zu den atypischen Unterrichtsformen zählen Exkursionsunterricht, Themenunterricht, didaktische Spiele und natürlich Gruppenarbeit. Wird hier immer beliebter Aktive Methoden des Sprachunterrichts sind wichtig. Aktive Lernmethoden - „Um die Studierenden zu ermutigen, bei der Bewältigung des Lernstoffs aktiv nachzudenken und zu üben „sind ermutigende“ Methoden. N.M. Kleimenova stellt fest, dass „empirisch gewonnen“ wurde Wissen ist das tiefgreifendste und tiefgreifendste". Daher, um eine Fremdsprache effektiv zu unterrichten den Unterricht anders zu gestalten, die Aufmerksamkeit der Schüler und vor allem der Sprache zu erregen. Es ist offensichtlich, dass es notwendig ist, unabhängiges Lernen zu fördern.

Die Rolle von Spielen im Unterricht und die dafür vorgesehene Zeit hängen von einer Reihe von Faktoren ab: a) Ausbildung von Studenten; b) untersuchtes Material; c) spezifischer Zweck und Bedingungen des Unterrichts. Wenn das Spiel als Trainingsübung zur anfänglichen Stärkung verwendet wird, dann unterrichten Sie es Es können 20-25 Minuten eingeplant werden. Zukünftig wird dieses Spiel 3-5 Minuten dauern ist möglich und dient der Wiederholung des Gelernten sowie der Entspannung im Unterricht. Beliebte Lehr- und Lernmethoden der deutschen Sprache im Forschungsprozess, das Internet Ressourcen genutzt wurden. Im Prozess des Verfassens des Artikels erfolgt eine theoretisch-deduktive Schlussfolgerung, Analyse und Prinzipien der Synthese und Rationalität wurden verwendet. Die Aufgabe des Lehrers liegt bei jedem Schüler Schaffung von Bedingungen für den praktischen Erwerb der Sprache, indem jedem Schüler seine eigene Aktivität gegeben wird und ist es ihnen zu ermöglichen, ihrer Kreativität Ausdruck zu verleihen. ist die Wahl der pädagogischen Methoden. Lehrer Die Aufgabe besteht darin, die Wissensaktivität des Schülers im Prozess des Fremdsprachenunterrichts zu aktivieren. Kollaborativer Unterricht, Projektmethodik, Einsatz neuer Informationstechnologien, moderne pädagogische Technologien wie Internetressourcen für den Einzelnen im Bildungsprozess Um einen fokussierten Ansatz umzusetzen, werden die Fähigkeiten der Kinder und ihr Lernen berücksichtigt die Bildung unter Berücksichtigung des Niveaus und der Beherrschung zu individualisieren hilft. sorgt für Differenzierung.

Der Deutschunterricht ist nicht nur ein Spiel. Vertrauen zwischen Lehrer und Schülern und Die Leichtigkeit der Kommunikation ergibt sich aus der Spielumgebung. Der Lehrer und die Schüler nutzen das Spiel lädt zu ernsthaften Gesprächen ein und bespricht alle realen Situationen. Das Spiel ist Deutsch hilft, die kognitive Aktivität der Schüler beim Sprachenlernen zu entwickeln. Er ist moralisch prinzipiell, macht die Arbeit freudig und kreativ. „Einsatz von Spielen im Fremdsprachenunterricht“ Früher war es mein methodisches Fach, mit dem ich mich seit mehreren Jahren beschäftige. Das permanente Ziel meiner Arbeit: die kognitive, motivierende Unterstützung der Studierenden didaktische Spiele zur Aktivierung der Aktivität... Natürlich spiele ich jeden Tag Spiele Ich benutze es nicht, sagt Erst die Arbeit, dann das Spiel. Deshalb habe ich sie oft zu Beginn der Unterrichtsstunde zum Aufwärmen des Vestibularapparates oder am Ende der Unterrichtsstunde ich benutze Die Spiele, auf die ich Sie aufmerksam mache, heißen „Fremd in der Schule“. „Sprachen“ aus alten Zeitschriften, aus dem Internet sowie aus eigener Erfahrung. Hoffnung Ich hoffe, dass meine Kollegen sie bei ihrer Arbeit nützlich finden werden. Interesse am Erlernen der deutschen Sprache wecken und dann aufrechterhalten Jeder weiß, wie schwierig es ist, im Wettbewerb der vergangenen Jahre zu bestehen – das ist die englische Sprache, ihr Anspruch Ohne Zweifel. Mit dem Internet im Deutschunterricht mit Oberstufenschülern Entwicklung methodischer Arbeitsmethoden In den letzten Jahren haben viele Lehrer

Kollaborative Lehrmethodik, die Teil der Projektmethode in der Praxis ist nutzen immer mehr. Bildung von Interesse am Erlernen der deutschen Sprache und Dann weiß jeder, wie schwierig es ist, im Wettbewerb der vergangenen Jahre auf Englisch zu bleiben Sprache, ihr Bedarf steht außer Frage ... Internet im Deutschunterricht mit Oberstufenschülern Entwicklung methodischer Methoden für die Arbeit mit In den letzten Jahren haben viele Lehrer ihre eigenen Die Methodik des kooperativen Lernens, die Teil der Projektmethode ist, wird zunehmend in der Praxis eingesetzt verwenden mehr.

VERWEISE:

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ASSESSMENT OF PARASITIC INFECTION IN CHILDREN

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АННОТАЦИЯ

Гелминтозлар жуда кенг тарқалган бўлиб, одамлар организмига мослашиб, инсон аъзолари ва тизимларида турли патологияларини келтириб чиқарадиган қадимий паразитлардан бири ҳисобланади. Улар организмда паразитлик қилиши билан бирга кўпгина асоратларни келтириб чиқаради.

Тадқиқот текшириш натижаларидан шуни хулоса қилиш мумкин, болалар ўртасида острицага боғлиқ гелминтологик касалланиш (энтеробиоз) ҳолатини камайитиришда шахсий гигиенага қатъий риоя қилиш муҳим аҳамият касб этади.

Калит сўзлар: Болалар, гелминтоз, шахсий гигиена, энтеробиоз, острица, лямблилар, аскаридоз, касалланиш.

АННОТАЦИЯ

Гельминтозы очень распространены и считаются одними из древнейших паразитов, которые приспособляются к человеческому организму, вызывая различные патологии в органах и системах человека. Они вызывают множество осложнений, а также паразитируют в организме.

По результатам исследований можно сделать вывод, что строгое соблюдение правил личной гигиены имеет важное значение в снижении заболеваемости гелминтологическими заболеваниями (энтеробиозами), связанными со страусами, среди детей.

Ключевые слова: Дети, гелминтозы, личная гигиена, энтеробиоз, страусы, лямблии, аскаридоз, заболеваемость.

ABSTRACT

Helminthiasis is very common and is considered one of the oldest parasites that adapt to the human body, causing various pathologies in human organs and systems. They cause many complications, and also parasitize in the body.

From the results of the research, it can be concluded that strict adherence to personal hygiene is important in reducing the incidence of helminthological disease (enterobiosis) related to ostriches among children.

Key words: Children, helminthosis, personal hygiene, enterobiosis, ostriches, giardia, ascariasis, morbidity.

Муаммонинг долзарблиги: Гелминтозлар - гелминтлар (паразит куртлар) келтириб чиқарадиган паразитар касалликларнинг катта гуруҳи бўлиб, аҳолининг саломатлик ҳолатини сезиларли даражада белгилайди. Жаҳон соғлиқни сақлаш ташкилоти (ЖССТ) ма'лумотларига кўра, гелминтозлар дунё аҳолисининг соғлиғига зарар етказиш бўйича (диарея, сил ва юрак-қон томир касалликларидан кейин) 4-ўринни эгаллайди. Ҳар йили сайёрамиздаги тахминан ҳар иккинчи одам гелминтларнинг 3 асосий туридан бири билан

касалланади, бу аскаридоз (1,2 миллиард киши), анколит (900 миллион) ва трихосефалоз (700 миллионгача) билан касалланади [5, 7, 8].

Инсониятда учрайдиган касалликлар ўртасида энг кўп тарқалгани гельминтозлар ҳисобланади. Бутун дунё Соғлиқни сақлаш ташкилотининг берган маълумотларига кўра Осиё, Африка ва Лотин Америка давлатларининг 90% аҳолиси ушбу кассаликка чалинган. Шаҳарларда глобал ривожланишни ўсиши, аҳолининг ижтимоий тузилишидаги ўзгаришлар ва бошқа омиллар билан боғлиқ демографик ўзгаришлар шаҳарларда итларнинг кўпайишига олиб келди ва бу катта муаммо бўлиб қолди. Айниқса болаларда паразитар касалликларни кўпайишига туртки фактор бўлиб ҳисобланади. Қуйидаги турлардаги гелментлар итлар орқали юқори юкумлилик инфекцияси ҳисобланади. Яни гельминтлардан - *Taenia hydatigena*, *Echinococcus granulosus*, *Dipylidium caninum*, *Toxascaris leonina*, *Toxocara canis*, *Ancylostomum caninum*, *Uncinaria stenocephala* 20,2 дан 72,2% гача ва интенсивлик билан кенг қамровли инвазияга эга [2, 3].

Жаҳон соғлиқни сақлаш ташкилоти маълумотларига кўра, дунёда 5 миллиардга яқин одам паразитар касалликлар ва гелминтозлар билан касалланган, яъни бу сайёрамиз аҳолисининг катта қисмини ташкил этади. Ҳатто эндемик мамлакатларда ҳам соғлиқни сақлаш органлари ва аҳоли томонидан уларга етарлича эътибор берилмайди. Гелминтозларни келтириб чиқарадиган гижжалар сайёрамиздаги энг қадимий ва кўп сонли ҳаёт шакллари билан биридир. Одамларда гелминтларнинг 350 дан ортиқ турлари паразитлик қилади [4].

Европада ҳар учинчи аҳоли гелминтлардан азият чекмоқда. Ўзбекистонда гелминтозлар билан касалланишнинг йиллик кўрсаткичи 100 000 аҳолига тўғри келади [6].

Ўзбекистонда энг кўп учрайдиган гелминтозлар: энтеробиоз, аскариоз, трематодоз. Мамлакатда энтеробиоз билан касалланиш ҳар 100 минг аҳолига 1100 тани ташкил этади. Беморлар орасида 90% болалар, асосан 1 ёшдан 3 ёшгача. Аскариоз билан касалланиш 100 минг аҳолига 100 та ҳолатни ташкил қилади [1].

Шундай қилиб, 20-асрнинг охирига келиб кўпчилик паразитар касалликлар назорат остида бўлади деган умид оқланмади. Аксинча, улар барча ривожланаётган мамлакатларда, айниқса тропик ва субтропикларда жойлашган мамлакатларда сақланиб қолмоқда. Европанинг саноати ривожланган мамлакатларида ҳам охириги йигирма йил ичида эндемик мамлакатлардан паразитар касалликлар импорти ортиб бораётганлиги сабабли вазият ёмонлашди. Яна бир ноқулай омил - ОИВ эпидемияси, гиёҳвандлик ва атроф-муҳит кўзгатувчилари туфайли аҳолининг иммунитет ҳолатининг заифлашиши кузатишмоқда [9, 10, 11].

Тадқиқот мақсади: Болаларнинг паразитар касалликлар, хусусан острица, лямблилар, аскаридоз ва теннидалар билан касалланиш ҳолатини баҳолаш ҳисобланади.

Тадқиқот материаллари ва усуллари: Олдимизга қўйилган мақсадга эришиш учун биз “Республикамизда паразитар касалликлар профилактикаси бўйича чора тadbирлар такомиллаштириш тўғрисида”ги Ўзбекистон Республикаси ССВнинг 25.03.2005 йилдаги № 121, Ўзбекистон Республикаси Давлат Эпидемиологик назорати марказларида ўтказиладиган лаборатория текширишлар номенклатуралари тасдиқлаш тўғрисида” ги №34 буйруқ ва УҚ №012-3/0134 “Гельминтозлар ва протозоозларнинг лаборатория диагностикасида паразитологик усуллар” услубий қўлланмасидан фойдаландик.

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Юқоридагилар билан бирга текшириш объекти сифатида Термиз шаҳрида жойлашган №1 ва №3 мактабгача таълим муассаси ва хусусий нодавлат “Нурли авлод” мактабгача таълим муассалари тарбияланувчиларини ва №2 ўрта таълим мактаби ўқувчиларини олдиқ ва 2020-2022 йиллар динамикасида уларда тарқалган касалликка чалиниш ҳолатларини текширилди.

Тадқиқот натижаси: Текширувда қуйидаги натижалар олинди, яни 2020 йил умумий текширилган аҳоли сони 24970 бўлиб, улардан 7546 та (30%) болалар муассасалари тарбияланувчилари 15532 (62,2%) таси эса мактаб ўқувчилари ҳисобланади. Қолганлари эса бемор билан мулоқотда бўлганлар. Умумий острица гельминти билан мусбат (+) натижа берган лаборатория таҳлиллар сони- 345 та бўлиб, улардан 140 (1,8%) таси мактабгача болалар муассасаси тарбияланувчилари, 205 (1,3%) таси эса мактаб ўқувчилари ҳисобланади. Копрологик текшириш усулида эса қуйидаги натижалар олинди: умумий текширилган аҳоли- 1349, улардан 551 (40.8%) таси мактабгача таълим муассасалари тарбияланувчилари, 798 таси (59.1%) таси мактаб ўқувчилари. Мактабгача тарбия муассасалари тарбияланувчиларида 11 (1.9%) та, мактаб ўқувчиларида эса 13 (1.6%) “мусбат” (+) натижа берди. 2021 йилги текширишлар бўйича қуйидаги натижалар олинди: умумий текширилган сони 19421, улардан: 9272 таси мактабгача таълим муассасалари тарбияланувчилари, 8500 таси (43.7%) таси мактаб ўқувчилари. Улардан 138 (1.4%) та мактабгача таълим муассасалари тарбияланувчиларида ва 181 (2.1 %) та мактаб ўқувчиларида “мусбат” (+) натижалар олинди. Копрологик усул билан текширилганда эса умумий текширилганлар сони- 1238, улардан 574 (46,3%) таси мактабгача таълим муассасалари тарбияланувчилари, 664 таси (53.6%) таси мактаб ўқувчилари бўлиб, улардан ҳар иккала муассасада 7 тадан “мусбат” натижалар 1.2% МТМ ва 1,0% мактаб ўқувчиларини ташкил этди. 2022 йилда қуйидаги натижалар олинди: умумий текширилганлар сони 16938 тани ташкил этиб, улардан 7115 (42,0%) таси МТМ, 6369 (37,6%) таси мактаб ўқувчилари, қолганлари эса беморлар билан мулоқотда бўлганлар ва бошқалар ҳисобланади. Текширилган болалардан 120 (1,6%) тасида МТМ тарбияланувчилари ва 137 (2,1%) мактаб ўқувчиларида “мусбат” (+) натижалар олинди. Копрологик текшириш усулида эса 1169 текширилганларнинг 297 (25,1%) та МТМ тарбияланувчилари, 812 (74.5%) мактаб ўқувчилари ҳисобланади. МТМ тарбияланувчиларидан 13 (4,3%) та, мактаб ўқувчиларидан эса 9 та (1,0%) “мусбат” (+) натижалар олинди.

Болаларда гельминтознинг клиник кўринишлари

1-жадвал

Болаларда иштаханинг пасайиши ёки йўқолиши	
Захарланиш белгилари	
Истма	
Тери ва шиллик қаватлар тузилиш	Тери рангини ўзгариши (сарғайиш, пегментланган доғлар); Тери ости тугунларни катталашиви; Шиш; Теридаги яралар;
Лимфа тугуни	Лимфа тугунларининг катталашиви;
Суяк-мушак тизими	Миалгия, миозит, Артралгия;
Нафас тизими	Нафас-бронх бўзилиши, Бронхиал астма хуружи;
Юрак-қон томир тизими	Юрак-қон томир тизимига хос бўлмаган белгилар;

Ошқозон-ичак тизими	Қоринда оғрик, Жигар ва талоқ катталаниши;
Сийдик айирув тизими	Фаникулит; Эпидидимит; Гидроцеле или лимфоцеле; Қайталанувчи вулвовагинит;
Неврологик белгилар	Неврологик кузғалувчанлик, галлюцинация, тиришиб қолиш;
Кўрув аъзосидаги бузилишлар	Қошлар ва кўз қовоқларининг шикастланиши, конъюнктивит, Шох парда, кўз тур пардасининг шикастланиши;
Жисмоний ривожланишдан орқада қолиши	

Болаларда гелминтоз билан касалланиш натижасида ўзига хос клиник белгилар намоён бўлади (1жадвалга қаранг).

Хулоса: Юқорида олинган текшириш натижаларидан шуни хулоса қилиш мумкин, болалар ўртасида острицага боғлиқ гелминтологик касалланиш (энтеробиоз) ҳолатини камайтиришда шахсий гигиенада қатъий риоя қилиш муҳим аҳамият касб этади. Шу билан бир қаторда аҳоли ўртасида тиббий маданиятни ўстириш ва гигиеник чора- тадбирларни қўллаш мақсадга мувофиқ саналади.

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Abstract. This article presents a comprehensive analysis of media language features, examining the intricate ways in which language is employed within various forms of media communication. The study aims to shed light on the role of language in shaping and influencing public opinion, promoting specific narratives, and constructing meaning within the media landscape. The research begins by exploring the fundamental principles that underpin media language, emphasizing its distinctive characteristics and functions. It investigates the ways in which media language differs from everyday language, highlighting the role of linguistic strategies such as framing, persuasion, and sensationalism in capturing audience attention and conveying information.

Key words: media, language features, headlines, catchphrases, audience attention, stereotypes.

Introduction. Media, in its various forms, plays a significant role in shaping our understanding of the world. Whether it's news articles, television programs, or social media posts, each medium has its unique set of language features that influence how information is conveyed and interpreted. This article aims to explore the key language features employed by the media and their impact on communication and perception. Media language features refer to the specific linguistic and stylistic elements used in various forms of media communication, such as news articles, television broadcasts, radio programs, and online platforms. These features are employed to convey information, shape audience perception, and create persuasive or engaging content. Understanding media language features allows individuals to critically analyze media content, identify biases or manipulation, and make informed judgments. It is essential to approach media consumption with a discerning mindset, considering the intention behind language choices and exploring multiple sources of information for a well-rounded understanding of complex issues.

Methodology. One of the most noticeable language features in media is the use of attention-grabbing headlines and catchphrases. Media outlets often employ concise, provocative, or emotionally charged language to capture the audience's attention and generate interest. These headlines serve as a gateway to the information presented, shaping the readers' initial perception and framing of the topic. Media language is often characterized by its tone and bias. Journalists and writers choose specific words, adjectives, and adverbs to create a particular tone that aligns with their intended message or influence. The choice of positive or negative language can shape readers' perception of events, individuals, or ideas, ultimately swaying public opinion. Additionally, media outlets may have inherent biases based on their political affiliations, ownership, or target audience. This bias can manifest through the selection of sources, the framing of stories, and the use of loaded language. It is crucial for consumers of media to be aware of these biases and seek diverse perspectives to obtain a more comprehensive understanding of the issues at hand. Sensationalism and emotional appeals are frequently employed in media language to evoke strong reactions from the audience. This can be seen in news coverage, where dramatic language, vivid imagery, and personal anecdotes are used to heighten emotional engagement. By appealing to people's emotions, media outlets can create a sense of urgency or importance surrounding a particular issue and maintain audience attention. Media language has the power to

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frame issues and shape public opinion by presenting information from a particular perspective. The choice of words, emphasis on certain aspects, and omission of others can influence how readers interpret and understand an event or topic. This framing can also align with the agenda of the media outlet, promoting specific narratives and shaping public discourse. In addition to written language, media also relies heavily on visual language. Images, infographics, and videos play a crucial role in conveying messages and capturing audience attention. Visual elements can enhance or reinforce the written content, evoke emotions, and simplify complex information. The selection, placement, and editing of visuals significantly impact the overall meaning and interpretation of media messages. Media language often includes jargon and technical language specific to certain industries or fields. This can be observed in news articles related to science, technology, finance, or law, where specialized terminology is used. While jargon can provide precision and accuracy within a particular context, it can also present a barrier to understanding for audiences who are unfamiliar with the terminology. It is important for journalists to strike a balance between using technical language for accuracy and ensuring that the content remains accessible to a broader audience. Media outlets frequently employ sound bites and quotations from key individuals to add credibility or enhance the impact of their stories. These concise and attention-grabbing statements are often strategically selected to support a particular narrative or viewpoint. Sound bites can simplify complex issues but can also lack nuance and context. It is essential for media consumers to consider the full context of a quotation and critically analyze its implications before forming opinions. Media language can perpetuate stereotypes through the use of stereotypical language or portrayals. Stereotypes simplify complex social identities and can lead to misrepresentation, prejudice, and discrimination. Journalists and media professionals should be mindful of the language they use and strive to promote accurate and respectful representations of diverse communities. Media outlets often include opinion pieces and editorials alongside news articles. These forms of media language explicitly express the author's viewpoint or interpretation of events. While objectivity is a foundational principle of journalism, opinion pieces provide a platform for analysis, commentary, and debate. It is crucial for media consumers to differentiate between news reporting and opinion pieces to understand the varying perspectives presented. In an era of misinformation and "fake news," fact-checking and verification have become essential components of media language. Responsible journalists and media organizations strive to verify information before publication, ensuring accuracy and credibility. Fact-checking statements, providing reliable sources, and transparently correcting errors are crucial practices for maintaining trust with the audience. The rise of digital media platforms, such as social media and online news outlets, has brought about specific language adaptations. In the realm of social media, character limits, hashtags, and emojis have shaped a unique language style. Online articles and blog posts often incorporate hyperlinks, multimedia elements, and interactive features to engage readers. The language used in digital media is characterized by brevity, immediacy, and the need to capture attention in a fast-paced online environment.

Results and Analysis. It is important to recognize that media language is a dynamic and evolving aspect of communication. As media consumers, being aware of these language features helps us critically engage with the messages presented to us, enabling us to make informed judgments and navigate the complex media landscape effectively. Media language can be used as a tool for manipulation and spin. This involves the deliberate shaping of language to present information in a particular light or to influence public opinion. Language manipulation can include

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euphemisms, loaded words, and biased framing to sway readers' perceptions and advance a specific agenda. It is important for media consumers to be aware of these tactics and critically analyze the language used to uncover underlying motives or biases. Media language should be sensitive to cultural and social contexts to ensure inclusive and respectful communication. Certain terms, expressions, or references may be offensive or harmful to specific groups. Journalists and media professionals must be mindful of the potential impact of their language choices and strive to promote diversity, inclusivity, and cultural understanding through their content. Media outlets often tailor their language to specific target audiences. This involves using vocabulary, references, and cultural cues that resonate with a particular demographic or interest group. By personalizing the language, media organizations aim to establish a stronger connection with their audience and enhance engagement. However, it is essential to strike a balance between personalization and maintaining journalistic integrity and accuracy.

Satire and parody are forms of media language that employ humor, irony, and exaggeration to critique or comment on societal issues. Satirical news outlets or programs use a distinct style of language to convey their satirical intent. It is crucial for media consumers to recognize the satirical nature of such content to avoid confusion or misinterpretation. Media language carries ethical considerations, especially when it comes to reporting on sensitive topics or individuals. Journalists and media professionals must adhere to ethical guidelines that prioritize accuracy, fairness, and respect for privacy. Responsible reporting involves thoughtful language choices, sensitivity to the potential impact on individuals or communities, and a commitment to truthfulness and integrity. Media language is not static but evolves alongside societal changes and technological advancements. New forms of media, such as podcasts, live streams, or virtual reality experiences, introduce innovative ways of communicating and engaging with audiences. As media platforms and technologies continue to evolve, so too will the language features used to convey information, evoke emotions, and capture attention.

Discussion. By understanding these various aspects of media language features, individuals can become more critical consumers of media, capable of discerning the techniques employed and interpreting the information with a nuanced perspective. Being aware of the language choices and strategies used by media outlets empowers individuals to navigate the media landscape more effectively and make well-informed decisions about the information they encounter. The language features employed by the media have a profound impact on communication and perception. Headlines and catchphrases shape initial impressions, while tone and bias influence interpretation and opinion formation. Sensationalism and emotional appeals strive to engage audiences, framing and agenda setting shape public discourse, and visual language enhances the overall message. As media consumers, it is crucial to be critical and discerning, understanding how these language features operate to develop a well-rounded understanding of the information presented to us. Media language features play a crucial role in shaping the way information is presented, influencing audience perceptions, and constructing meaning within the media landscape. Through techniques such as attention-grabbing headlines, framing, sensationalism, and persuasive language, media outlets aim to capture and retain audience attention while conveying specific messages or narratives. These features extend beyond textual elements to include visual representations, sound bites, and the use of tone, voice, and rhetoric. These features are carefully crafted to evoke emotions, reinforce biases, or persuade audiences to adopt particular viewpoints. However, they can also be prone to biases, stereotypes, and

misinformation, highlighting the importance of critical media literacy skills in evaluating and interpreting media content.

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**ПРЕДУПРЕЖДЕНИЕ ПОТЕНЦИАЛЬНЫХ ПОБОЧНЫХ ЭФФЕКТОВ
ЗАМЕСТИТЕЛЬНОЙ ГОРМОНАЛЬНОЙ ТЕРАПИИ В ГЕНЕТИЧЕСКИХ
ДАННЫХ**

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Аннотация

Гормональная заместительная терапия (ГЗТ) является распространенным методом лечения климактерического синдрома (КС), комплекса симптомов, возникающих у женщин в период менопаузы. Хотя ГЗТ эффективна в облегчении вазомоторных симптомов и улучшении качества жизни, ее применение связано с повышенным риском некоторых неблагоприятных событий, таких как венозная тромбоэмболия (ВТЭ) и рак молочной железы.

Генетические факторы играют важную роль в индивидуальном ответе на ГЗТ. Вариации в генах, участвующих в метаболизме гормонов, свертывании крови и развитии рака, могут влиять на риск неблагоприятных событий, связанных с ГЗТ.

Понимание генетических факторов, влияющих на ответ на ГЗТ, может помочь в разработке персонализированных подходов к лечению, которые максимизируют пользу и минимизируют риски для каждой женщины.

Эта статья рассматривает текущее состояние знаний о генетических факторах, влияющих на ответ на ГЗТ, и обсуждает потенциальные применения этой информации для персонализации лечения КС.

Ключевые слова: Заместительная гормональная терапия, климактерический синдром, генетические факторы, персонализированная медицина.

Annotation

Hormone replacement therapy (HRT) is a common method of treating menopausal syndrome (COP), a complex of symptoms that occur in women during menopause. Although HRT is effective in relieving vasomotor symptoms and improving quality of life, its use is associated with an increased risk of certain adverse events such as venous thromboembolism (VTE) and breast cancer.

Genetic factors play an important role in the individual response to HRT. Variations in genes involved in hormone metabolism, blood clotting, and cancer development may affect the risk of adverse events associated with HRT.

Understanding the genetic factors that influence the response to HRT can help in developing personalized treatment approaches that maximize benefits and minimize risks for each woman.

This article examines the current state of knowledge about the genetic factors influencing the response to HRT and discusses potential applications of this information to personalize CS treatment.

Keywords: Hormone replacement therapy, menopausal syndrome, genetic factors, personalized medicine.

Цель: Рассмотреть текущее состояние знаний о генетических факторах, влияющих на ответ на заместительную гормональную терапию (ЗГТ) при климактерическом синдроме (КС).

Актуальность. Персонализированная медицина становится все более важной в здравоохранении, поскольку она позволяет адаптировать лечение к индивидуальным потребностям и рискам каждого пациента. В случае заместительной гормональной терапии (ЗГТ) для лечения климактерического синдрома (КС) генетические факторы играют важную роль в определении индивидуального ответа на лечение.

Понимание генетических факторов, влияющих на ответ на ЗГТ, имеет ряд важных преимуществ:

Оптимизация лечения:

Генетическое тестирование может помочь врачам определить женщин, которые с большей вероятностью получают пользу от ЗГТ и имеют более низкий риск неблагоприятных событий.

Минимизация рисков: Генетическое тестирование может также помочь выявить женщин, которые подвержены повышенному риску развития неблагоприятных событий, связанных с ЗГТ, таких как венозная тромбоэмболия (ВТЭ) и рак молочной железы. Это позволит врачам принимать обоснованные решения о том, следует ли назначать ЗГТ этим женщинам и какие меры предосторожности следует предпринять.

Разработка новых методов лечения: Исследование генетических факторов, влияющих на ответ на ЗГТ, может привести к разработке новых методов лечения КС, которые более безопасны и эффективны.

Персонализация ЗГТ на основе генетических данных может значительно улучшить результаты лечения для женщин с КС, обеспечивая оптимальное облегчение симптомов при минимизации рисков.

Методы: Для оценки генетических факторов, влияющих на ответ на заместительную гормональную терапию (ЗГТ) при климактерическом синдроме (КС), использовались следующие методы:

Обзор литературы: Был проведен тщательный обзор опубликованных исследований, включая исследования типа случай-контроль, когортные исследования и метаанализы, для выявления генетических вариантов, связанных с ответом на ЗГТ и риском неблагоприятных событий.

Анализ данных: Данные из отобранных исследований были проанализированы для определения генетических вариантов, которые последовательно ассоциировались с ответом на ЗГТ или риском неблагоприятных событий.

Функциональные исследования: Были рассмотрены функциональные исследования, которые исследовали механизмы, с помощью которых генетические варианты влияют на ответ на ЗГТ.

Критерии включения: Исследования, в которых оценивалась связь между генетическими вариантами и ответом на ЗГТ при КС.

Исследования, в которых оценивался риск неблагоприятных событий, связанных с ЗГТ, таких как венозная тромбоэмболия (ВТЭ) и рак молочной железы.

Исследования, в которых использовались надежные методы генетического анализа.

Критерии исключения: Исследования, в которых оценивались генетические факторы, влияющие на возникновение КС.

Исследования, в которых оценивались генетические факторы, влияющие на ответ на другие методы лечения КС.

Исследования, в которых использовались методы генетического анализа с низкой надежностью.

Этот обзор предоставляет всесторонний анализ генетических факторов, влияющих на ответ на ЗГТ при КС, и выявляет области, требующие дальнейших исследований.

Результаты: Вариации в генах, участвующих в метаболизме гормонов, свертывании крови и развитии рака, могут влиять на риск неблагоприятных событий, связанных с ЗГТ. Понимание этих генетических факторов может помочь в разработке персонализированных подходов к лечению, которые максимизируют пользу и минимизируют риски для каждой женщины.

Обзор литературы выявил ряд генетических вариантов, связанных с ответом на заместительную гормональную терапию (ЗГТ) при климактерическом синдроме (КС) и риском неблагоприятных событий.

Вазомоторные симптомы: Варианты в гене CYP1A1, который участвует в метаболизме эстрогена, были связаны с уменьшением вазомоторных симптомов в ответ на ЗГТ. Варианты в гене ESR1, который кодирует рецептор эстрогена, были связаны с повышенным риском вазомоторных симптомов в ответ на ЗГТ.

Риск венозной тромбоэмболии (ВТЭ): Варианты в гене F5, который участвует в свертывании крови, были связаны с повышенным риском ВТЭ в ответ на ЗГТ. Варианты в гене F2, который также участвует в свертывании крови, были связаны с повышенным риском ВТЭ в ответ на ЗГТ.

Риск рака молочной железы: Варианты в гене BRCA1 и BRCA2, которые связаны с повышенным риском рака молочной железы, также были связаны с повышенным риском рака молочной железы в ответ на ЗГТ. Варианты в гене CYP19A1, который участвует в синтезе эстрогена, были связаны с повышенным риском рака молочной железы в ответ на ЗГТ.

Эти генетические варианты могут помочь врачам определить женщин, которые с большей вероятностью получают пользу от ЗГТ и имеют более низкий риск неблагоприятных событий. Дальнейшие исследования необходимы для подтверждения этих ассоциаций и выявления дополнительных генетических факторов, влияющих на ответ на ЗГТ.

Заключение: Исследования выявили ряд генетических вариантов, связанных с ответом на ЗГТ и риском неблагоприятных событий, таких как вазомоторные симптомы, венозная тромбоэмболия (ВТЭ) и рак молочной железы. Эти генетические варианты могут использоваться для разработки генетических тестов, которые помогут врачам принимать обоснованные решения о том, следует ли назначать ЗГТ конкретной женщине и какие меры предосторожности следует предпринять.

Персонализация ЗГТ на основе генетических данных может значительно улучшить результаты лечения для женщин с КС. Дальнейшие исследования необходимы для подтверждения выявленных ассоциаций, выявления дополнительных генетических факторов и разработки новых методов лечения КС, которые более безопасны и эффективны.

По мере развития области персонализированной медицины генетическое тестирование, вероятно, станет неотъемлемой частью принятия решений о лечении ЗГТ при КС. Это позволит врачам предоставлять женщинам лечение, которое наилучшим образом соответствует их индивидуальным потребностям и рискам, обеспечивая оптимальное облегчение симптомов и улучшение качества жизни.

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