



# ACTUAL PROBLEMS OF MODERN SCIENCE, EDUCATION AND TRAINING

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## MODERN PROBLEMS OF TOURISM AND ECONOMICS

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### FACTORS INFLUENCING ECONOMIC GROWTH AND THE FORMATION OF ITS MULTIFACTOR ECONOMETRIC MODEL

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**Annotasiya.** Maqolada iqtisodiy o'sishga ta'sir etovchi ba'zi omillar va uning ko'p omilli ekonometrik modelini shakllantirish keltirilgan va ularning adekvatligi, koeffitsientlarning barqarorligi kriteriyalar yordamida tekshirilgan.

**Kalit so'zlar:** Iqtisodiy o'sish, ko'p omilli, model, mezon, adekvat, o'sish surati, koeffitsientlarning barqarorligi

**Аннотация.** В статье приведены некоторые факторы, влияющие на экономический рост и формирование его многофакторной эконометрической модели, а их адекватность, коэффициенты коэффициентов, проверенные с помощью использования.

**Ключевые слова:** Экономический рост, многофакторный, модель, критерии, адекватный, темп роста, случаи появления коэффициентов

**Abstract.** The article presents some factors affecting economic growth and the formation of its multifactorial econometric model, and their adequacy, the stability of the coefficients are tested using the criteria.

**Keywords:** economic growth, multifactorial, model, criterion, adequate, growth rate, stability of coefficients

**Introduction.** The issue of economic growth, including its quality, is very important for determining the development prospects of a country, its regions, and any social system in general. Economic growth makes it possible to predict the development prospects of a society. In addition, economic growth also creates the conditions to address the problem of resource scarcity. In a market economy, the state pursues fiscal and monetary policies to ensure sustainable economic growth. The importance of short-term monetary policy in ensuring economic growth, especially for countries transitioning to a market economy, has been reflected in many studies around the world. In general, history has recorded economic developments in these countries, but it has been achieved through fluctuations. It is necessary to study how developed countries have achieved strong economies. As we have said, the ultimate goal of the economy, that is, macroeconomics, is to create conditions for people to live well. Of course, an in-depth qualitative and quantitative analysis is required to give a clear answer to the question of how developed countries have achieved this high level. Because the development factors of countries are different. But the main factor that is common to all is to operate in a market economy, to make extensive use of the laws and methods of a market economy. Because a market economy is a thrifty, economy based on private property, entrepreneurship, competition, and material interests.

When the category of economic growth is included in the list of key indicators of economic performance, it shows an increase in real GDP from year to year, or more



precisely, an increase in real GDP per capita. The category of "economic development" is a multidimensional and multifaceted indicator that is closely related to "economic growth" and reflects the social, institutional and political changes in the country, living standards, the level of satisfaction of human interests. Indeed, the category of "economic development" is broader than the concept of "economic growth". Sometimes "economic development" may not occur when economic growth is clearly guaranteed. Thus, "economic development" includes the provision of human interests, the satisfaction of vital needs, living conditions, health care, education, opportunities for harmonious development. The study then provides a comprehensive analysis of the statistics of the "economic development" category.

The results of research on the world economy and national economy in the period before the coronavirus pandemic show that before the onset of the coronavirus pandemic, there were positive shifts in the world economy and national economies, signs of sustainable development. In recent years, the world economy has grown at an average rate of around 3%, with high rates in China, Tajikistan, Armenia and Uzbekistan, and low rates in the United States, Great Britain and the Russian Federation[9]. The gross income of the world economy in 2019 will reach 84.5 trillion US dollars, including the United States 20.6 (share 24.4%), the People's Republic of China 13.1 (share 15.6%), Germany 3.9 (4.6%), the United Kingdom 2.8 (3.3%), Russia and South Korea 1.5 (1.9%) trillion dollars

**Literature review.** Econometric modeling of macroeconomic indicators in the world was carried out by J. Tinbergen, J. Anderson, E. Winkop and others. They developed a gravitational approach to export analysis and forecasting. The widespread use of econometric models in the analysis and forecasting of dynamic time series is associated with the discoveries made by foreign scientists R. Engle, K. Gradger, D. Hendry and S. Johansen. Later, K. Sims used vector autoregression in econometric analysis and contributed to the development of macroeconometrics. Scientists from the International Monetary Fund have developed econometric models for forecasting exports and imports, including key factors affecting the volume of exports and imports of goods[1]. At the same time, the impact of monetary and fiscal policy instruments on economic growth remains a mystery for developing countries, including Uzbekistan. The annual output of macroeconomics is measured by the rate of economic growth. After all, the dream of every country is to achieve high and sustainable economic growth. But this is not easily achieved in developed countries. Economic development is taking place through growth, decline, stagnation and crises.

**Research Methodology.** The research methodology is based on the creation of econometric models using the methods of correlation-regression analysis of dynamic series data, their analysis. The database includes dynamic series of macroeconomic indicators for the period 2000-2019, which were collected from the websites of the World Bank, the Asian Development Bank, and the Statistics Committee of the Republic of Uzbekistan. The main variables were GDP, total investment (I), number of employees (L), capital (K), and labor productivity ( $\Delta(Y/L)$ ). Using these variables, econometric models were developed and their correlation matrix was analyzed: the aim was to determine the relationship between GDP and the number of workers and the

capital involved, labor productivity  $\Delta (Y / L)$  and the provision of workers with funds (Background);

The method of economic-statistical modeling is one of the measures aimed at improving the analysis and planning of economic activity of market economy entities.

Even the most advanced statistical model is unable to cover the whole interrelationship of economic events and processes. Accordingly, there are always elements of uncertainty in the application of economic analysis and economic-statistical modeling. In general, one of the main conditions for the effectiveness of the application of economic-statistical modeling is its real appearance and its exact conformity to the process[3].

$$y = \gamma K^\alpha L^\beta, \text{ where } K \text{ is the volume of production assets; } L - \text{ labor costs; } \\ \gamma, \alpha, \beta - \text{ calculated parameters.}$$

The efficiency of the factors in the production function is determined by the function of the first-order product of the function on each variable. A specific product represents an additional product for a factor if the amount of the other factor does not change. Consequently, the latest efficiency is for production funds

$$\frac{\partial y}{\partial K} = \gamma \alpha L^\beta K^{\alpha-1} \text{ for labor it is as follows:}$$

$$\frac{\partial y}{\partial L} = \beta \gamma L^{\beta-1} K^\alpha \text{ Using Euler's theorem, the gross product can be divided into}$$

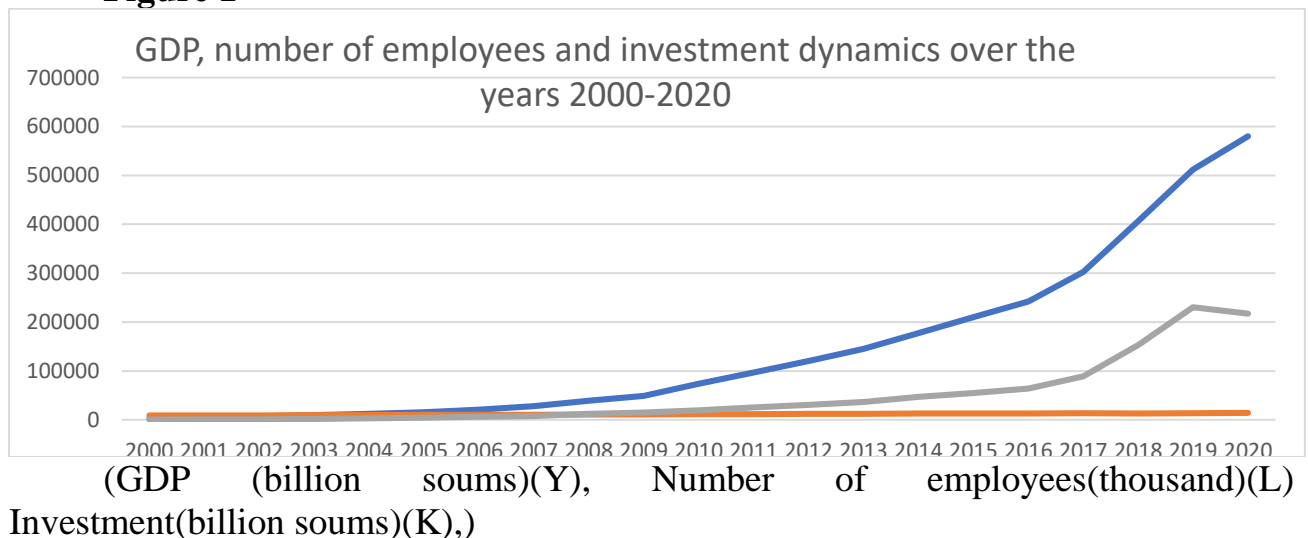
"fractions" of factors;  $y = \frac{\partial y}{\partial K} K + \frac{\partial y}{\partial L} L$  and the parameters are the coefficient of elasticity of production in relation to fixed assets and labor:

$$\alpha = \frac{\partial y}{y} : \frac{\partial K}{K}; \quad \beta = \frac{\partial y}{y} : \frac{\partial L}{L} . \text{The effect of production concentration on the Cobba-}$$

Douglas production function is reflected in the sum of the parameters.

**Analysis and results.** Using the statistics of macroeconomic indicators, we created the function of macroeconomic production of the Republic of Uzbekistan for 2000-2020, and in the program EviewsI-9 we got the following function[8]:

**Figure 1**





Based on data from the Asian Development Bank

$$Y = -264004 + 27,12 * L + 1,95 * K \quad \ln Y = -38,7028 + 4,78 * \ln L + 0,51 * \ln K$$

$$R^2 = 0,988, F = 759,56$$

$$R^2 = 0,998, F = 4033,1$$

Here  $Y$  is the gross domestic product, in billions of soums.  $L$  is the number of workers and employees employed in the economy, thousand people

$K$  is the average amount of fixed assets in the economy, in billions of soums.

Logarithmic-linear function is characterized by adequacy and stability of coefficients. This means that the average growth rate of investment during the period we observed had a positive impact on GDP. The main source of economic growth was the labor force and their efficient use.

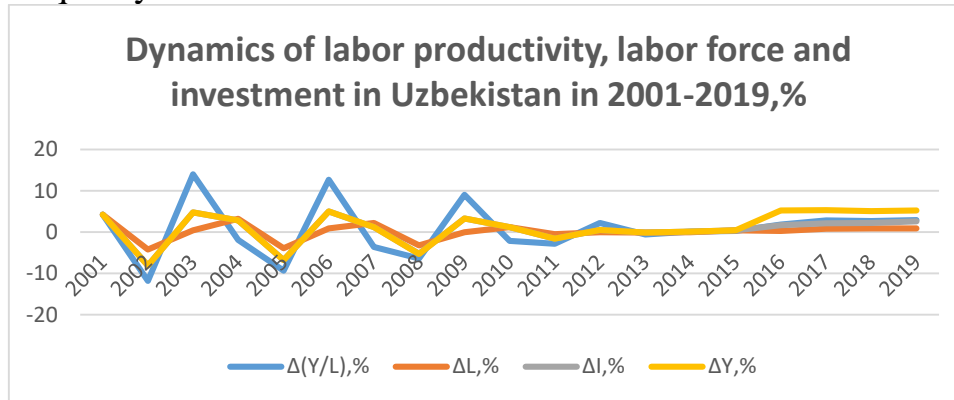
One of the main tasks for 2021 is to gradually deepen economic reforms and ensure their popularity and effectiveness, as outlined in the Address. All ongoing reforms are aimed at creating an environment of free competition among manufacturers in our country, and through it the introduction of modern equipment and technologies in the industry and enterprises, the introduction of innovations. In carrying out these tasks, it is necessary to improve the working conditions of workers and employees in the real sector, increase labor productivity through material and moral incentives, the introduction of innovations. In recent years (2016-2019) in our country, as a result of the implementation of the objectives of the Action Strategy, this indicator has a steady growth trend. The annual growth rate of labor productivity ( $\Delta(Y/L), \%$ ) is higher than the rate of armament of workers and employees ( $\Delta L, \%$ ) and fixed assets ( $\Delta I, \%$ ) (Table - 1).

#### Dynamics of economic growth, labor productivity, fixed assets of workers in the Republic of Uzbekistan in 2001-2019, %

Years	$\Delta(Y/L), \%$	$\Delta L, \%$	$\Delta I, \%$	$\Delta Y, \%$						
2001	4,2	4,2	4,2	4,2	2010	-2,1	1,2	1,2	1,2	
2002	-11,8	-4,2	-8,1	-8,1	2011	-2,8	-0,5	-1,6	-1,6	
2003	14	0,4	4,8	4,8	2012	2,2	0	0,5	0,5	
2004	-1,9	3,2	2,8	2,8	2013	-0,6	-0,1	-0,1	-0,1	
2005	-9,3	-3,9	-6,8	-6,8	2014	0,1	0	0,1	0,1	
2006	12,7	0,9	5,0	5,0	2015	0,3	0,4	0,4	0,4	
2007	-3,6	2,2	1,2	1,2	2016	1,8	0,3	1,7	5,2	
2008	-6,4	-3,2	-5,2	-5,3	2017	2,8	0,8	2,1	5,3	
2009	9	0	3,3	3,3	2018	2,7	0,9	2,2	5,1	
					2019	2,9	0,9	2,6	5,2	

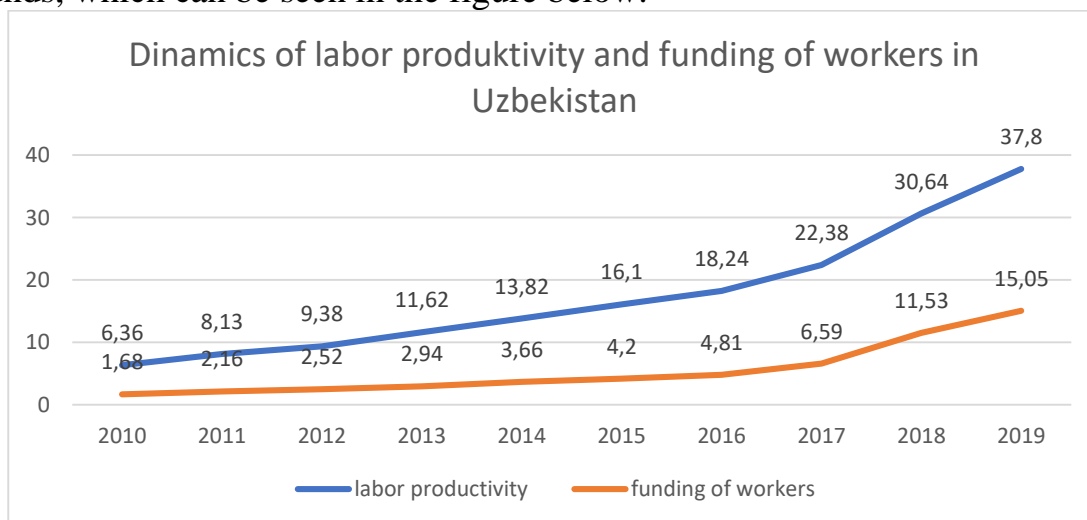
**Source: Author's work based on the data of the Statistics Committee of the Republic of Uzbekistan**

At present, the creation of a mechanism to ensure economic stability in the practice of the world economy is of great importance for the future of nations. In this case, the aggregate demand in the country is equal to the aggregate supply, and it is also called economic equality.



**Figure 2**

Consistent measures are being taken in our country to ensure the full development of the national economy in order to fully meet the growing demand for goods and services, to ensure decent working and living conditions. We need to ensure that the economy grows by at least 5% in 2021, and the budget deficit does not exceed 5.4% of GDP. Due to the positive developments in the country, the deepening of economic reforms and the widespread introduction of innovations, since 2008 the growth rate of labor productivity was much higher than the provision of workers with funds, which can be seen in the figure below.



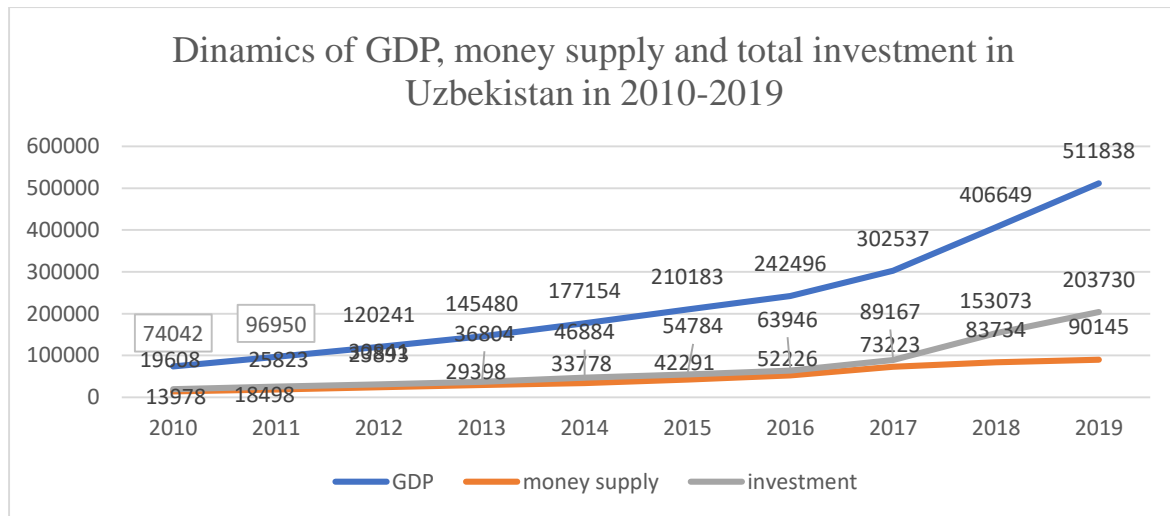
(Dynamics of labor productivity, provision of funds)

**Figure 3. Dynamics of labor productivity and funding of workers in Uzbekistan in 2010 - 2019**

The implementation of alternative monetary policy and the increase in the money supply have expanded the opportunities for investing in the economy, primarily due to lower interest rates as a result of the impact of banks on interest rates. The investment activity of economic entities and the population has increased, and as a result, the dynamics of investment has accelerated. If in 2010 the total investment



amounted to 19.6 trillion soums, in 2019 this figure reached 203.7 trillion soums, or increased by 10.4 times over the same period. During this period, the money supply increased from 14 trillion soums to 90.4 trillion soums or 6.4 times.



(GDP, investment and money supply)

**Figure - 4. Dynamics of GDP, money supply and total investment in Uzbekistan in 2010-2019**

Econometric modeling shows that in the period when there was a positive relationship between labor productivity and investment in the country, a one percent increase in investment per employee led to an increase in labor productivity by 2.6 percent without other changes. This can be seen from the following regression equation.

$$\ln Pr = 1,32654 + 0,925895 \ln Fon$$

Thus, the monetary policy of the state, combined with fiscal policy, has served to ensure economic growth, macroeconomic stability in our country and will remain so in the future.

**Conclusions.** Research shows that during the years of independence, as a result of structural reforms as the main reformer of the state, the GDP in current prices increased from 3256 billion soums in 2000 to 511838 billion soums in 2019. During this period, the population of the republic increased from 24.7 million to 33.6 million. GDP per capita increased from 131.82 thousand in 2000 to 15233.3 thousand. Sustainable economic development was noted in 2017-2019 as a result of economic modeling, transformation of agriculture, improvement of business and private entrepreneurship, increasing investment activity in the economy. In 2017-2019, as a result of increased consumption and investment demand in the economy, the volume of production and services in the real sector increased, the volume of investment from all sources of financing increased by 2.3 times. During this period, the volume of investments in 2017 amounted to 89.1 trillion. from 203.7 trillion soums in 2019, which is 228.6%. The current stage of development of the theory of economic growth in the context of the global crisis, which overcomes the orthodox approach, consists in the development of new theoretical and methodological foundations of development, the specificity of which determines the priority of universal values. At the same time, it is



necessary to determine the endogenous sources of dynamic instability of the economic system and the effect of increasing qualitative changes of the system itself, and it is determined by modeling.

Significant structural changes caused by the global crisis highlight the need to justify a new measure of economic development in the face of imbalances, instability and uncertainty, the need to re-synthesize theoretical and methodological theories that reveal the boundaries of development in the exchange of labor for knowledge. The technological basis of social production and the interdependence of changes in the social structure of the intellectual economy and the quality of economic development are interpreted, firstly, as a fundamental criterion for radically reforming the system of social relations and, secondly, the outcome of national and world economies.

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## REFORMS ON DEVELOPING A COMPETITIVE MECHANISM BETWEEN BANKS AND FINANCIAL INSTITUTIONS

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**Annotasiya:** Maqolada bank va moliyaviy institutlar o'rtasidagi raqobat mexanizimini mohiyati va funksiyalari, moliyaviy institutlar xizmatini tashkil etish xususiyatlari yoritilgan. Respublikamiz tijorat banklarida raqobatni takomillashtirish bo'yicha ilmiy taklif va amaliy tavsiyalar ishlab chiqilgan.

**Kalit so'zlar:** raqobat, bank, moliya institutlari, moliyaviy texnologiyalar, moliyaviy katomeratlar, risk, qimmatli qog'ozlar, unversal bank.

**Аннотация:** Данная статья посвящена описанию сущности и функций механизма конкуренции между банками и финансовыми организациями, а также особенностей организации обслуживания финансовых организаций. Разработаны научные предложения и практические рекомендации по повышению конкуренции между коммерческими банками в стране.

**Ключевые слова:** конкуренция, банковское дело, финансовые институты, финансовые технологии, риск, ценные бумаги, универсальный банкинг.

**Annotation:** This article deals with the description of the essence and functions of competition mechanism between banks and financial organizations, as well as the peculiarities of organizing services for financial organizations. The scientific proposals and practical recommendations have been developed to increase competition between commercial banks in a country.

**Key words:** competition, banking, financial institutions, financial technologies, risk, securities, universal banking.

**Introduction.** Recent researches conducted in this field indicate that the entry of various organizations into financial market has led to amplified competition in banking sector and an urgent need to address various problems faced by banks. An increase in the range of services in the financial sector also led to remarkable changes in the structure of banking sector. This requires creation of a modern transformable structure of banks, widespread use of world and advanced information technologies. If modern universal banking requires slowness, bureaucracy, inefficiency, ignorance, inability to cope with risky situations, loss of income and inability to compete, it is necessary to reflect speed, strong professionals, and the use of modern banking technologies, continued profitability and competitiveness. The universalization of banks in developed countries is growing rapidly in world practice, while in developing countries this situation is gradually taking place. Universal Banking specializes in following areas in Uzbekistan: information, risk, securities transactions and money management.

In addition, the development of activities will lead to expansion of new types of banking operations. The method of "innovative thinking" is being widely promoted for the application of new information technologies in banking system all over the world

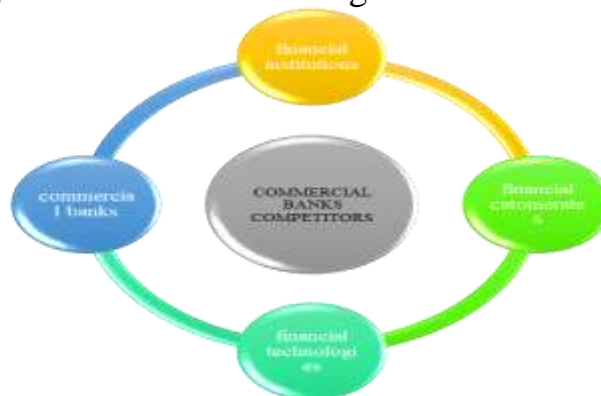
in practice. “Innovative thinking” refers to the introduction of new strategic marketing services in banking and widespread introduction of new banking technologies in banking operations. If bank accounted for 6 percent of total costs of importing technologies in service sector, today the cost of these technologies in developed countries indicates 25-30 percent of overall income. These changes and innovations will lead to the development of competition in internal setting for attracting customers to the new service sector.

**Literature overview.** A number of researches have been conducted on finance market, the risk and competition in financial market system and other topics related to banking system. For instance, scientific issues on the problems of competition among Banks [1], competition in the Financial Sector, as well as overview of Competition Policies [2], implications of market power in banking: Evidence from developing countries [3], effect of credit market competition on lending relationships [4], managing banking system competition [5].

Moreover corruption in bank lending, beneficial role of competition and information sharing [6], bank competition and stability [7], shadow banking, insurance and financial sector stability [8], directions for increasing competition between commercial banks [9], competition in the banking sector [10] are the objects of a lot of scientific works.

**Research methodology.** The purpose of the research is to develop a mechanism of competition between banks and financial institutions and to draw scientific conclusions on the development of scientific and practical proposals and recommendations based on the analysis of the practice to provide an access to the interbank market. The literature on general economic and scientific articles on completion of economists in banking and financial institutions, conclusions, proposals and recommendations based on the analysis of the written and oral feedback, expert assessment, observation of processes, a systematic approach to economic events and processes have been studied as a theoretical and methodological basis of the article. There were used to systematize the data of banks and financial institutions, such as comparison, aggregation of theoretical and practical materials while studying the topic.

**Analysis and results.** In world practice, companies, firms and large financial institutions competing with banks can be categorized as follows:



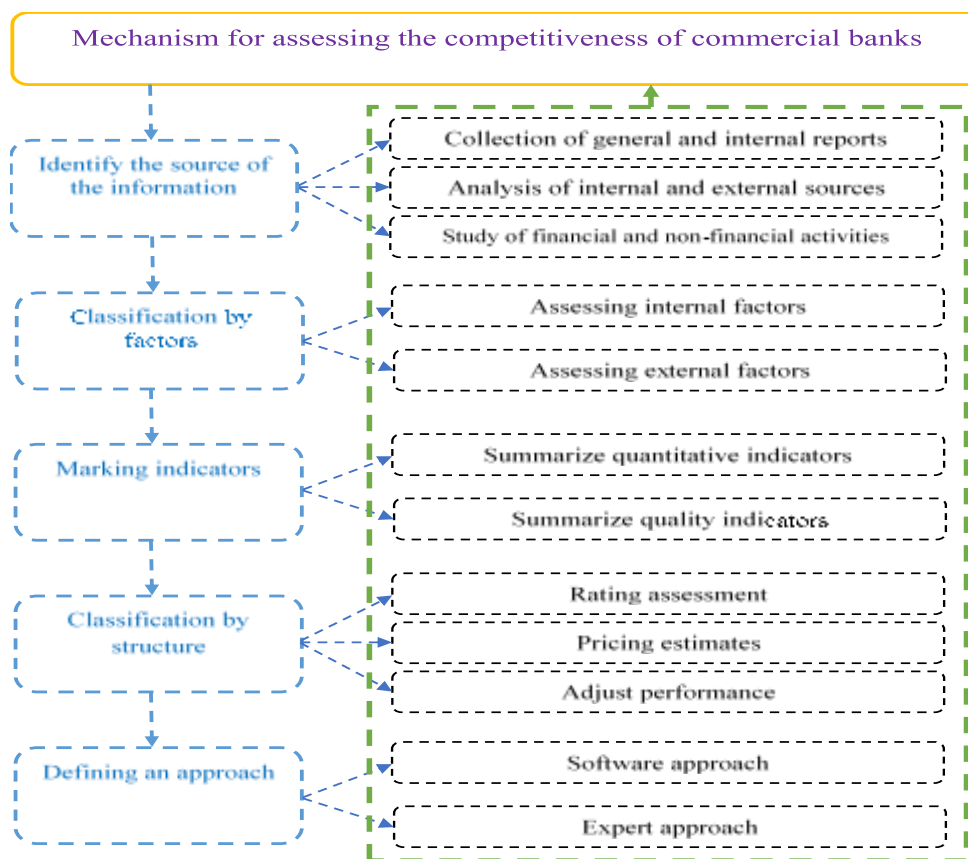
**Figure 1. Competitors of commercial banks in the interbank market**

We know that the banks themselves are various financial institutions and large financial companies. That is the catheters of competitors of commercial banks. In recent years, another important competitive financial technology has been

implemented into the banking market. It forced banks to pay special attention to this location area as well.

The acceleration of the process of global integration is creating basis for the development of various processes in financial markets. Radical changes in the world economy lead to emergence of new products in financial markets of all countries, an increase in quality of services, creation of new innovative information technology products. This led to a sharp increase in competition in financial markets of any country.

The creation of new innovative ideas by financial institutions or introduction of large sums of money in this area has led to fierce competition in the technology market. The introduction of new innovative ideas in any area is an important resource for its development. Today, the amount of investment by financial institutions is increasing to create and support innovative ideas. In particular, the contrastive study of change from 2010 to 2015 shows that it ranged from 54% to 59%. By 2022, this figure is projected at 63%.



**Figure 2: Mechanism for Assessing the Competitiveness of Commercial Banks**

Therefore, when assessing competition in the banking market, it is not important to take banks as a basis. At the same time, there is a mechanism for the effective assessment of competition between commercial banks as a result of studying the interbank competitive environment based on the identification of sources and approaches to the data, their classification by factors and structure, determining specific indicators and timely implementation, urgent tasks in each area. We can consider these processes in the figure below in general.



As can be seen from the figure above, it is possible to increase the competitiveness of banks in the interbank market by creating a mechanism to assess the competitiveness of commercial banks.

So, the development of skills to compete with financial institutions entering the country's banking market should be the strategic goal of each bank. Competition between financial institutions and banks is gradually developing in the global banking market. This means that it is important for each country to keep abreast of changes in the banking market in a timely manner, to apply new innovative technologies in the banking sector.

In general, financial institutions are an innovative component of modern international financial markets and have a high development potential.

It is useful to study the latest trends in the world. Because at a time when tangible and intangible assets on the balance sheets of world banks are rapidly changing, it would be advisable for us to focus on not only exports, but also to modernize the use of know-how and technologies, taking the digital economy to a new level.

The active use of financial technologies to improve the quality and popularity of financial services provided by commercial banks is also necessary. In particular, such technologies expands opportunities to exchange credit information, establish cooperation with non-banking institutions and financial platforms within the framework of open banking.

**Conclusion.** The following conclusions have been drawn as research outcome in order to further improve the banking competition in banking system. It is necessary to:

- accept the development of financial institutions in the global financial market as a direct competitor in the banking market;
- develop a system of measures for the use of digital technologies in the banking market;
- improve further the use of new innovative types of banking services: digital payments, blockchain, remote services, internet banking;
- implement modern banking experiences and assessment criteria, including the transition of modern IT systems to digital banking and support of previously implemented services;
- carry out the identification and use of plastic cards of issuing banks in a single payment system;
- achieve the full liberalization of the banking sector;
- control the fiscal of the payment and implementation of the integration of relevant services into digital banking platforms.

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**INTEGRATION OF THE LOADED SECOND-ORDER KORTEWEG-DE VRIES EQUATION WITH A FREE TERM INDEPENDENT OF THE SPATIAL VARIABLE**

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**Annotatsiya:** Maqolada ozod hadi fazoviy o'zgaruvchiga bog'liq bo'lmagan ikkinchi tartibli yuklangan Kortevog-de Friz tenglamasi davriy funksiyalar sinfiga integrallangan.

**Klit so'zlar:** Ikkinchi tartibli yuklangan Kortevog-de Friz tenglamasi, Shturm-Liuvill operatori, teskari spektral masala, Dubrovin tenglamalar sistemasi, izlar formulasi.

**Аннотация.** В статье исследуется метод обратной спектральной задачи применяется к интегрированию второго порядка нагруженным уравнениям Кортевега-де Фриза со свободным членом независимым от пространственной переменной в классе периодических функций.

**Ключевые слова:** второго порядка нагруженным уравнениям Кортевега-де Фриза, оператор Штурма-Лиувилля, обратная спектральная задача, уравнения систем Дубровина, формула следа.

**Abstract.** In this paper, the method of the inverse spectral problem is applied to the integration of the loaded second-order Korteweg-de Vries equation with a free term independent of the spatial variable in the class of periodic functions.

**Keywords:** Second-order Korteweg-de Vries equation, Sturm-Liouville operator, inverse spectral problem, Dubrovin system of equations, trace formulas

**1. Formulation of the problem.**

Solutions in the class of periodic functions for KdV equation were studied in [1]–[3] in various formulations. In the works of [4] the KdV equation with free a term independent of the spatial variable, and in the work of [5], [6] the KdV equation with a loaded term was studied.

We consider the nonlinear equation

$$q_t = P[q], \quad x \in R, \quad t > 0, \quad (1)$$

with the initial condition



$$q(x, 0) = q_0(x). \quad (2)$$

Here,  $q = q(x, t)$  is sufficiently smooth,  $\pi$  is a function periodic in  $x$ , and  $P[q]$  is polynomial in  $q$  and its derivatives with respect to  $x$ .

We construct a polynomial  $P[q]$ , such that Cauchy problem (1)+(2) is integrated using the inverse problem for the Sturm–Liouville operator with the periodic potential  $q(x, t)$  :

$$L(t)y \equiv -y'' + q(x, t)y = \lambda y, \quad x \in R. \quad (3)$$

We let  $y_n = y_n(x, t)$ ,  $n \geq 1$  denote orthonormal eigenfunctions corresponding to the eigenvalues  $\xi_n = \xi_n(t)$ ,  $n \geq 1$  of the Dirichlet problems ( $y(0) = 0$ ,  $y(\pi) = 0$ ) for Eq. (3).

Differentiating the identity

$$(L(t)y_n, y_n) = \xi_n$$

with respect to  $t$  and using the symmetry of the operator  $L(t)$ , we obtain

$$\dot{\xi}_n(t) = \int_0^\pi q_t y_n^2 dx. \quad (4)$$

Substituting expression (1) in formula (4), we obtain the equality

$$\dot{\xi}_n = \int_0^\pi P[q] y_n^2 dx.$$

We next seek the antiderivative of the integrand in the form of a quadratic form in  $y_n$  and  $y_n'$ , i.e., let

$$(ay_n^2 + by_n y_n' + cy_n'^2)' = P[q] y_n^2, \quad (5)$$

where the functions  $a = a(x, t, \xi_n)$ ,  $b = b(x, t, \xi_n)$  and  $c = c(x, t, \xi_n)$  are independent of  $y_n$  and  $y_n'$ . Using the equality  $y_n'' = (q - \xi_n)y_n$  and equating the corresponding coefficients, from (5), we obtain

$$b = -c', \quad a = \frac{1}{2}c'' - c(q - \xi_n),$$

$$P[q] = \frac{1}{2}c''' - 2c'(q - \xi_n) - cq_x. \quad (6)$$

The left-hand side of (6) is independent of  $\xi_n$ . Therefore, the right-hand side must also be independent of  $\xi_n$ . We seek the function  $c(x, t, \xi_n)$  in the form of a polynomial in  $\xi_n$ :

$$c(x, t, \xi_n) = \sum_{k=0}^N c_k(x, t) \xi_n^{N-k}. \quad (7)$$

Substituting (7) in (6), we obtain

$$P[q] = 2c_0'(x, t)\xi_n^{N+1} + \sum_{k=0}^{N-1} \left[ \frac{1}{2}c_k'''(x, t) - 2qc_k'(x, t) - q_x c_k(x, t) + 2c_{k+1}'(x, t) \right] \xi_n^{N-k} + \frac{1}{2}c_N'''(x, t) - 2qc_N'(x, t) - q_x c_N(x, t).$$

Because the polynomial  $P[q]$  is independent of  $\xi_n$ , from the last equality, we obtain the relations

$$c'_0(x,t) = 0, \quad c'_{k+1}(x,t) = -\frac{1}{4}[c'''_k(x,t) - 4qc'_k(x,t) - 2q_x c_k(x,t)], \quad k = 0, 1, \dots, N-1,$$

$$P[q] = \frac{1}{2}c'''_N(x,t) - 2qc'_N(x,t) - q_x c_N(x,t).$$

We now consider the equation

$$q_t = \frac{1}{2}c'''_N - 2qc'_N - q_x c_N, \quad x \in R, \quad t > 0, \quad (8)$$

where the function  $c_N = c_N(x,t)$  is expressed in terms of  $q = q(x,t)$  as follows. For given continuous functions  $d_k = d_k(t)$ ,  $k = 0, 1, \dots, N$  we construct a sequence of functions:

$$c_0(x,t) = d_0(x,t), \quad c_{k+1}(x,t) = -\frac{1}{4}c''_k + qc_k - \frac{1}{2} \int_0^x q_x c_k dx + d_{k+1}, \quad k = 0, 1, \dots, N-1.$$

For example,

$$c_1 = \frac{1}{2}d_0[q + q(0,t)] + d_1,$$

$$c_2 = \frac{1}{8}d_0[-q_{xx} + 3q^2 + 2qq(0,t) + 3q^2(0,t)] + \frac{1}{2}d_1[q + q(0,t)] + d_2$$

and so on.

Nonlinear equation (8) called a higher KdV equation. In the case  $N=1$ , this equation becomes

$$q_t = \frac{1}{4}[q_{xxx} - 6qq_x]d_0 - \frac{1}{2}[2d_1 + d_0q(0,t)]q_x.$$

In particular, if  $d_0 = 0$ ,  $d_1 = -1$ , then we obtain the equation

$$q_t = q_x,$$

and if  $d_0 = 4$  and  $d_1 = -2q(0,t)$ , then we obtain the KdV equation

$$q_t = q_{xxx} - 6qq_x.$$

If  $d_0 = 4$  and  $d_1 = 0$ , then we obtain a nonlinear equation with an additional term of the form

$$q_t = q_{xxx} - 6qq_x - 2q(0,t)q_x,$$

and if  $d_0 = 4$  and  $d_1(t) = c(t)q(0,t)$ , then we obtain the equation

$$q_t = q_{xxx} - 6qq_x + \gamma(t)q(0,t)q_x.$$

In the same way, we can find other KdV equations with an additional term.

In the case  $N=2$ , Eq. (8) becomes

$$q_t = -\frac{1}{16}d_0(q_{xxxxx} - 10qq_{xxx} - 20q_x q_{xx} + 30q^2 q_x) +$$

$$+ \frac{1}{8}[d_0q(0,t) + 2d_1](q_{xxx} - 6qq_x) - \frac{1}{8}[3d_0q^2(0,t) + 4d_1q(0,t) + 8d_2]q_x.$$

In particular, from this equation with  $d_0 = -16q(0,t)$ ,  $d_1 = 8q^2(0,t)$ ,  $d_2 = 2q^3(0,t)$ , we obtain the nonlinear equation

$$q_t = q(0,t) \cdot (q_{xxxxx} - 10qq_{xxx} - 20q_x q_{xx} + 30q^2 q_x).$$

## 2. Streaming Run for the Forward Difference Problem

In this paper, we study the loaded second-order KdV equation with a free term independent of the spatial variable, namely, we consider the following equation

$$q_t = q|_{x=0} (q_{xxxxx} - 10qq_{xxx} - 20q_x q_{xx} + 30q^2 q_x) + f(t), \quad x \in \mathbb{R}, t > 0 \quad (9)$$

with initial condition

$$q(x,t)|_{t=0} = q_0(x), \quad (10)$$

where  $f(t)$  is given real continuous function and  $q_0(x) \in C^5(\mathbb{R}^1)$  is given real function. It is required to find a real function  $q(x,t)$ , that is  $\pi$ -periodic in a variable  $x$ :

$$q(x + \pi, t) \equiv q(x, t), \quad x \in \mathbb{R}, t > 0 \quad (11)$$

and satisfies the smoothness conditions:

$$q(x,t) \in C_x^5(t > 0) \cap C_t^1(t > 0) \cap C(t \geq 0). \quad (12)$$

**Theorem.** Let  $q(x,t)$  be the solution of problem (9)-(12). Then the boundaries  $\lambda_n(t)$ ,  $n \geq 0$  of the spectrum of the following operator

$$L(\tau, t)y \equiv -y'' + q(x + \tau, t)y = \lambda y, \quad x \in \mathbb{R} \quad (13)$$

satisfy the system of equations

$$\dot{\lambda}_n(t) = f(t), \quad n \geq 0, \quad (14)$$

and the spectral parameters  $\xi_n(\tau, t)$ ,  $n \geq 1$  satisfy the analogue of the system of equations of Dubrovin:

$$\frac{\partial \xi_n}{\partial t} = 2(-1)^n \sigma_n(\tau, t) [2q_{\tau\tau}(\tau, t) - 6q^2(\tau, t) - 8\xi_n q(\tau, t) - 16\xi_n^2] h_n(\xi), \quad n \geq 1, \quad (15)$$

$$h_n(\xi) = \sqrt{(\xi_n - \lambda_{2n-1})(\lambda_{2n} - \xi_n)} \times \sqrt{(\xi_n - \lambda_0) \prod_{\substack{k=1 \\ k \neq n}}^{\infty} \frac{(\lambda_{2k-1} - \xi_n)(\lambda_{2k} - \xi_n)}{(\xi_k - \xi_n)^2}}$$

the sign  $\sigma_n(\tau, t)$  changes at each collision of the point  $\xi_n(\tau, t)$  with the boundaries of its gap  $[\lambda_{2n-1}, \lambda_{2n}]$ . Moreover, the following initial conditions are fulfilled:

$$\xi_n(\tau, t)|_{t=0} = \xi_n^0(\tau), \quad \sigma_n(\tau, t)|_{t=0} = \sigma_n^0(\tau), \quad n \geq 1, \quad (16)$$

where  $\xi_n^0(\tau)$ ,  $\sigma_n^0(\tau)$ ,  $n \geq 1$  are the spectral parameters of the Sturm-Liouville equation corresponding to the coefficients  $q_0(x + \tau)$ .

**Proof.** Let  $y_n = y_n(x, \tau, t)$ ,  $n \geq 1$  e the normalized eigenfunction of the Dirichlet problem for equation (13) corresponding to the eigenvalue  $\xi_n = \xi_n(\tau, t)$ ,  $n \geq 1$ .

Differentiating the identity  $(L(\tau, t)y_n, y_n) = \xi_n$ , with respect to  $t$ , we get

$$\dot{\xi}_n = \int_0^\pi q_t y_n^2 dx. \quad (17)$$

Using the identity

$$q_t(x + \tau, t) = q(0, t)[q_{xxxxx}(x + \tau, t) - 10q(x + \tau, t)q_{xxx}(x + \tau, t) - 20q_x(x + \tau, t)q_{xx}(x + \tau, t) + 30q^2(x + \tau, t)q_x(x + \tau, t)] + f(t).$$

we write the equality (17) in the form

$$\dot{\xi}_n = q(0, t) \int_0^\pi (q_{xxxxx} - 10qq_{xxx} - 20q_xq_{xx} + 30q^2q_x) y_n^2 dx + f(t). \quad (18)$$

We seek for a primitive integrand in quadratic form of  $y_n$  and  $y_n'$ :

$$(ay_n^2 + by_ny_n' + cy_n'^2)' = (q_{xxxxx} - 10qq_{xxx} - 20q_xq_{xx} + 30q^2q_x) y_n^2,$$

where the functions  $a$ ,  $b$ ,  $c$  do not depend on  $y_n$  and  $y_n'$ . Using equality  $y_n'' = (q - \xi_n)y_n$  and comparing the left and right sides of the last equality, we find

$$b = -c', \quad a = \frac{1}{2}c'' - c \cdot (q - \xi_n),$$

$$\frac{1}{2}c''' - 2c' \cdot (q - \xi_n) - cq_x = q_{xxxxx} - 10qq_{xxx} - 20q_xq_{xx} + 30q^2q_x.$$

It is not difficult to see that the function  $c = 2q_{\tau\tau} - 6q^2 - 8\xi_n^2q - 16\xi_n^2$  satisfies equality (18). So, we have

$$\begin{aligned} \dot{\xi}_n &= q(0, t)(ay_n^2 + by_ny_n' + cy_n'^2)|_0^\pi + f(t) = \\ &= [2q_{\tau\tau}(\tau, t) - 6q^2(\tau, t) - 8\xi_n^2q(\tau, t) - 16\xi_n^2] [y_n'^2(\pi, \tau, t) - y_n'^2(0, \tau, t)] + f(t). \end{aligned} \quad (19)$$

We denote by  $s(x, \lambda, \tau, t)$  the solution of equation (13) satisfying initial condition  $s(0, \lambda, \tau, t) = 0$ ,  $s'(0, \lambda, \tau, t) = 1$ . Then we have

$$y_n(x, \tau, t) = \frac{1}{c_n(\tau, t)} s(x, \xi_n, \tau, t),$$

where

$$c_n^2(\tau, t) \equiv \int_0^\pi s^2(x, \xi_n, \tau, t) dx = s'(\pi, \xi_n, \tau, t) \frac{\partial s(\pi, \xi_n, \tau, t)}{\partial \lambda}.$$

Using the last equality in (19), we get

$$y_n'^2(\pi, \tau, t) - y_n'^2(0, \tau, t) = \frac{1}{\frac{\partial s(\pi, \xi_n, \tau, t)}{\partial \lambda}} \left( s'(\pi, \xi_n, \tau, t) - \frac{1}{s'(\pi, \xi_n, \tau, t)} \right).$$

Employing the expression

$$s'(\pi, \xi_n, \tau, t) - \frac{1}{s'(\pi, \xi_n, \tau, t)} = \sigma_n(\tau, t) \sqrt{\Delta^2(\xi_n) - 4}$$

we deduce

$$y_n'^2(\pi, \tau, t) - y_n'^2(0, \tau, t) = \frac{\sigma_n(\tau, t) \sqrt{\Delta^2(\xi_n) - 4}}{\frac{\partial s(\pi, \xi_n, \tau, t)}{\partial \lambda}}.$$

where

$$\sigma_n(\tau, t) = \text{sign} \left\{ s'(\pi, \xi_n, \tau, t) - \frac{1}{s'(\pi, \xi_n, \tau, t)} \right\}.$$

From the following expansions

$$\Delta^2(\lambda) - 4 = 4\pi^2(\lambda_0 - \lambda) \prod_{k=1}^{\infty} \frac{(\lambda_{2k-1} - \lambda)(\lambda_{2k} - \lambda)}{k^4},$$

$$s(\pi, \lambda, \tau, t) = \pi \prod_{k=1}^{\infty} \frac{\xi_k - \lambda}{k^2}$$

follows that

$$y_n'^2(\pi, \tau, t) - y_n'^2(0, \tau, t) = 2(-1)^n \sigma_n(\tau, t) h_n(\xi). \quad (20)$$

From (19) and (20) we get (15).

We notice that if instead of Dirichlet boundary conditions we consider periodic or anti-periodic boundary value conditions, then equation (14) remains  $\dot{\lambda}_n(t) = f(t)$ ,  $n \geq 0$ , and the theorem is proved.

**Remark.** Using the trace formula

$$q(\tau, t) = \lambda_0 + \sum_{k=1}^{\infty} (\lambda_{2k-1} + \lambda_{2k} - 2\xi_k(\tau, t)) \quad (21)$$

$$q^2(\tau, t) - \frac{1}{2} q_{\tau\tau}(\tau, t) = \lambda_0^2 + \sum_{k=1}^{\infty} (\lambda_{2k-1}^2 + \lambda_{2k}^2 - 2\xi_k^2(\tau, t)) \quad (22)$$

system equations of Dubrovin can be rewritten in the “closed” form.

**Corollary 1.** The theorem gives a method for solving problem (9)-(12). First we find the spectral data  $\lambda_n^0$ ,  $n \geq 0$ ;  $\xi_n^0(\tau)$ ,  $\sigma_n^0(\tau)$ ,  $n \geq 1$  of the Sturm-Liouville equation

$$-y'' + q_0(x + \tau)y = \lambda y, \quad x \in R.$$

Solving equations (14) with initial conditions  $\lambda_n^0(t)|_{t=0} = \lambda_n^0$ ,  $n \geq 0$ , we find

$$\lambda_n(t) = \lambda_n^0 + \int_0^t f(s) ds, \quad n \geq 0. \quad (23)$$

Further, solving the Cauchy problem (15), (16) for  $\tau = 0$  we get  $\xi_n(0, t)$ ,  $n \geq 1$ . Then substituting this data into equation (15) and solving the Cauchy problem  $\xi_n(\tau, t)|_{t=0} = \xi_n^0(\tau)$ ,  $\sigma_n(\tau, t)|_{t=0} = \sigma_n^0(\tau)$ ,  $n \geq 1$  for Dubrovin system (15) we find  $\xi_n(\tau, t)$ ,  $n \geq 1$ . Finally, by using the trace formula (21) and (23) we obtain  $q(\tau, t)$ .

**Remark.** Equations (23) show that the spectrum of the Sturm-Liouville operator (13) moves on the axis while keeping the initial structure, that is, the lengths of the gaps do not change.

**Corollary 2.** In [7], there was proved the theorem which states that the lengths of the gaps of the Sturm-Liouville equation with  $\pi$ -periodic real-valued coefficient decrease exponentially if and only if the coefficient is analytic. From this theorem we conclude that if  $q_0(x)$  is real analytical function, then the lengths of the gaps corresponding to this coefficient decrease exponentially. For the coefficient  $q(x, t)$  there correspond the same gaps. Thus the solution  $q(x, t)$  of problem (9)-(12) is real analytical functions on  $x$ .



**Corollary 3.** In [8], a generalization of Borg's inverse theorem was proved: the number  $\pi / n$  is a period of the coefficient of the Sturm-Liouville equation with  $\pi$ -periodic real-valued coefficient if and only if all the lacunae whose numbers are not divisible by  $n$  are vanished. Here  $n \geq 2$  is a natural number and the lacuna  $(\lambda_{2k-1}, \lambda_{2k})$  has a number  $k$ . Therefore, if  $q_0(x)$  has a period  $\pi / n$  then the solution to problem (9)-(12) is the  $\pi / n$ -periodic function on  $x$ .

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**USE OF MODERN TECHNOLOGICAL MEASURES TO INVESTIGATE  
PRIMARY SCHOOL STUDENTS IN READING**

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**Annotatsiya** – maqolada boshlang'ich sinf o'quvchilarini mutolaaga qiziqtirish usullari haqida fikrlar keltirilgan. Shu bilan birga o'quvchilarini mutolaaga qiziqtirishda foydalaniladigan usullar, texnologik vositalar ham tahlil qilingan. Bundan tashqari yangicha metodlar misollar yordamida keltirilgan.

**Kalit so'zlar:** mutolaa, mutolaa madaniyati, maktabgacha ta'lim tashkiloti, boshlang'ich sinflar, badiiy matnlar, janrlar.

**Аннотация.** В статье рассматриваются способы заинтересовать учащихся начальных классов чтением. Также анализируются методы и технологические средства, используемые для вовлечения учащихся в чтение. Кроме того, новые методы представлены на примерах.

**Ключевые слова:** чтение, культура чтения, дошкольная организация, начальные классы, художественные тексты, жанры.

**Abstract** - The article discusses ways to get elementary students interested in reading. It also analyzes the methods and technological tools used to engage students in reading. In addition, new methods are presented using examples.

**Key words:** reading, reading culture, preschool organization, elementary grades, literary texts, genres.

**Introduction.** If we focus on the problematic questions that cause a lot of discussion among parents, why do children not read books, what should parents do in the family, and what should teachers do in educational institutions, read to the child what to give, how to teach a child to read were described as suggestions and guidelines on how to positively influence students through the above ideas and play exercises. First of all, we need to teach children to do the task. The task should be to give the child a happy mood. You may not be able to get the kids interested in reading because you didn't get the job done. Instead of saying, "Read this text quickly," say, "Put a title to this text."

**Literature review.** Examples of speed reading exercises include modern games. For example, innovative games such as “Unusual Reading”, “Text Structuring”, “Text Description”, “YES or NO”, and “Find in the Text” can activate students, make reading faster, and make them more aware, helps to achieve. During the exercises, students are forced to read the text, comprehending the main content without realizing it [1].



### **Text Description Exercise**

This type of exercise is similar to the verbal or descriptive (graphic) methods of retelling a fairy tale text. Students will be given a poem. They have to write a new text using the words in the poem [5]. For example:

#### **Kitob-hammabop**

Hayotimiz oynasi, bilimlarning onasi,  
Buyumlar durdonasi, menga o'rgatgan odob  
— Bu kitobdir, bu kitob.

Mazmunlari xi'lma-xil, aqlingga qo'shgan aql,  
Do'stimdir juda ahil, fan yo'ilida nur-oftob  
— Bu kitobdir, bu kitob.

#### **Po'lat Mo'min**

**Analysis and Results.** Using these poetic words, the student should write a new poem or a new type of text. The book is the mirror of our lives. Because books have a lot of knowledge and interesting information that we need. The book is one of the most valuable of all. From the fairy tales and stories in the books we learn etiquette lessons. Reading a book makes a person more intelligent. That is why we respect books as our inseparable loyal friends.

The homework is to draw a poem [6].

#### **Exercise "YES or NO"**

This type of exercise helps students to better understand the content of the text, develop their thinking and attention. A teacher or a student asks a question only through the interrogative form of the sentences in the text. Students answer "YES" or "NO" one by one from the beginning of the desk. Students who answer correctly will be encouraged [7]. A student whose attention has been diverted from the content of the text, or who has given an incorrect answer, will be asked a question back or given the task to continue reading the text. Through the exercise, students will be able to re-read the text and better understand the text [8].

#### **Exercise "Find in the text"**

The following types of reinforcement questions can be used after reading the text with students. For example, information or artistic text is processed as follows. The teacher gives some information from the text. Students find out which hero they belong to. For example:

1. Born in the pasture... (Lamb)
2. When they saw the lamb, they were amazed. (sheep)
3. "Oh, it's a wonderful ram," he said. (Black Ram)
4. The poor man ran in all directions with his heart in his hand (Mother Sheep)

[9]

5. Antique, antique, - said ..... (White Ram)
6. Began to do strange things (Lamb)
7. Oh, if my branches had grown faster, I would have shown myself (?)
8. One day he disappeared again (lamb)
9. You are right; such antique lambs are rarely born (sheep).





Qo'zichoq<sup>1</sup>

Rauf Tolib

**Discussion.** A lamb was born in the pasture. Her eyes were like beads, her hair was curly, and she was dazzling in the sunlight. The sheep were amazed to see the lamb.

Wow, would a lamb be so beautiful? They said to each other [10].

"I'm going to be my sweetheart," Mother Sheep licked. The lamb began to grow very fast. Jumping on the wide, green meadow, he could not keep up; he could not stand up and follow his mother. She was overweight for a month or two and was overweight. It's more eye-catching. Everyone who saw it praised him.

"Oh, it's a beautiful ram," said the Black Ram with the twisted horns, looking at him eagerly.

"Antique, antique," said the White Ram. The Lamb's nose rose.

"You're right, such antique lambs are rare," said the sheep.

Lamb: "Do you hear that?" He looked at the lambs next to him. But when the Lamb heard the praise of himself, he became more and more confused and did not know what to do. As the days passed, the Lamb began to do strange things. He walked alone, not joining the other lambs. Ignoring the others, he looked away [11]. At first, no one cared. "Look at him, he's a wolf when he's older," said the Lamb.

"Oh, if my branches had grown faster, I would have shown myself ..."

Wherever the lamb was disappointed, the grass was left in the bushes. The mother sheep began to worry about the Lamb. One day the Lamb disappeared. Mother Sheep searched for him and found him in the meadow by the river.

"Son, you broke my fire!" I cried and ran; I am tired.

"You're so scared, I'm going to open that Wolf's belly with my horns," said the Lamb [12].

"Hey, boy, shut up ... I don't know, why are you so arrogant?"

"Isn't it worth it, old man?" I'm bored. You see, bear, one day I'll give that Wolf a treat.

"Don't listen to anyone, son," said the Mother Sheep. But the Lamb did not stop twisting. One day he disappeared again. The poor Mother Sheep ran in all directions, searching for and destroying the heart of the Sheep. When it got dark, he could not find it and returned to the darkness. The next day he looked again. He saw his son's familiar skin in the ravine behind the hill. The Mother Sheep flew in dry praise, rubbed the skin of the Lamb, which had been fed to the Wolf, and wept softly.

Through this game exercise, students also develop the competence to work with information.

**Conclusion.** In conclusion, we need to allow the child to gather information about the text, the story, to get acquainted with the text. We must not forget that text-based images or animations also help to understand the content of the text. If the child understands the content of the text, he can read it quickly. After reading the text at least 3 times, we can suggest that the child read the task one minute faster.

<sup>1</sup> TEXTBOOK Textbook for 4th grade of general secondary schools Revised and supplemented 6th edition TASHKENT «YANGIYOL POLYGRAPH SERVICE» 2017 B-37.



By constantly reminding students of their task, we can also achieve our goal through updating the type of tasks, games, quick exercises, and activities with new names.

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**UDC: 1: 316 (075)**  
**CONTEMPORARY TECHNOLOGIES USED IN THE INSTRUCTION OF  
THE RUSSIAN LANGUAGE AS A MEANS OF ACHIEVING  
QUALITY EDUCATION**

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**Annotatsiya:** Ushbu maqolada rus tili darslarida bir nechta zamonaviy texnologiyalardan foydalanish va ularning o'qitishdagi o'rni ko'rib chiqiladi.

**Tayanch so'zlar:** Innovatsion usullar, Venn diagrammasi, mustaqil fikrlash, sinxronlash, «suv ustidagi doiralar».

**Аннотация:** В данной статье рассматривается использование нескольких современных технологий на уроках русского языка и их роль в качестве обучения.

**Ключевые слова:** Инновационные методы, диаграмма Венна, независимое мышление, синквейн, «круги по воде».

**Abstract:** The article discusses the use of several up-to-date technologies applied in modern Russian classes and their extensive role in the provision of quality education.

**Keywords:** Innovative methods, Venn diagram, independent thinking, Sinkwine method, “water rings” method.

**Introduction.** The quality instruction has been one of the main problems of both modern and higher education. It is obvious that quality education is a process of continuous improvement.

The quality of knowledge is an integral set characterizing the outcome of learners' educational and cognitive activities: the set of activities should consist of completeness, depth, efficiency, flexibility, concreteness, generalization, consistency, awareness and strength. The provision of quality education requires constant and systematic work as well as continual improvement in order meet the requirements of modern education [1].

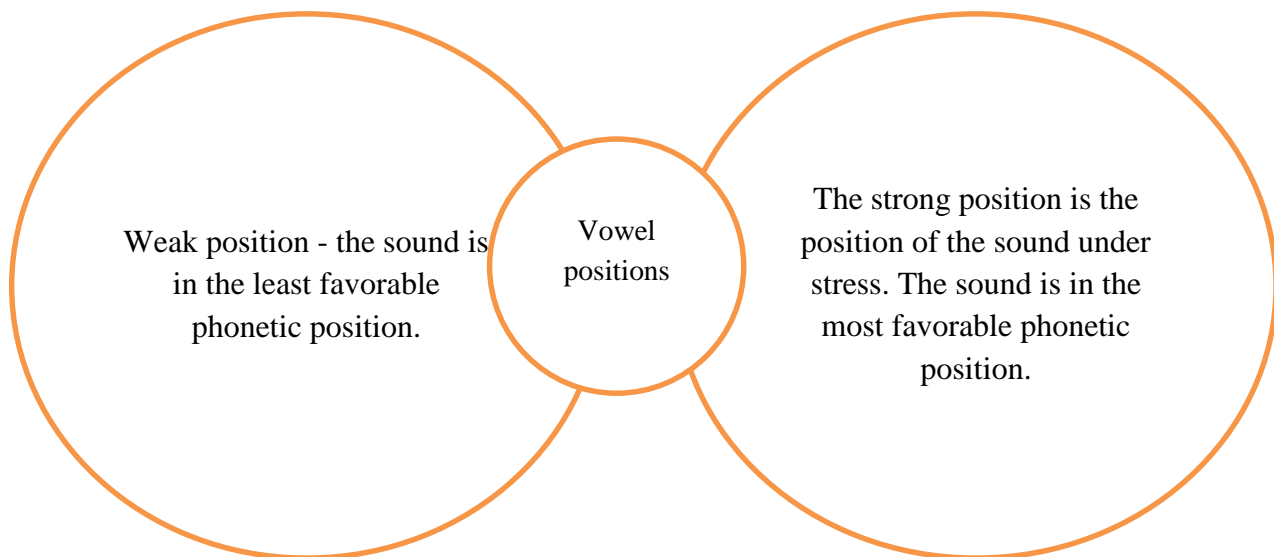
**Research Methodology.** In modern educational settings, it is very necessary to master various new educational technologies and methods. Today's education is increasingly focused on the creation of learner-oriented technologies and methods which provide equal balance between social and individual needs by launching the mechanism of self-development (self-improvement, self-instruction) and ensure the readiness of the learners to realize their own individuality and changes in society [2].

To accomplish this task, it is indispensable to utilize modern innovative methods and technologies in the Russian language classes. The wide application of these technologies in Russian classes will ensure a positive acquisition of new themes.

Various innovative methods allow learners to interact with each other during the lessons and practice their communicative skills by exchanging their thoughts, debating

and active participation. The difference between communicative methods and traditional teaching methods is that innovative methods allow learners to think freely and independently [3]. The active use of innovative methods and technologies will help both teachers and learners to increase learning efficiency [4]. The following up-to-date methods such as Venn diagram, Sinkwine method, “water rings” method, “thick and thin” questions etc. are highly recommended for teachers to implement in their Russian classes.

One of the popular innovative methods that is widely applicable in today’s teaching is called Venn diagram, named after the English mathematician and logician John Venn who was the founder of this diagram. Learners have a lot of benefit from his method when analyzing, synthesizing and comparing various concepts and processes. They can also use this diagram for the comparison of multiple grammatical terms. For example, in Russian classes learners may apply it for comparing the strong and weak positions of Russian vowels.



Learners can put to use a Venn diagram to study the grammatical themes while comparing the rules presented in two different grammar books and draw a final, independent conclusion.

Sinkwine is also one of the beneficial and effective methods in teaching. It is a methodological technique with the help of which learners compose quintains or poems with 5 lines. The writing of each line in a stanza is based on certain principles and rules. With the application of this method learners usually summarize the results of the studied material. Sinkwine is one of the critical thinking methods that activates learners’ mental activity through reading and writing. Writing Sinkwine is free creative activity that requires learners to find and highlight the most significant elements of the theme, their analyses etc. It also helps learners draw necessary conclusions and formulate them briefly, based on the basic principles of writing a poem. The key word there is the concept being under the discussion and phenomenon. A concept is written in a column by a learner and for each letter certain rules are selected according to a theme.

1st line - one keyword that defines the content of the Sinkwine

2nd line - two adjectives characterizing the keyword



3rd line - three verbs stating the actions of the concept

4th line - a four-word phrase

5<sup>th</sup> line - a synonym for the key concept

An example for a Sinkwine method:

**Sound**  
**Voiceless, voiced**  
**Hearable, can sound, can be pronounced**  
**Helps people to communicate**  
**Noise**

The function of a teacher as a source of information is somewhat reduced when he/she uses this method in his/her pedagogical activity. However, the functions like classroom management and students' control will greatly increase with method [5].

In the "water rings" method the key word is the concept or phenomenon being studied by the learners. It is usually written in a column and for each letter in the column certain rules are selected by the learners related to the topic being discussed. For example:

**С** - синтагматика-это один из двух аспектов изучения системы языка, противопоставленный парадигматике (syntagmatics is one of two aspects of learning the language system, opposed to paradigmatics)

**И** - изменения звуков, которые возникают под воздействием соседних звуков называются позиционными изменениями (changes in sounds that occur under the influence of neighboring sounds are called positional changes)

**Н** - носовая полость, твёрдое нёбо, зубы относятся к пассивным органам (nasal cavity, hard palate and teeth are passive organs)

**Т**- турбулентный источник возникает при сужении речевого аппарата в каком - либо его месте. Так образуются щелевые согласные (a turbulent source arises when the vocal apparatus narrows in any place, this is how slotted consonants are formed)

**А** - анализ особых (синтагматических) отношений между знаками языковыми, возникающих между последовательно расположенными единицами языка при их непосредственном сочетании друг с другом в реальном потоке речи или в тексте (the analysis of special (syntagmatic) relations between linguistic signs arising between sequentially located units of the language in the process of direct combination with each other in a real speech stream or in a text)

**Г**- гласные звуки характеризуются звучностью, которая образуется вибрацией голосовых связок и отсутствием смычки органов речи в полости рта (vowel sounds are characterized by sonority, which is formed by the vibration of the vocal cords and the absence of the occlusion of the speech organs in the oral cavity)

**М** - мена звуковых единиц, которая определяется действующими в данном языке синтагматическими законами – это позиционная мена звуков (change of sound units, which is determined by the syntagmatic laws operating in a given language, it is a positional change of sounds)

**А** - анатомио-физиологическому аспекту относится строение речевого аппарата (the anatomical-physiological aspect is the structure of the speech apparatus)

**Т** - твёрдые и мягкие звуки отличаются друг от друга артикуляцией (hard and soft sounds differ from each other in articulation)



**И** - импульсный источник возникает при резком раскрытии смычки произносительных органов, что порождает краткий и резкий звук. Таким образом, образуются взрывные согласные (it is an impulse source which arises with a sharp opening of the bow of the pronunciation organs and generates a short and harsh sound, this is the way how explosive consonants are formed)

**К**- качественная редукция зависит от двух условий:

1. От удара
2. От твёрдости – мягкости предшествующего согласного.

(high-quality reduction depends on two conditions:

1. Stress
2. Hardness and softness of the preceding consonant)

**А** - аккомодация – это приспособление ударных гласных с мягкими согласными (accommodation is a process of adaptation of stressed vowels with soft consonants).

The “water rings” method is an opportunity to perceive the relationship between ideas, theories, laws and concepts that are assimilated and already assimilated by learners. Also it provides a chance to develop learners’ analytical and critical thinking skills.

The flexibility and variability of the educational content, the absence of strict requirements for planning and organization of the educational processes, the multilevel and multi-functionality of secondary educational establishments, the possibility of using innovative technologies, the increase in the scientific potential of the teaching staff etc. can be attributed to the achievements that open the way for the teachers’ initiative and creativity [6]. All the above-mentioned working conditions of the specialist provide him/her not only with a certain freedom, but also increase his/her responsibility and help impose many obligations on him/her.

Today, a language teacher has to go through innovative challenges that have no analogues in the past, take part in the development of solutions and independently find answers to theoretical and practical questions, as well as carry out a creative approach to this activity [7]. In the modern educational conditions, it is no longer enough for a teacher to simply have deep subject knowledge and practical skills. The language instructor needs more analytical, informational, reflective, perceptual, communicative skills, i.e. he/she must have a reasonable degree of professional competency [8].

**Conclusion.** Thus, the use of the foregoing innovative methods in Russian language classes allows learners to think independently, analyze problematic case situations, make their own assumptions, apply previously acquired knowledge, skills and abilities in different situations, acquire new knowledge, skills and competencies, and to prove their personal views.

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**UDC: 372.862**

**USE OF INFORMATION AND EDUCATIONAL ENVIRONMENT IN THE  
FORMATION OF STUDENTS' COMPETENCES IN THE SUBJECT  
"COMPUTER SCIENCE AND INFORMATION TECHNOLOGIES"**

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**Annotasiya.** Ushbu maqolada o'quvchilarning "Informatika va axborot texnologiyalari" fanidan kompetensiyalarini shakllantirishda axborot-ta'lim muhitlaridan foydalanishga oid taklif va tavsiyalar keltirilgan.

**Tayanch so'zlar:** kompetensiya, axborot-ta'lim muhiti, informatika va axborot texnologiya, elektron ta'lim resurs.

**Аннотация.** В данной статье представлены предложения и рекомендации по использованию информационно-учебных пособий в формировании компетенций студентов по направлению «Информатика и информационные технологии».

**Ключевые слова:** компетентность, информационно-образовательная среда, информатика и информационные технологии, электронный образовательный ресурс.

**Annotation.** This article contains suggestions and recommendations for the use of information and educational environments in the formation of students' competencies in the subject "Computer Science and Information Technology".

**Key words:** competency, info-educational environment, Computer science and information technologies, e-educational resources.

**Introduction.** Today, the innovative processes taking place in the development of the socio-economic information infrastructure of society is imposing a number of



new requirements on the quality of education, the level of education of school graduates, and their professional level. [1]. One of the requirements is to teach pupils to the subjects using competence approach at schools. [2]. The introduction of competence-based learning is considered by modern pedagogy as an important factor in improving the quality and base of education. The main purpose of competence based approach is to increase professional and personal success of the learners and to assess adequately their own capabilities in a given situation [3-6]. Therefore, the formation of students' competencies in computer science and information technology is one of the most pressing issues today.

**Literature review.** Theory and practice of introducing educational technologies aimed at developing the competencies of students in secondary schools, the study of pedagogical conditions and methods for developing the basic competencies of students: Karshiev A.A., Turdiev N.Sh., Asadov Yu.M., they studied methodology for the implementation of information and communication technologies in secondary schools, the mechanism for using information technologies to improve the logical thinking of students and the theory and practice of introducing information and communication technologies in education, scientific works on the problems of application of distance learning technologies discussed by I.N.Babich, G.S.Batrshina, S.A. Zaytseva, S.V.Zenkina, L.L.Bosova, A.A.Abdukodirov, U.Sh.Begimkulov, M.H.Lutfillaev, N.I.Taylakovlar, on the theory and practice of teaching computer science F.I Zakirova, M.R Fayzieva, I.A Yuldashev B.Z Turaev, S.K Tursunov, A.D Ongarbaeva, D.V Luchaninov, B. A.Kondratenko, L.M.Ivkinalar, The theory of the use of information and communication technologies in the formation of students 'competencies, methods of developing students' information skills studied by NR Saidova, A.A Karshiev, L.A Leonteva, L.M Repeta, I.V Stavtseva, M.V.Utenin, O.V.Baranova, T.J.Bazarjapova, V.P.Koropovskaya.

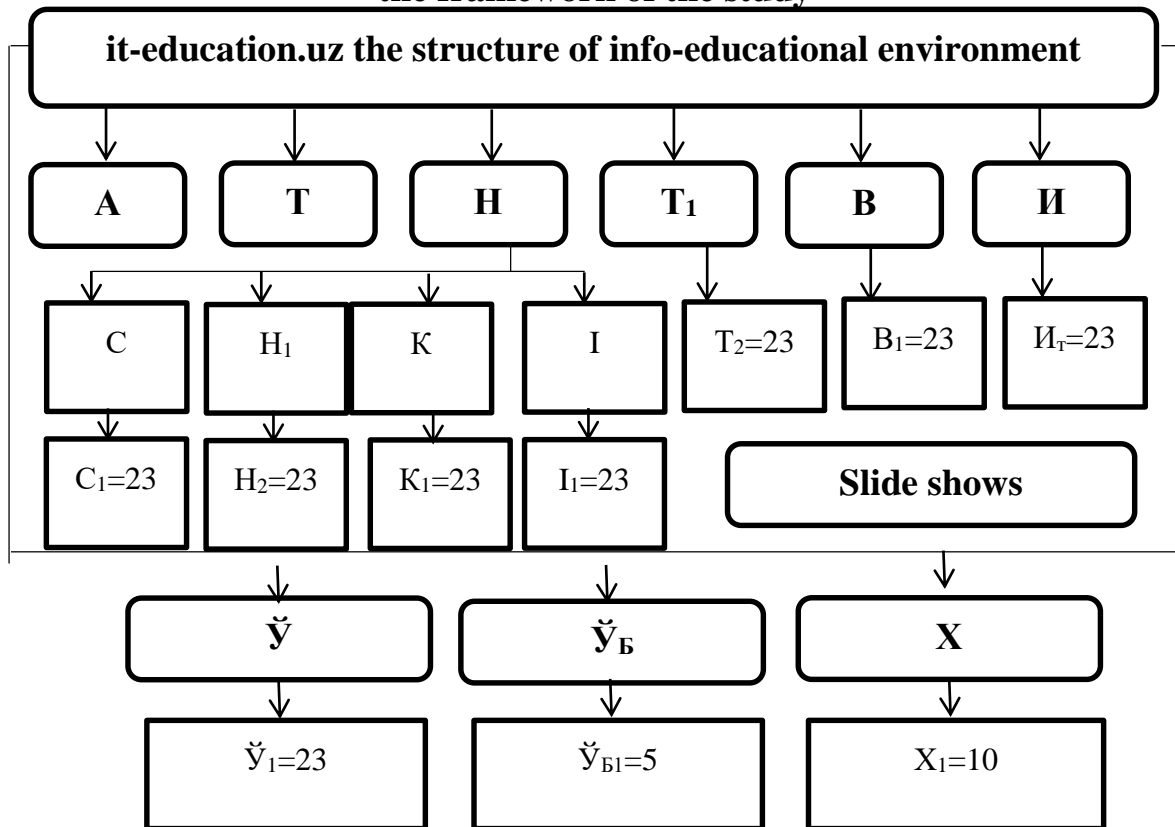
Although the above study puts forward some approaches to the formation of students' competencies in the field of "Computer science and Information Technology", but the methodology for the formation of schoolchildren's competence in the subject "Computer Science and Information Technology" has not been sufficiently and scientifically studied.

**Research methodology.** Today, due to the improvement of digital technologies, it is necessary to perform a number of important and urgent tasks for secondary schools. [7-9].

A new information-educational environment **it-education.uz** has been created as a part of the being carried out research. The main structure of this information-educational environment is given in the picture below №1.



**The structure of the information and educational environment created within the framework of the study**

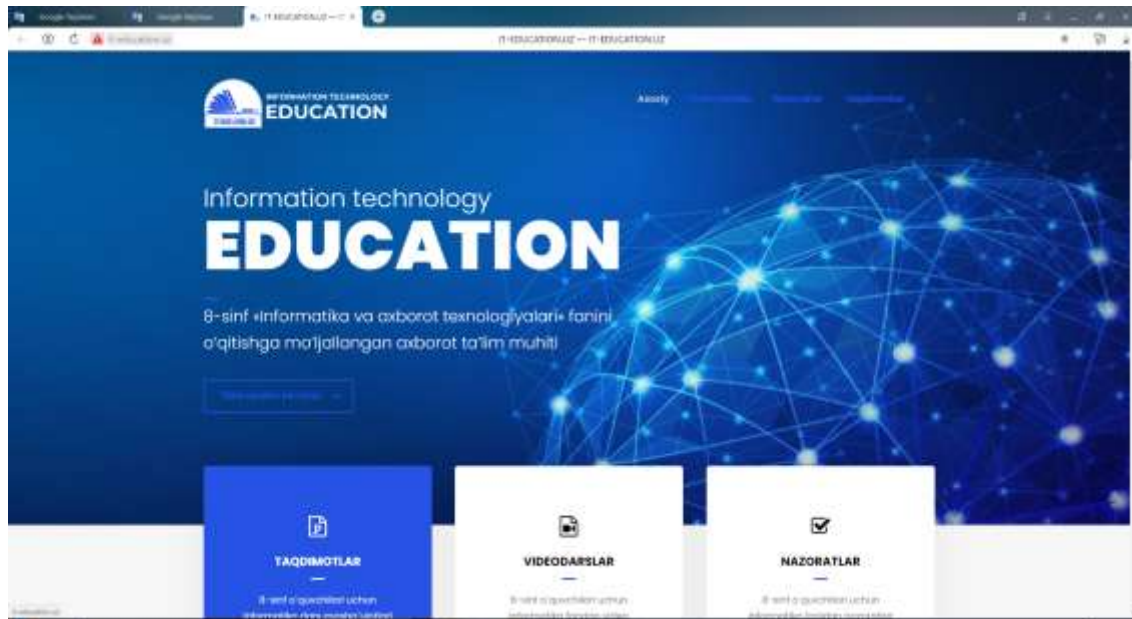


**1-picture. The structure of it-education.uz info-educational environment.**

A – information on the goals and objectives of subject, T – information about system, H – controls, C – standart tests, H<sub>1</sub> – non standart tests, K – crossword puzzles, I – Icils tests, T<sub>1</sub> – presentations, B – videos, И – tasks for talented youth, Y – methodological support for the teachers, Y<sub>B</sub> – tasks for quarterly, annual assessments of students' knowledge, X – foreign educational establishment's addresses and resources C<sub>1</sub> – number of standart tests, H<sub>2</sub> – non standart tests amount, K<sub>1</sub> – amount of crossword puzzles, I<sub>1</sub> – Icils tests amount, T<sub>2</sub> – amount of presentation , B<sub>1</sub> – quantity of videos, И<sub>1</sub> – quantity of tasks for talented youth, Y<sub>1</sub> – amount of methodological assist for the teachers, Y<sub>B1</sub> – amount of annual and quarterly assessments for students, X<sub>1</sub> – foreign educational establishment's addresses and resources amount.

One of the ways to accomplish these tasks is to form the competencies of students of a general education school in the field of "Computer science and Information Technology"[10-11]. In this regard, in modern conditions, it is necessary to develop new approaches to the formation of the necessary competencies of students in general education schools in the field of "Informatics and information technology". Nowadays, one of the new approaches to the formation of the necessary competencies of students in the field of "Informatics and Information Technology" is the effective use of the global network, Google search services, information and educational environments and educational portals.

The title page of the information-educational environment is shown in Figure 2 below.



**2-picture. The title page of the it-education.uz information-educational environment.**

The information and educational environment created within the framework of the study is aimed at improving the effectiveness of teaching the subject "Informatics and Information Technology", which provides effective practice for students of the 8th grade of a comprehensive school. Besides, it serves as a basis for the development of the distance learning. Wide scope realization of new information technology means will take place in information-educational environment. At the same time, it is aimed at developing the necessary competencies of 8th grade students in the direction of "Informatics and Information Technology" and has the following capabilities:

**1. Structure and functional flexibility.** The peculiarity of the information and educational environment being created is that it is created on the basis of pedagogical and psychophysiological requirements adapted to the formation of the needs and competencies of students. Also, various e-learning didactic resources and examples of lesson plans in this environment serve as a methodological guide for computer science teachers.

**2. Generality.** This information and educational environment ensures the internal unity of the components of the environment resulting from the actions of the subjects of the educational process, ensures the consistent logic of the organization of the educational process: effectively organizes the appropriate activities of teachers and students to determine the planned learning outcomes.

**3. Openness** The created educational information environment provides not only its own internal resources, but also the integration of various information environments. At the same time, local, regional and global resources allow organizing a changing education that meets the needs of all participants in the educational process. Thus, the information and educational environment created as part of the study is effective, on the one hand, while maintaining its originality, on the other hand, due to the connection with external information and educational environments, educational



portals and electronic libraries. It is also open information-educational environment that provides opportunity to the students to study everywhere, anytime.

**4. Multifunctionality.** The information and educational environment created within the framework of the study has the potential to provide all the components of the 8th grade subject "Computer science and Information Technology". It includes various didactic tools related to science, the organization of various forms of educational activities of students, the individualization of the learning process, as well as means of monitoring and evaluation, which perform the following functions: cognitive; developer; modeling; Formation of ICT competencies; Feedback; self-esteem and control.

**5. Changeability.** The created information and educational environment has the ability to choose from a wide range of electronic educational resources on the subject "Informatics and Information Technology" Grade 8, a certain form of work in the classroom or extracurricular activities and the level of cognitive activity, the complexity of the information being studied. At the same time, based on the construction of individual educational trajectories, it ensures the achievement of the planned learning outcomes in the direction of "Computer Science and Information Technology".

**6. Visualization.** The created information and educational environment is effective in that the educational information on the subject of the 8th grade "Computer science and Information Technology" is enriched with high-quality color illustrations, and the sources studied are based on mathematical models. It also provides opportunity to the pupils effectively to analyze resources on "Computer science and Information Technology" and to form competencies by gathering additional information

**7. Interactivity.** Created new information-educational environment is directed to get better knowledge in an interactive atmosphere in the 8<sup>th</sup> grade. At the same time, it creates conditions for the operational control of student performance, the use of various educational sources, the organization of individual learning activities, and the development of their cognitive independence.

**Analysis and results.** Pedagogical experiments on the use of the information and educational environment it-education.uz, created as part of the study, were carried out in the formation of the competencies of students of secondary schools in the subject "Computer science and information technology". Pupils of the 8th grade of general education schools of the Navoi region were involved in experimental work. They were provided with rooms for the experiments and control. At the same time, 90 students were involved in the experimental group, 92 students were involved in the control group. The information and educational environment it-education.uz, created as part of the study, was used for 8th grade students of the experimental group in the classroom and extracurricular activities. Traditional method used for the control group. The results of 8th grade students who participated in this experiment were analyzed, and in order to verify their reliability, a mathematical and statistical analysis was carried out based on the Student-Fisher test. Appropriate means for samples when using this criterion

$\bar{X} = \frac{1}{n} \sum_{i=1}^4 n_i X_i$ , scattering coefficients  $D_n = \frac{\sum_{i=1}^4 n_i (x_i - \bar{X})^2}{n - 1}$ , in determining the indicators



of assimilation  $A \% = \frac{\bar{X}}{3} \cdot 100\% - \frac{\bar{Y}}{3} \cdot 100\%$  these formulas are used. As a result of the calculation, it was found that the average rate of assimilation of the experimental class was higher than that of the control class, i.e. increased by 9.1%.

**Conclusions and suggestions.** The aim of the research is to study the potential of the information and educational environment in the formation of the competencies of 8th grade students in the direction of "Computer Science and Information Technology" in secondary schools. To realize this, firstly, we have to study, the state of ICT provision in general education schools and the use of computer technologies in schools, secondly, to organize training courses for computer science teachers in developing and using information and educational environments in general education schools, thirdly, to determine ways improving the use of the learning environment of information at schools. The study of this issue has a special character, and the research conducted on the study of the theoretical basis of the use of information-educational environments for schoolchildren in the subject "Computer Science and Information Technology" allowed to draw the following conclusions:

- In the development of informatization of society, an important role is played by the formation of the necessary competencies of students of a general education school in the field of "Computer Science and Information Technology". To live in this informatized society one is to be able to use information technologies. That is why today it is important to form and develop the ability of students to search, process, comprehend, understand and use information, as well as to form competencies.

- The information and educational environment is a modern pedagogical software tool for activating the independent learning activities of schoolchildren in the field of "computer science and information technology", which makes it possible to intensify their cognitive activity, increase the effectiveness of learning and improve the learning process. Information and learning environments have the following advantages over traditional learning tools: ease of use, the ability to model and predict situations, a complex effect on emotions, enhanced audiovisual effects, increased information research and search capabilities. It also combines traditional means of communication, making the learning process wonderful, dynamic, unconventional, fun and engaging the student in the process of active cooperation.

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**UDC: 372.862**

## **HOW TO CREATE AND USE ELECTRONIC EDUCATIONAL RESOURCES FOR THE DEVELOPMENT OF STUDENTS 'PROGRAMMING ALGORITHMIC THINKING**

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**Annotatsiya.** Ushbu maqolada C++ Builder dasturlash muhitida talabalarning dasturlashga oid algoritmik hamda mantiqiy fikrlashini rivojlantirishga mo'ljallangan elektron ta'lim resursi yaratish va undan foydalanish bo'yicha taklif va tavsiyalar keltirilgan.

**Kalit so'zlar:** C++ Builder, dasturlash, algoritmik fikrlash, mantiqiy fikrlash, elektron ta'lim resursi.

**Аннотация.** В этой статье представлены предложения и рекомендации по созданию и использованию электронных ресурсов обучения, предназначенного для развития алгоритмического и логического мышления учащихся о программировании в среде программирования C ++ Builder.

**Ключевые слова:** C ++ Builder, программирование, алгоритмическое мышление, логическое мышление, электронный учебный ресурс.



**Annotation.** This article provides suggestions and recommendations for creating and using an e-learning resource to develop students' algorithmic and logical thinking in programming in the C++ Builder programming environment.

**Key words:** C++ Builder, programming, algorithmic thinking, logical, educational e-resources.

**Introduction.** Nowadays further development of methodology of algorithmic thinking on programming as well as improvement of computer science and informational technologies are becoming one of the modern issue of our modern life in higher educational institutions [1, 2, 4].

The solution to these problems is to develop an alternative algorithm for teaching programming technologies in accordance with the methodological features of pedagogical research on the training future specialists in the field of computer science. This requires, first of all, the analysis of the literature in the field and the analysis of research in this area.

**Literature review.** Theory, methodology of introduction of information and communication technologies in the system of uninterrupted education, methods of creation and use of electronic educational resources, problems of application of distance learning technologies, improvement of methods of teaching computer science have been studied by scientists such as Belova A.A., Abdukadirov, F.M., Zakirova, G.A., Rasulova, N.M., Babakhodjayeva, K.R., Mamadaliyev, V.T., Jurayev, J.K., Nurbekova, F.V., Shkarban, I.V., Morozova, T.V., Atyaskina, Y.V., Chernobay.

However, their works have not been sufficiently researched to improve the methodology of programming, in particular the development of students' algorithmic and logical thinking in programming.

At the same time, although N.A. Otakhanov's research on object-oriented programming languages and M.R. Fayzieva's research on web-based programming teaching methods do not include the information on the development of students' algorithmic thinking about programming. Therefore, this research is relevant for today's education system.

One of the solutions to this problem is to analyze the work of researchers on the creation of didactic tools, interactive methods, in particular, the creation of e-learning resources and their application in the educational process, which develop students' algorithmic thinking about programming.

In this regard, the research of GA Rasulova identified pedagogical and psychological requirements for the structure and content of multimedia e-textbooks, and developed criteria and indicators for evaluating the effectiveness of the use of multimedia e-textbooks [3].

Interactivity of teaching on the basis of pedagogical and psychological requirements, such as the integration of teaching materials of different levels of complexity with ergonomic description of the structure and content of such multimedia e-textbooks, a high level of visualization, the reflection of a set of variable tasks; assumed that aspects of optimality would have didactic productivity.

At the same time, F.V. Shkarban emphasizes the need to develop targeted, meaningful and procedural components of the methodology of teaching the basics of object-oriented programming in the study using visual learning environments [4].

In his research, he suggested that it would be useful to increase the effectiveness of object-oriented programming teaching methods using visual learning environments.

In the research of N.M.Babakhodjayeva developed an algorithm for the design of algorithmic, logical thinking skills of students in the theory of algorithms on an entropic approach to the formation of algorithmic, logical thinking skills and justified the possibility of development through assignments. Based on the development of a software package for the theory of algorithms, the researcher proved the effectiveness of education [5].

K.R. Mamadaliyev's research has improved the principles of creating informative content that provides reproductive, productive, creative levels of critical thinking, independent search for information, the formation of analytical competencies in students, the mechanisms of creating modernized textbooks and electronic textbooks [6].

I.V Morozova's research has developed requirements for the formation of competencies of future teachers of computer science in the design of e-learning resources. It has developed a mechanism for the formation of professional competencies of future computer science teachers [7].

At the same time, the scientific research of T.V. Atyaskina provided a set of necessary and sufficient organizational and pedagogical conditions for the successful formation of self-education skills of future programmers using electronic resources. Her research explores the possibilities of electronic resources that can effectively develop the self-education skills of future technicians and programmers [8].

According to the analysis of the work of the above-mentioned researchers and scholars, in developing students' algorithmic thinking about programming, it is first necessary to develop a methodology for creating and using e-learning resources related to programming.

Therefore, didactic, methodological, psychological, technical, aesthetic, ergonomic requirements should be taken into account when creating e-learning resources [9]. These requirements play a key role in increasing the efficiency of e-learning resources.

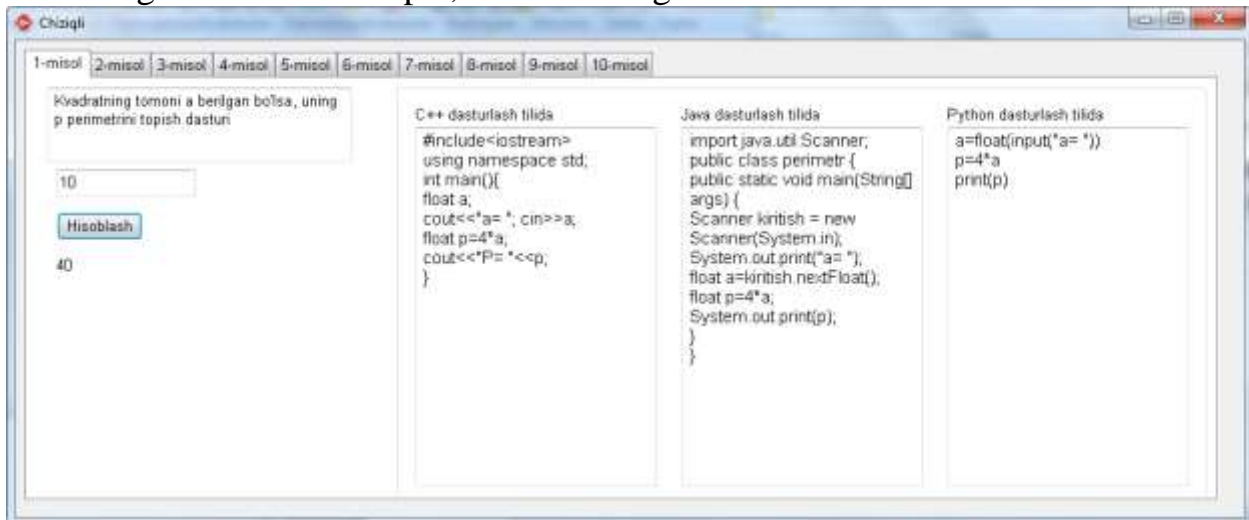
**Research methodology.** When creating e-learning resources, it is advisable to use the C ++ Builder programming environment. Therefore, using the C ++ Builder XE3 programming environment, an e-learning resource was developed to develop students 'algorithmic thinking about programming (Figure 1).



1-figure. Title page of the app.

This e-learning resource includes programs that develop students' algorithmic thinking about programming, as well as program code for these programs in C ++, Java and Python. In addition, questions and assignments of varying complexity (reproductive, productive, partially exploratory and creative) are combined.

Sample program codes are divided into linear, branching, iterative, functions, arrays, strings, and file handling sections. The programs in each section are listed in ascending order. For example, the Line Programs section window looks like this:



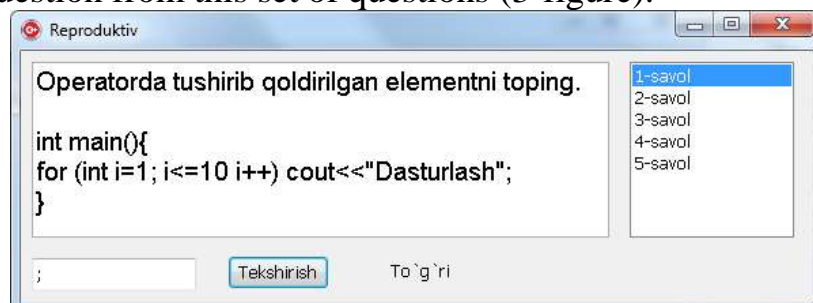
2-figure. Linear Applications section window.

The above window can be conditionally divided into two parts. 1. The task window on the left side of the window. 2. On the right is a window that describes the program code in C ++, Java and Python programming languages.

This view applies to each section, where the user cannot edit items that describe the terms of the assignment and the program code. But the possibility of copying has been created.

Also included are questions of varying difficulty for each section. Once the questions window is entered only the section with reproductive level is activated. One allowed to the second level after completing the first one.

At each stage, the questions are sorted by level of difficulty. The user can move on to the next question only if they answer the first question correctly. Here is an example of a question from this set of questions (3-figure):



3-figure. Reproductive level questions window.

**Analysis and results.** The success of the pedagogical experiments carried out in the process of conducting experimental work aimed at developing students' algorithmic thinking in programming shows the need to take into account its organizational and pedagogical aspects in this process. Therefore, special attention was paid to these aspects. Experimental work was carried out in 2020 among students studying at the





Navoi State Pedagogical Institute in the field of "Methods of teaching computer science."

A total of 64 students were involved in the experiment and control groups. The experiments were conducted in three stages: emphatic; shaper; closing. During the highlighting phase of the experiment, students were interviewed and observed about the key features of programming languages.

At the formative stage, based on the proposed e-learning resource, the experimental group was trained and the following criteria were developed to assess the effectiveness of students' learning: motivational; cognitive; technological; creative.

In the final stage, a mathematical-statistical analysis based on the Student-Fisher criterion was performed in order to check the reliability of the results of the students in the experimental and control groups.

Using this criterion, formulas were used to determine the appropriate mean values for the samples, scattering coefficients  $\bar{X} = \frac{1}{n} \sum_{i=1}^4 n_i X_i$ ,  $D_n = \sum_{i=1}^3 \frac{n_i (x_i - \bar{X})^2}{n-1}$ ,

standard deviations  $\tau_n = \sqrt{D_n}$ , variances,  $\delta_n = \frac{\tau_n}{\bar{X}}$ , reliable deviations of the estimates

$\Delta_n = t_{kh} \cdot \frac{D_n}{\sqrt{n}}$ ,  $P = \frac{\bar{X}}{3} \cdot 100\% - \frac{\bar{Y}}{3} \cdot 100\%$  and mastering rates. The calculation showed that

the average mastering rate of the experimental group was higher than that of the control group, ie by 9%.

**Conclusions and suggestions.** To sum up, the development of students' algorithmic thinking about programming is of great importance today in the field of information technology. Because it requires the development of effective applications for the management of the entire industry, the implementation of electronic payments, the calculation of mathematical and economic problems, the development of software products for computers and mobile devices, and the exchange of data remotely. This can be done through programming languages. Therefore, in order to develop students' algorithmic thinking about programming in higher education institutions, it is important to first improve science programs and create a new generation of textbooks. At the same time, it is necessary to improve the system of organizing students' independent study. This will require students to be given practical assignments focused on creative thinking and the development of e-learning resources that will help them solve them.

Therefore, we recommend using the e-learning resource mentioned above to develop students' algorithmic thinking about programming. This e-learning resource encourages students to work independently and think critically. As a result, the formation of students' competencies can be achieved.

From the above statistical analysis, it can be concluded that the development of algorithmic thinking of students in higher education institutions in the development of programming is the basis for the popularization of the proposed e-learning resource.



The proposed e-learning resource will help students to spend their free time meaningfully, to acquire knowledge independently, to increase their programming competence, and to develop algorithmic thinking.

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UDK. 575.2

## PSYCHOLOGY OF MILITARY DISCIPLINE OF CADETS

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**Annotasiya.** Maqolada kursantlarning harbiy intizom psixologiyasi takomillashtirish bilan bog'liq masalalar tahlil qilinadi. Xususan, bunda intizom, harbiy intizom masalalari tahlil qilinadi, harbiy intizomni ta'minlashda harbiy psixologlarning o'rni va uning ilmiylik jihatlari ochib beriladi. Shu bilan birga, ushbu sohadagi yangilanish va o'zgarishlar tadqiq etilgan.

**Tayanch tushunchalar:** harbiy xizmatchi, kursant, intizom, harbiy intizom, kasbiy intizom, harbiy psixolog, rahbar, motiv, stress

**Аннотация.** В данной статье анализируются вопросы связанные с совершенствованием психология военная дисциплина. В частности, анализируются вопросы дисциплины и военные дисциплины, раскрываются место военных психологов обеспечение военная дисциплина, его научные аспекты. Исследована новизна и изменение данной области.

**Ключевые понятие:** военнослужащие, курсант, дисциплина, военная дисциплина, профессиональная дисциплина, военная психология, руководитель, мотив, стресс

**Annotation.** This article analyzes the issues related to the improvement of psychology of military discipline. In particular, the issues of discipline and military discipline are analyzed, the importance of military psychologists, military discipline, its scientific aspects are revealed. The novelty and change of this area is investigated.

**Keywords:** military personnel, cadet, discipline, military discipline, professional discipline, military psychology, leader, motive, stress

**Introduction.** Today peace and security have become one of the global challenges of the world. The reasons for this are: the fact that mankind lives in a world that is complex, extremely contradictory, where the geopolitical interests of countries collide, ideological attacks escalate and seek their balance; the emergence of ideological trends that undermine the democratic development and undermine the unity of mankind; the fact that the process of transformation penetrates all spheres of public life; the; it is like the ideological struggles to master the mind and soul of man. "Attempts to capture the thinking, consciousness, worldview of people is happening in the fields of ideology. To make other regions and peoples dependent, methods and means that are now difficult to see and perceive, in particular, methods of spiritual corruption, are being used" [2. 128]. Undoubtedly, in such a situation, the worldview, spiritual and spiritual preparation of the employees of the system using force, which ensures the security, peace, rights and freedoms of citizens, as well as legitimate interests of the country, is an important aspect. As we all know, military officers, employees pass knowledge, skills, military-psychological training in higher military



educational institutions, that is, "participants in the educational process (educators, parents or other legal representatives of underage education, pedagogical workers and their representatives)"[1] become.

The head of our state, Commander-in-chief of the Armed Forces Sh.M. Mirziyoyev noted: "Today, educating young people in the military-patriotic spirit, strengthening their civil position is a very important task. The situation in our region and the world is becoming increasingly tense. There are threats and risks to our national security, peaceful lives. Therefore, increasing vigilance and awareness, strengthening our mutual solidarity, being ready to give a worthy response to any threats, is becoming an acute necessity of life. Protection of the awareness of the younger generation from negative influences, return of the lost to the true path every citizen of Uzbekistan, who considers himself a patriot, especially young people, this must be remained as the main duty"[6. 258].

If we analyze thoughts of the president of the Republic of Uzbekistan we can understand that thoughts directly belong to cadets studying in military educational institutions, we will not be mistaken.

**Literature review.** "Discipline" is an important factor for the fruitful Organization of the activities of cadets and its implementation. And the psychology of discipline serves the spiritual management of cadets. In the preparation of cadets for professional activities as a future officer, the relationship between the commanders and the subordinates lasts until a certain time, that is, until the end of the study, after the end of the study, the professional relationship becomes a social relationship.

Military discipline of cadets is a psychological professional problem, since the psychology of service of each cadet is primarily associated with their specific individual psychology, on the other hand it is also directly related to military regulations, normative acts, orders and other legal acts. The importance of military discipline for cadets is that this discipline is part of the discipline of the state society. In turn professor E.A. Sokolov's opinion in "discipline" is divided into the followings, namely "pure discipline, military-combat discipline", "financial discipline" [8.171] and other disciplines. All types of discipline are also associated with the psychology of discipline in the cadets, resulting from the content of their professional service discipline. The geography of the study of the psychology of discipline of Cadets is very wide, it is studied by scientists, practitioners as a specific problem in military pedagogy, psychology for more than 1,5 centuries.

**Research Methodology.** Since the military discipline of cadets and its psychology were an extremely interesting and urgent problem, this topic was studied by many Russian and European, Uzbek military scientists, for example A.Kislov's "Military morality" (1938 y.), A.N.Nevrossky's "Military discipline and methods of its protection" (1874 y.), V.N.Khalturin's "Psychological basis of military discipline" (1896 y.) in addition to it M.I.Dragimirov, N.D.Butovsky, D.P.Parsky, A.Verkhovsky, L.Bizov, F.Ogorodnikov studied psychological and pedagogical aspects of military discipline in the Republic of Uzbekistan. X.Rustambaev, N.Muhammad, S.O.Abdukholikov in the textbook "Professional ethics of the servants (employees)of the National Guard " (2019y.) written.



Each Science adheres to the concept of "discipline" from its point of view, but there is one historical fact that in the 60-ies of the XX century the concept of "discipline" was not gradually used in pedagogical science, and the issue of discipline was understood only in the educational process. But in the field of pedagogy "innovator" A.S. Makarenko, A.Avlony proved how important the issue of discipline is in education and showed it in practice. In fact, carrying out practice in harmony with the theory serves to ensure discipline [5.172], he says.

The concept of discipline, in turn, is directly and indirectly related to the sciences of psychology, pedagogy, jurisprudence, ethics, military tactics. At the same time, both military psychology and military pedagogy are considered practically. Discipline itself is also a process related to knowledge, skills, qualifications. There are many types of disciplinary actions which are committed by cadets, but exactly what kind of actions are committed by servicemen? The answer to this question can be found by approaching to the problems in different ways, especially with personal relations, professional relations, social relations. Of course, the reasons for the emergence of these problems should be the object of the study of Deputies, military psychologists on educational work. The Researcher A.A.Novikov believes that the object of the process of organising the preparation works for professional activity is the cadet, the subjects of the research process – the Department of the higher education institution, the leadership of the faculty and courses, the composition of professors and teachers and scientific staff [7.12].

#### Analyses and Results

At present, military psychologists are being trained in military institutions of higher education, but in the preparation and training of the military psychologists is being carried out on the basis of such sessions such as programs, methodical materials, lectures, discussions, practical sessions in civil universities. For example, in the lecture session, educational tasks are seen in the accurate and clear expression of the professional methodological and scientific position of the teacher, problem-solving, in its popularity, the introduction of the speaker into a rational and emotional relationship with the audience [3.141].

Like all activities, education is a specially organized activity which is aimed at the realization of the educational goal of teachers and educators in a higher educational institution, which includes components such as content, organization and methodology [9.4-5]. At first glance, it seems that the method and methodology of training these personnel are correct way, but it is not quite right to say that this problem is being solved correctly. Because, studying the psychology of a person is a process that is difficult in its own way, requires a lot of effort, so it is necessary to have a special method of learning together. To do this, one need necessary qualification and professionalism, otherwise it will be waste of time and pain in the neck. "The examination of the psychologists of the warrior personality is one of the main problems of military psychology" [11.17]. The training of cadets in the direction of military psychology as a subject of special training of military psychologists would have allowed to study the psychology of the military more accurately, deeper. The only example is that in the US military educational institutions, the Military Sciences (15% of the total training time) are taught more than the humanities. In the humanities,



including military psychology subjects, 50% of the total training time is allocated to the 1st course, 30% in the 2nd course, 60% in the 3rd course, 70% in the 4th course [4.120].

Military psychologists prepare cadets not only for issues of strengthening military discipline, but also for the Prevention of military stress, training them not to lose themselves, to seize themselves. It is no secret that there are specific aspects of the military profession that we aim at from such a proposal, it is also not necessary to base it on this, to study only one side of the problem, the same thing is evident in our study, since there is also a difference in the psychology of the cadet with the psychology of the Since there is also a difference in the observance of military discipline and knowledge of discipline as a value, for example, the officer is considered to be military personnel with higher education, cadets are also World-Wide, who want to grow in service, try to get the rank on time, have their own personal value.

And ordinary soldiers and servicemen who are engaged in contractual service, almost in the majority, if they serve from the contract to the contract, then the second party to the next contract can think. There is no higher education, it is possible to receive a rank, but it is considered military personnel who know that the rank does not grow. This does not mean that we can look at ordinary soldiers as a category of individuals who violate the discipline of service with this. Violation of discipline first of all depends on the environment, the situation, , the professional worldview. As for the chips of the Cadets ' team, they closely help disciplinary violations. The importance of military discipline among servicemen is again manifested in the fact that during peace it is possible to establish a violation of discipline or to train an employee who violates it, if during the war it is a violation of discipline this is a tragedy, because in such cases treason in each servant can help to negatively solve the fate of

Military discipline resilience is also largely dependent on who commands the military. Because the commander's reputation unites the military community, while his authoritarian leadership unites the community on the one hand, and on the other hand he takes the responsibility of the team on his own neck. Because he thinks about the team and he is suitable for the team. Therefore, in order to create military discipline and observe it long, the discipline must correspond to everyone, no matter whether they are big or small. With a disciplined serviceman, there are two sides to the functioning of the chief, that is, the first one is disciplined if you set a task for a serviceman, you do not have to check how he performs his task, because he has the mind, the potential to perform the task. The complete fulfillment of the task assigned to each servant without discipline, there will be doubt that he will perform qualitatively, and the need to control it will bring additional concern to all managers.

**Conclusion.** Whether we want the professional activity of cadets, including military personnel, is associated with stress. And if the stress is not taken at the time of the receipt, then its end is certain. We can also divide the tragedy into spiritual and spiritual. A mental tragedy is considered a long-term concern, a physical tragedy is a short-term and suddenly ending tragic process.

The discipline of servicemen is considered the face of this same society. In strengthening professional discipline there should not be concepts such as "junk", "small", "not necessarily", "I will do later". The moral and spiritual environment in the



teams of Cadets is also directly related to military discipline. The positive sides of the moral-spiritual environment strengthen the will. And the Will is also connected with the character, temperament (client). In this regard, willpower is also important. "Will power is the quality of Will which is determined by the accuracy of the goal set by the individual, the aspiration to accomplish it, the speed of taking a certain decision on the goal and the ability to execute it in a timely manner" [10.265]. And being strong-willed is also tied to a personal example. Being a personal example will prevent forced exposure, excessive spending of time and effort and upbringing.

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**NATIONAL CONCEPT AND NATIONAL IMAGE OF WORLD  
KNOWLEDGE**

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**Annotasiya:** Maqolada konsept va milliy konseptosfera tushunchasi, uning o'ziga xos xususiyatlari, olimlar tomonidan berilgan ta'riflar hamda tilshunoslik va kognitiv tilshunoslikdagi o'rni haqida atroflicha yoritib berilgan.

**Kalit so'zlar:** konsept, professional, dunyoning konseptual tasviri, dunyo tasviri, dunyo modeli, milliy konseptual soha, e'tiqod, urf-odat, mentalitet.

**Аннотация:** В статье подробно рассматриваются понятие и концепция национальной концептосферы, ее особенности, определения, данные учеными, и ее роль в лингвистике и когнитивной лингвистике.

**Ключевые слова:** Ключевые слова: концепт, профессионал, концептуальный образ мира, образ мира, модель мира, национальное концептуальное поле, вера, традиция, семантика.

**Abstract:** The article describes on the concept and the concept of the national conceptosphere, its specific features, definitions given by scientists and its role in linguistics and cognitive linguistics.

**Key words:** concept, professional, conceptual image of the world, world image, world model, national conceptual field, belief, tradition, semantics.

**Introduction.** According to linguistic observations, the scholar Ter-Minasova says, "The most important function of language is that it preserves culture and transmits it from generation to generation. Therefore, language plays a very important role in the formation of personality, national character, ethnic community, people, and nation." If the concept is polymorphic, the person who uses the concept will have experiences in terms of national, property, class, professional, family, and personal spheres. In this regard, the potential of the whole language can be called a conceptual sphere. The conceptosphere of the national language is rich, if the whole culture of the nation is rich in its literature, folklore, science, fine arts (which are also directly related to language) and the national conceptual field, the historical experience of the nation and religion. [1: 280-287]

**Materials and Methods.** It is generally accepted, there is a universal and universal identity in the culture and language of each nation. Any culture has its own unique cultural values, reinforced by language, morals, beliefs, behavioral characteristics and other characteristics. Ter-Minasova identifies a set of stereotypes about the people among the sources that provide objective information about the national character of a particular people. Maslova describes the stereotype as "a world that measures activity, behavior, and so on." [2: 208]. S.G. According to Ter-Minasova, the most popular source of stereotypes is:





- 1) all kinds of international anecdotes and jokes;
- 2) national classics and fiction;
- 3) folklore, oral folklore;
- 4) the national language. [3: 261]

The concept is a universal phenomenon, so its use helps to determine the specifics of the national image of the world. Approaching the concept as an "algebraic expression of meaning" indicates the size of the term, its hidden, potential sources. [1: 280-287] A conceptual view of the world is born and formed at the heart of the human mind, but it is necessary to pay attention to the emergence of this view in the collective consciousness, to define the "concept" from this point of view. The role and mentality of the national positions of the concept worldview. The importance of this component, as well as the interest in linguistics as a carrier of the linguistic mentality, and, consequently, the socio-cultural aspect.

The national conceptual sphere consists of a set of individual, public, class, national, and universal human concepts, that is, concepts that have universal human value. Universal concepts include such basic concepts as homeland, mother, family, freedom, love, faith, friendship, as well as time, place, causation and other basic universal concepts, in which national cultural values are formed. According to the existence of common, universal concepts that allow mutual understanding between peoples. At the same time, each nation has its own worldview, its own values. Each culture forms its own stereotypes about consciousness and behavior based on its own worldview. Thus, although the concept of "friendship" is universal, it has a different look for each nation. In the study, this concept was studied in the context of the English and Uzbek concepts.

The language is a universal channel of communication between people, generations, epochs, and a reflection of the spiritual life of the people. Language can reflect the cultural and national mentality of its owners. The national language is a part of the national culture, a means of its expression and understanding. The ethnolinguistic tenet is broader than the linguistic tenet, because it has two types of ten - linguistic and cultural, and thus the linguistic form of self-understanding and self-understanding of the cultural self-understanding of human beings. [4: 11-12]. Ethno cultural consciousness is a collective consciousness in the form of a mother tongue, which embodies the ethnic mentality, the peculiarities of people's worldview [4: 11-12].

Linguistic consciousness forms and mediates the national linguistic image of the world - a set of ideas about the world, historically formed and reflected in the daily consciousness of a particular linguistic society, forming a certain way of conceptualizing reality. Just as it is formed in the collective consciousness of the people, real reality is formed in the human mind as a system of concepts. (concepts - are reflected in the human mind on the basis of a system).

**Results and Discussions.** A concept is a set of basic concepts that bring together the national consciousness of the surrounding world. The semantic space of a particular language consists of concepts, and according to the semantic space, knowledge structures can be judged by their specific national structure. [5:37]. The concept is



expressed through the use of language units in the language through concepts such as feelings, imaginations, beliefs, views, customs.

Reviews of many works by local and foreign authors devoted to various aspects of the study of the world image can be found in the works of Radchenko and Kornilov. According to Kornilov's definition, we understand the national linguistic image of the world through the national identity of everything written in language. [6:188-193]. Conceptual knowledge about the national (cognitive) image of the world, including the perception of the surrounding reality, a direct image of the world obtained because of direct knowledge, the authors Z.D. Popova and I.A. Stern's work is covered in detail. [7:52-58].

The concept of the conceptosphere was introduced by D.S. Likhachev describes this, in particular, emphasizing that the concepts of national language should be studied in close connection with folk culture. [1:280-287]. It should be noted that in the works of Yu.N. Karaulov the main elements of the linguistic and conceptual model of the world, according to the author, the linguistic model of the world consists of the semantic field, the conceptual model of the world, summarizes. [8:107-109].

**Conclusion.** As a conclusion, we can say that the concepts of "national concept" and "national image of the world" are the concepts of cultural linguistics and cognitive linguistics and serve to reveal the national mentality, worldview, character, nation and way of living the nation. The problem of the relationship between language and culture is one of the central problems of linguistics. A national concept, or simple concept, is considered to be a richer concept than a person's national, social, professional, and individual experience. Concepts of universal value represent the national concept sphere. As mentioned above, the main part of the national culture is the national language, while the national language forms the national image of the world. For the first time, the concept of the concept sphere was formed as a set of national language concepts.

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## **THEORETICAL ISSUES OF NON-ALTERNATIVE VOCABULARY**

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**Annotasiya:** Maqolada tilshunoslikda muqobilsiz leksikaning nazariy tomondan o‘rganilishi yoritilib berilgan. Bunda muqobilsiz leksikaning paydo bo‘lishi, sabablari, mavzuiy guruxlari o‘rganilgan.

**Kalit so‘zlar:** muqobilsiz leksika, frazologik birlik, tarjima nazariyasi, matn, pragmatika, lingvokul'turologiya, etnolingvistika

**Abstract:** The article describes the theoretical study of non-alternative vocabulary in linguistics. In this case, the emergence of non-alternative vocabulary, causes and thematic groups were studied.

**Keywords:** non-alternative vocabulary, phraseological unit, translation theory, text, pragmatics, linguoculturology, ethnolinguistics

**Аннотация:** Статья посвящена теоретическому исследованию безальтернативной лексики в лингвистике. В данном случае изучалось появление безальтернативной лексики, причин и тематических групп.

**Ключевые слова:** безальтернативная лексика, фразеологизм, теория перевода, текст, прагматика, лингвокультурология, этнолингвистика.

**Introduction.** Words that are impossible to compare with the foreign lexical concept in the process of scientific and practical change of a language and are distinguished only by comparing the lexical structure of one language with the lexical units of another language are called non-alternative lexicon. Non-alternative lexicon



has been studied several times in scholarly works on linguistics, translation theory, and linguistics, and its content has been interpreted differently by different researchers. Alternative lexicon is a complex, multifaceted phenomenon that, on the one hand, requires the study of assimilation in connection with the problem of lexemes, on the other hand, texts require a linguoculturological, pragmatic approach as a phenomenon mainly related to the translation of literary texts. That is why it is also considered a phenomenon related to translation theory. In order to determine the linguistic status of the irreplaceable lexicon, we first want to refer to the views and analyzes of some world and Uzbek linguists in this regard.

**Materials and Methods.** We include different groups of lexical units in the composition of non-alternative lexicons, but the most transparent layer of lexicon - realism - serves as the main material for research. Russian scientist G. V. Dedicating his research to the translation of Russian non-alternative lexicon into Norwegian, Shatkov was one of the first in linguistics and translation to use the term "non-alternative lexicon" and described non-alternative as "absolute or partial absence of alternative words in one language in another." An irreplaceable lexicon is one that is "ready" in the lexicon of another language in the same historical period, one that does not have a clear fit, a word or its meanings (own or portable). The author includes in the lexicon without alternatives: famous nouns, national realities, words with national expressive coloring, words involving subjective forms of assessment, words with portable meanings. The scholar mentions dialects, archaisms, imitation words, tajnis (word games) as a specific type of lexicon without alternatives [2, pp.57-58]. Non-alternative lexical units are words that express concepts and national specific realities that are specific to a particular period in human development [3, p.3]. Russian researcher G. V. Chernov identifies three types of non-alternative:

- 1) material - occurs when the subject or event does not exist in the life of the translators (people);
- 2) lexical-semantic - in the absence of a similar concept of a given object or phenomenon of objective reality;
- 3) stylistic (methodological) - when there is a difference in the lexical-stylistic features of the corresponding lexical unit in the original language and the language in which it is translated.

The reason why there is no concept in the language to be translated is because the subject itself does not exist or the meaning of the word in the translated language does not match the meaning of the word in the original language - all this is not important from the translation point of view. Perhaps it would be correct to study this phenomenon not as irreversible concepts, but as a difference in the content of lexical units.

In translation theory, an irreplaceable lexical term has emerged that refers to lexical units that express the specific realities of a country, such as history, culture, economy, and everyday life, that have no alternative in another language. Non-alternative lexicon refers to lexical units of a particular language that have no absolute or partial alternative to lexical units in another language. L. S. In his monograph, Barkhudarov also introduces a series of three major language units into the non-alternative vocabulary. The first category includes well-known names, names of



enterprises, organizations, media, geographical names. The second category includes realities - words denoting concepts and situations, events and objects that do not exist in the practical experience and real life of people who speak another language, and the third category includes random lacunae. This category of non-alternative lexicon may include, for some reason, lexical units of one language that are not found in the vocabulary of another language.

Deciding whether words denoting realities can be added to a lexicon without an alternative is not always an easy task, as an occasional translation alternative (which has yet to be translated into the lexical structure of the language to be translated and is used as a “potential” lexical unit in speech) can often shift to holistic lexical consistency. The timing of the transition of occasional compatibility to normal may not always be clearly defined. When a word is recorded in an explanatory dictionary of the language to be translated, the lexical units in the original language cease to be non-alternative. L. S. Barkhudarov also notes that the main issue for linguistics is whether a word becomes a unit of language (lexical content) or, if of secondary importance, a unit of oral speech. The author emphasizes that he uses the term lexicon without alternative only in the sense that this or that lexical unit does not have compatibility in the lexical structure of another language.

This category can also be studied as words and phrases that have no alternative at the stage of development of the same translation, meaning objects, processes and events. Vocabulary that has not yet been successfully adapted at the stage of translation into the target language belongs to the category of non-alternative (ie, temporary non-alternative). A lexicon whose alternatives in the language to be translated may be completely absent is a lexicon that falls into the category of non-alternative.

The absolute impossibility of finding conformity to an original word in a lexical translation without an alternative is a relatively rare phenomenon. He says that this phenomenon occurs when the word in the original means a purely local phenomenon that is inconsistent in the lives and perceptions of other peoples. The ability to correctly translate what is meant in the original text and the images associated with it implies a certain knowledge of the realities described in the play, mainly in the original language text. In country studies, comparative linguistics, and translation theory, this knowledge is described as background knowledge, i.e., accurate information about the realities of another country, other people, is necessary for the reader to understand the text fully and clearly, just as it is necessary for the translator. E. M. Vereshagin and V. G. Kostomarov interpret this knowledge as “common to the participants in the communicative process” [1, p.126].

**Results and Discussions.** In translation theory and practice, only the part of “background knowledge” relevant to other culture, country-specific events is important for the reader to understand the translated text perfectly. Indeed, in the lexical material of the Uzbek language, it is possible to distinguish a group of words that can evoke in the speakers of this language certain ideas that do not exist in other cultures and civilizations. For example, if the word "osh" in the Uzbek language gives rise to the idea of pilaf in some areas, people of other cultures may understand the word in the sense of jumping from a height, such words as apple, horse, word, flour.



Non-alternative lexicon is “lexical (phraseological) units that are not subject to constant authorial neologisms; semantic (conceptual) lacunae, broad semantic words used in the text in its broadest sense; the meaning is different types of complex words, which in translation are translated only by description or by various transformations. The second type of non-alternative lexicon related to pragmatic differences in the content of the corresponding units in the original and translated languages includes:

- 1) Types of deviations from the general norms of language: territorial and social dialects, jargons, slang, forbidden vocabulary, archaisms, as well as other types of collective deviations from the norms of common language: simplification (dialectisms, substandard vocabulary, inaccuracy in speech) and elevation (archaisms, poetisms) ;
- 2) originally preserved (used without translation) foreign language words (or phrases), as a rule, it is not difficult to elucidate their reference content, but at the same time, their pragmatic content cannot always be fully elucidated;
- 3) abbreviations, their pragmatic structure (position of letters or sounds) do not always correspond to the target language;
- 4) words with subjective evaluation suffixes;
- 5) pronouns;
- 6) imitation words;
- 7) associative lacunae, that is, certain additional associations that are formed in the minds of speakers of one language, but do not exist in the minds of speakers of another language. To a separate group of non-alternative lexicons, we can include well-known nouns and adverbs, the feature of which is that the non-alternative becomes referential or pragmatic, depending on which method is chosen when translating. In translation theory, traditionally, the following are included in the non-alternative lexicon: words denoting reality, temporary non-alternative terms, and random non-alternative words. It is clear from the descriptions of non-alternative lexicons in scholarly works on translation theory that the non-alternativeness of concepts understood from certain lexical units is due to cultural differences, which means that words belonging to the above groups should be studied as objects of linguistics.

An imaginary image without an alternative corresponds to an irreplaceable word. It is such an image that it has no relevance in a different cultural reality and, in turn, needs an in-depth interpretation of non-alternative vocabulary in foreign language audiences, as well as the use of a number of additional figurative and lexical techniques.

Thus, when we study and analyze works on translation theory and linguistics, we see that there is no uniformity among researchers in the definition of non-alternative. In some linguists, the definition of non-alternative vocabulary is general. They include in the lexicon all the words in the original language that have no alternative in translation. Other linguists have narrowly defined the concept of non-alternative lexicon to the level of a lexical unit representing national specific realities, i.e., words specific to a particular people, representing different types of material and cultural objects. It is clear from the generalization of the work on the theory of translation that realities are part of the lexicon without alternative, as one of its categories. The third party studies non-alternative vocabulary as a complex group that includes many categories, including realities.



Definitions of non-alternative lexicon proposed by linguists, translation theorists and linguists are generally consistent, the difference between them is that experts in the field of linguistics approach the concept of non-alternative lexicon from a didactic point of view and interpret the lexical units as necessary. The content of the non-alternative lexical unit, i.e. the internal structure of the word, is important for linguistics, and for translation theory and practice, the main criterion is the study of the means by which non-alternative lexical units are translated into another language.

**Conclusion.** Thus, lexicon without alternatives is an important, multifaceted linguistic phenomenon for language communication, literary translation, translation theory, text pragmatics, linguoculturology, ethnolinguistics. Such lexemes have their own semantic content, stylistic features. The complex study of non-alternative lexicon as a multi-layered group of lexical units, which is the subject of research in the theory and practice of translation and linguistics, allows us to more accurately describe the diversity of these language units, ways to translate them into other languages.

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## INTERPRETATION OF THE THEME OF WAR IN RUSSIAN AND UZBEK LITERATURE (ON THE EXAMPLE OF THE NOVELS BY U. KHASHIMOV AND Y. BONDAREV)

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**Abstract** It can be said that the war of the second half of the twentieth century became the main and actual topic of Russian and Uzbek literature. For this reason, the article discusses a number of ideas about wartime literature. Examples are analyzed in the works of U. Khashimov and Y. Bondarev.

**Key words:** World War, writers, real historical events, heroic-epic prose, Soviet people, soldier.

**Аннотация** – Можно сказать, что война второй половины XX века стала главной и актуальной темой русской и узбекской литературы. По этой причине в статье обсуждается ряд представлений о литературе военного времени. Примеры анализируются в работах О. Хошимова и Ю. Бондарева.

**Ключевые слова:** Мировая война, писатели, реальные исторические события, героико-эпическая проза, советский народ, солдат.

**Annotatsiya** – Aytish mumkinki, XX asrning ikkinchi yarmida o‘tgan urush rus va o‘zbek adabiyotining asosiy va dolzarb mavzusiga aylandi. Shu sababli ham maqolada urush davri adabiyoti haqida bir qancha fikrlar yoritilgan. Misollar O‘.Hoshimov va Y.Bondarev asarlari misolida tahlil qilingan.

**Kalit so'zlar:** Jahon urushi, yozuvchilar, real tarixiy voqealar, qahramonlik-epik nasr, sovet xalqi, askar.

**Introduction.** The theme of war is inexhaustible. More and more new works appear which again and again make us return to the fiery events of more than fifty years ago and see in the heroes of the Great Patriotic War what we have not yet understood and appreciated enough. At the turn of the fifties and sixties, a whole galaxy of names well-known to readers today appeared: V. Bogomolov, A. Ananiev, V. Bykov, A. Adamovich, Y. Bondarev. The work of Yuri Bondarev has always been dramatic and dramatic. The most tragic event of the twentieth century - the war against fascism, the inescapable memory of it - permeates his books: "Battalions ask for fire", "Silence", "Hot snow", "Coast". Yuri Vasilyevich belongs to the generation for which the Great Patriotic War became the first life baptism, the harsh school of youth.

**Literature review.** The concept of Yuri Bondarev's work was the theme of the high humanism of the Soviet soldier, his vital responsibility for our present day. The story "Battalions ask for fire" was published in 1957. In "Battalions ..." Yuri Bondarev managed to find his own trend in a wide literary stream. The author does not strive for a comprehensive description of the vivid picture of the war - he bases the work on a specific combat episode, one of many on the battlefields, and populates his story with





completely specific people, privates and officers of the great army. Bondarev's image of war is formidable and cruel. And the events described in the story "Battalions ask for fire" are deeply tragic.

**Analysis and Results.** The pages of the story are full of high humanism, love and trust in man. Even here, Yuri Bondarev began to develop the theme of the mass heroism of the Soviet people, later it was most fully embodied in the story "Hot Snow". Here the author spoke about the last days of the Battle of Stalingrad, about the people who stood in the way of the Nazis to death. In 1962, Bondarev's new novel, Silence, was published, and soon its continuation, the novel Two, was published. The hero of "Silence" Sergei Vokhmintsev has just returned from the front. But he cannot erase from his memory the echoes of recent battles. He judges the actions and words of people by the highest measure - the measure of front-line friendship, military partnership. In these difficult circumstances, in the struggle for the establishment of justice, the civic position of the hero is getting stronger. Let us recall the works of Western authors (Remarque, Hemingway) - in this literature, the motive of the alienation of yesterday's soldier from the life of today's society, the motive of the destruction of ideals is constantly heard. Bondarev's position on this issue leaves no room for doubt. At first, it is also not easy for his hero to enter into a peaceful rut. But it was not in vain that Vokhmintsev went through the harsh school of life. He again and again, like the heroes of other books of this writer, asserts: the truth, no matter how bitter it may be, is always alone [1].

"Military" prose went through several stages in its development. The first works about the Great Patriotic War were created during the war itself. These are B. Gorbатов's *Invictus*, *For a Just Cause*, V. Grossman's *The People Are Immortal*, A. Fadeev's *The Young Guard*, and others. Kazakevich, "In the trenches of Stalingrad" by V. Nekrasov, "Satellites" by V. Panova, etc.). It was she who determined the "face" and dynamics of the literary process, when writers assessed the events of the war years from the perspective of the victorious people. At the turn of the 60s of the 20th century, a qualitative shift was determined in the development of "military" prose, associated with the appearance in Soviet literature of such a remarkable phenomenon as "the prose of lieutenants". Speaking in 1966 at the session "Actual Problems of Socialist Realism", J.I. Novichenko singled out the repeated military cycle, attributing to it the works of Y. Bondarev.

The signs of this cycle were called bold and sharp details, images and details that are as close as possible to real front-line life (mainly to the everyday life of the war), the penetration "inside" of facts, psychologism, the depiction of events and human destinies in their contradictory complexity [2]. It should be noted that the movement of "military" prose from stage to stage did not at all deny the accumulated experience of the past. Here we should talk about continuity, the accumulation of traditions both in terms of problems, and in terms of art, and in terms of increasing attention to the inner world of a particular person in war. "It is wrong to see some kind of abyss that allegedly separates the two periods of development of "military" prose (we are talking here about the "peaks" of the development of prose about the war of 1946-1948 and the turn of the 60s. -L.Sh.), - the literary critic notes A.G. Bocharov, - be it the opinion that in the first post-war decade everything was basically bad, and then it became good,



or the opinion that, on the contrary, serious miscalculations appeared precisely at the turn of the 60s. It should be about continuity” [3]. So, the "forerunner" of the entire "prose of lieutenants" was the story of V. Nekrasov "In the trenches of Stalingrad." Note that the very expression "trench truth" was first used by A. Fadeev back in 1946 when discussing this particular story. Of particular note is the fruitful adherence to Sholokhov's traditions in depicting the Russian national character (the novel "They Fought for the Motherland", the story "The Fate of a Man") in the "military" prose of Y. Bondarev, K. Vorobyov, Vyach. Kondratiev [4]. The appearance of "lieutenants' prose" was due to the objective laws of the development of society and literature. Why did the front-line writers remain silent for so long? Why were their first "military" works written more than ten years after the Victory? Writers answer this question in different ways, but one can still discern a certain common position in their answers [5].

**Discussion.** People's writer of Uzbekistan, laureate of the State Prize of the Republic Utkir Khashimov is one of the representatives of the generation that entered literature in the 60s. He is the author of many interesting, original stories, novels and novels. U. Khashimov is also a talented publicist. His articles, devoted to topical issues of our time which have become a notable event in our social and cultural life. The works of Utkir Khashimov have two important features that made them captivating and gave them artistic appeal [6]. One of them was that the writer does not turn artistic creativity into a tool of primitive propaganda, does not proclaim slogans and exclamations about the urgent tasks of the time. On the contrary, in most of his works he strives for artistic coverage of important universal problems. Vanishing human values take the leading place in his prose. Along with the interpretation of topical social problems, the author in many cases skillfully displays very subtle psychological processes which is taking place in the inner world of the characters. A special place in the work of Utkir Khashimov is occupied by the novel "Between Two Doors" [7]. The writer is concerned not only with topical social issues of today, but is more concerned with eternal moral problems, the fate of a person, the secrets of his soul. Starting from the title, U. Khashimov tried to load the entire content of the novel with a serious philosophical meaning. In particular, calling it "Between two doors", the writer means the path of a person, passed by him from birth to death. According to the ideological philosophy of the author, this path, being complex and contradictory, requires great courage, will, knowledge and heroism from a person in order to pass it successfully [8].

This trend was clearly manifested in U. Khashimov's novel "Between Two Doors". This novel was published in Russian under the title Enter and Exit. And in critical literature, it is often referred to as "Between two doors", and this name is more consistent with the content of the work. The stage of maturity on the creative path of the writer begins with him. It was also warmly received by readers. The novel was recognized as one of the best works of 1986 and was awarded the Republican State Prize [1]. The novel "Between Two Doors" touches upon important problems of its time. The main characters of the novel are people who bore the brunt of the Second World War on their shoulders and courageously won it [9]. In particular, in the images of Arif-aksakal, Khusan Duma, Komil-tabib, Kimsan, "Black Aunt", Robiya, the dedication of the Uzbek people during the war was artistically embodied. In this work,



the author with high artistic skill, taking as a basis the storylines of several heroes, showed the historical fate of his people, the reversals of human destinies. This work was a great success and excited the minds of Uzbek readers. The writer was flooded with letters that came to him in the thousands. The problems raised by him stirred up public thought.

**Conclusion.** Over time, the work of Y.V. Bondarev takes on a more tragic character. Back in the 70s of the XX century, through the mouth of Vadim Nikitin, the author uttered prophetic words about the coming trials in Russia. At the turn of the century, the pain of the writer and his heroes for the fate of the country and the world intensifies, which is directly related to the events and processes taking place in modern Russia. But Y.V. Bondarev retains faith in Russia, in its spiritual potential, in the moral healing of man and mankind. The writer continues to live and work, remaining true to himself, his life principles and beliefs. In both works, with the appearance of a beloved girl, the dispute stops. These episodes from the story and the novel, like two drops of water similar to each other, differ only in the names of the characters. In the same way, two events very similar to each other are found in U. Khashimov's story "Earthly Matters" and in the novel "Between Two Doors". In the story "Earthly Matters", Khoja's mother, having changed her spouse during wartime, marries another person. This event causes bitter suffering in Hodja's soul and life. And in the novel "Between Two Doors" Muzaffar's mother - Rano, without waiting for her husband's return from the front, converges with Umar the lawyer. This story also leaves unforgettable traces in the fate and life of Muzaffar. Such episodes, wandering from work to work, harm their emotional effectiveness and persuasiveness.

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## **THE DEVELOPMENT OF SHORT STORY GENRE POETICS IN ENGLISH LITERATURE OF THE LATE XX – EARLY XXI CENTURIES**

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**Annotatsiya:** Maqolada ingliz adabiyotida zamonaviy qissaning janr sifatida rivojlanishini ilmiy tahlil qilish zaruriyati jahon adabiyotining muhim masalalariga aylanib borayotganini inobatga olib ingliz adabiyotida zamonaviy qissalar poetikasining rivojlanishi o'rganilgan.

**Kalit so'zlar:** qissa poetikasi, Grem Grin va Saymon Van Buy hikoyalari, ingliz adabiyoti, janr rivojlanishi.

**Аннотация:** Развитие современной поэтики короткого рассказа в англоязычной литературе и произведениях современных авторов коротких рассказов является фундаментальным моментом наших сравнительных исследований. Необходимость научного анализа развития современного короткого рассказа в английской литературе как жанра становится важной проблемой мировой литературы.

**Ключевые слова:** поэтика рассказа, рассказы Грэма Грина и Саймона Ван Буя, английская литература, развитие жанра.

**Abstract:** The development of contemporary short story poetics in English literature and works of modern short story writers are fundamental point of our comparative studies. The necessities of scientific analysis of advancement of modern short story in English literature as a genre are becoming important issues of world literature.



**Key words:** poetics of short story, Graham Greene`s and Simon Van Booy`s stories, English literature, development of genre.

**Introduction.** Short story is a narrow sense, a short piece of fiction that comprises unity of characterization, theme and effect. It points to show a single narrative effect with the greatest economy of means and paramount emphasis. It has deep-rooted history in all nations` literature. Writing style of short story has been changing over the years. In this research paper, we will discuss the development of short story in English literature. The writers mostly are searching information and news that happen in society and lives of people. Also, when we investigate contemporary literature, we cannot exclusively mark a few themes or settings. Since society changes over time, authors` point of view and writing style do see dramatic modification. Contemporary authors frequently take style and views from the writers who lived before them. As a matter of fact, contemporary literature put more emphasis on the events, actions, moods and literature of the past so as to make create the present`s atmosphere. Additionally, the technological advancements of the 21st century have led other writers to write about the future, usually to remark on the present and invoke self-analysis. [1]

As a broad sense, literature teaches us about life by exposing us to the lives of different people through their stories, and from these vicarious experiences, we learn important lessons and values. Literature teaches us humanity, to be sensitive and empathetic towards others. Also, literature makes a sense of present and learns about life on the world.

**Literature review.** Nowadays the leading role in English literature is played by narrative genres. It is noticed that there are more short stories, also like the texts of other small genres, than large genres as novels. Nowadays all over the world there are many investigations on clarification of mechanisms of relation between new and traditional aesthetics on different levels of postmodern literature poetics, creative processes and their stylistic development occurring in the prose of the late XX century are investigated and described, the principles of narrative construction of narrator`s "Self" and character`s "Self" in fictional and non-fictional texts are elaborated as well as the criteria of self-identification of speech are distinguished. However, on the agenda the problem of revealing the most consequential aspects of genre development of small prose in English literature is still remaining. [2]

British practitioners of the arts such as H. E. Bates, Sean O`Faolain, V. S. Pritchett stress that "a short fiction text must be exemplary, represent the world in brief compass and satisfy the reader`s craving for paradox and shape, his longing to perceive a dramatic pattern and significance in experience". Most of the analysts hold on meaningful openings and natural suitable endings. [3] Occasionally, a certain controlling image manages crucial unity which outstrips, as it integrates, the unity guaranteed by some more clear devices. It can be partially incorrect to consider that the genre requires the same degree of control and overall design as a sonnet.

**Analysis.** The inductive approach of the genre deals with the notion of brevity and analyses structural features of a short story. In this case, study of endings is the best way to understand this approach. Two analysts, Susan Lohafer and John Gerlach rely heavily on Edgar Allan Poe`s compositional principles and prevail approach that



ending or closure of a short story controls the beginning and the middle of story. As Susan Lohafer mentioned that the “genre is distinctively and expressively end-oriented, which is to say that short story writing is a supreme art form.” For her, the ending-oriented poetics of the genre enables it to have first and foremost an intense ontological impact on the reader. This means that a short story is prone to disturb, transfer and become part of our life with rhythms and patterns. Like the structure of a sentence, the pattern, structure, rhythm of a story at once oppose and fosters the reader’s impetus to closure. A story takes the reader’s attention more closely to the sentence level. [4]

Contemporary writers take the real events and characters as their hero or whereas write more fantastic stories. Technological advancement helps to investigate new areas for many writers and opens more places to go and learn different cultures. Also, scientific works are reflected in their writings that show new discoveries. [5]

Since the beginning of the 20th century, there has been in indication in much contemporary fiction a style of writing which may be most appropriately expressed as “poetic.” This genre is identified by a persistent and widespread use of figurative language, symbolism, imagery and other linguistic and structural elements traditionally more nearly connected with the method and characteristics of poetry than with those of prose. It applies language not only as a vehicle for communication but also as a weapon for attracting to the creative, theoretical, and esthetic sensibilities of the reader, as poetry does; it allows the writer to include dimension, depth and extension of meaning to his fiction of a sort which is impossible in ordinary prose. [6] If roughly employed, it can become monotonous and precious, making the reader crave for old-fashioned fiction of the variety which tells a dramatic story and conveys all of its thematic statement plainly on its surface; but if aptly conducted, it may produce a prose which is subtle, intense, and beautiful. Except in the fiction of such earlier nineteenth century short story writers as Edgar Allan Poe, Melville, and Hawthorne, the poetic style is not characteristic of much nineteenth century American fiction before Crane and James. [7] The most possible reason why it is not is that the widely popular varieties of fiction, both long and short were action-centered, the story or novel transacting its business primarily through a plot, to which other considerations were subordinated. Therefore, poetic style became more usable in writing short stories after the wake of realistic movement and also, the focal center of fiction had shifted from external action to character analysis and to the central drama of the mind and after the mode of realism had advanced beyond the Howellsian concept of writing about familiar material in ordinary language. [9]

In addition, a moot question is used frequently in short stories rather than novels, because it comprises brief events and characters and existing problems are solved in the blink of an eye in stories. James and Crane did use a moot questions in their writings. Another obvious reason is that while metaphorical dilations of language may be necessary for novelists, it is functionally useful to short story writers who strive to space peak meaning in restricted space. Poe said: “In the whole composition, there should be no word written, of which the tendency, direct or indirect, is not to the one pre-established design.” Chekhov said that the short story must be “brief, brief as possible. ...” that it would be better for the story writer “to say not enough than to say too much.” Kipling observed that a story “from which pieces have been raked is like a



fire that has been poked.” James noted in his book entry that he wrote stories in tremendously succinct and so that he created a little gem of bright, quick, vivid form. The impulse beyond economy, intensification, and compression of statement has pursued to rise in the short story, as has the attempt to reach psychological depth, to offer meanings extending toward the fundamental events which move the story forward. [10] Additionally, the modern story writer gains a extremely personal or subjective view of the world and often places it in his fiction in an imaginative and emotional manner. For these reasons, the modern short story has come to present essentially the same creative problems that the lyric poem poses, and it is therefore quite natural that many writers have resorted to the use of poetic devices to solve these problems. In fact, this trend, which is drawing the short story ever nearer to poetry, particularly in the precise and beautiful use of language has become so pronounced that even some years ago one critic flatly asserted that “no story of the present worth a second glance is without its poetic overtones.”[11]

Moreover, two broad and opposing classes of short stories, the lyrical and the mimetic, lessened our confusion which critical writing of short stories. Lyrical means to those which similar poetry in their stylistic and structural techniques and mimetic refers to those which attain their whole effect by representing in ordinary prose a chronologically straightforward series of events whose significance is comprised in and completed by the resolution of the events. This distinction infers a basic difference of intention in the two classes: both use action and character to develop a theme, but the mimetic story places the basic emphasis on narration, whereas the lyrical subordinates the narrative element to a secondary or even inconsequential role and takes the emphasis on dramatizing an idea or emotional situation, as the lyric poem does. It is also, noted that when the narrative element in a lyric poem accepts a very strong emphasis the narrative still serves only as a means to an end, the author’s aim not being to narrate a story but to show an idea in a dramatic context. Overlooking this difference of intention may lead to serious misunderstandings and faulty interpretations. As a rule, writers narrate a story that it leads to mimetic type which helps to express, but in lyrical story type he should add more poetic style, the linguistic dilations he employs will lead to function on a relatively ordinary pictorial or sensory level; that is, the imagery, figurative language, and symbolism will be a means simply for enlarging or improving the impression or effect he is searching to produce instead of presenting as the means for widening the story’s thematic implications and making the reader to read between or beyond the lines, as more complicated applications of the poetic style do. [12]

**Conclusion.** In addition, a moot question is used frequently in short stories rather than novels, because it comprises brief events and characters, and existing problems are solved in the blink of an eye in stories. James and Crane did use the moot question in their writings. Another obvious reason is that while metaphorical dilations of language may be necessary for novelists, it is functionally useful to short story writers who strive to space peak meaning in restricted space. Poe said: “In the whole composition, there should be no word written, of which the tendency, direct or indirect, is not to the one pre-established design.” Chekhov said that the short story must be “brief, brief as possible. ...” that it would be better for the story writer “to say not



enough than to say too much.” Kipling observed that a story “from which pieces have been raked is like a fire that has been poked.” James noted in his book entry that he wrote stories in tremendously succinct and so that he created a little gem of bright, quick, vivid form. The impulse beyond economy, intensification, and compression of statement has pursued to rise in the short story, as has the attempt to reach psychological depth, to offer meanings extending toward the fundamental events which move the story forward. [10] Additionally, the modern story writer gains an extremely personal or subjective view of the world and often places it in his fiction imaginatively and emotionally. For these reasons, the modern short story has come to present essentially the same creative problems that the lyric poem poses, and it is therefore quite natural that many writers have resorted to the use of poetic devices to solve these problems. This trend, which is drawing the short story ever nearer to poetry, particularly in the precise and beautiful use of language has become so pronounced that even some years ago one critic flatly asserted that “no story of the present worth a second glance is without its poetic overtones.”[11]

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## ON THE HISTORY OF GERMAN AND UZBEK FOLK FAIRY TALES

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**Annotatsiya.** Ushbu maqola nemis va o'zbek olimining xalq ertaklarining adabiyot janri sifatidagi ilmiy izlanishlari haqida.

**Kalit so'zlar:** xarakter, folklor, folklorshunos, milliy qadriyatlar, sehrlil ertaklar, strukturaviy tahlil, tasniflovchi, afsona.

**Аннотация.** В этой статье говорится о научных исследованиях немецких и узбекских учёных народных сказок, как о литературном жанре.

**Ключевые слова:** персонаж, фольклор, фольклорист, национальные ценности, волшебные сказки, структурный анализ, классификатор, миф.

**Abstract.** This article is about German and Uzbek scientist's scientific researches on folktales as a literature genre.

**Key words:** character, folklore, folklorist, national values, magic tales, structural analysis, classifier, myth.

**Introduction.** It is known that from the time of man's creation, the world around him has expressed its attitude to the events taking place in nature. This attitude was previously expressed through various imitations and sounds, actions, but over time they were replaced by words, songs and dances. People created legends about the emergence of the world, the whims of nature in the form of storms and floods, animals and plants, the emergence of mountains, praised the alpine heroes from the people, young men and women sang their love, wise and brave prince, beautiful and the wise princess, weaving fairy tales in the dream of a righteous king, embodying her past and life experiences in proverbs and teachings.

**Literature review.** Before the advent of writing, these units of speech were passed down orally from generation to generation among the people, called folklore, and it undoubtedly served as the foundation of the literature of all the peoples of the world. These units are also called national values because they reflect the views, attitudes and customs of each nation. In scientific terminology, folk oral art is called folklore, and it was first proposed in 1846 by the English scholar William Thomas, which means folk - folk and lore - customs, i.e. folk knowledge, folk wisdom [1]. In the broadest sense, the term refers to all examples of folk art, such as architecture, painting, pottery, national instruments, national costumes, music, dance, and oral literature.

**Analysis and Results.** One of the most deeply studied genres of folklore is fairy tale, which is the oldest and most widespread in the oral creation of all peoples. For example, let's take a look at the history of the creation of the fairy tale "Red Riding Hood", which is at the top of the list of fairy tales "repertoire" of grandmothers and parents around the world [2]. The first tales about the familiar red-cap girl were told



by French peasants in the fourteenth century. The plot of the fairy tale of this period is a bit "bloody", in which the wolf, which "cleansed" the grandmother, "leaves" the granddaughter, leaving the flesh and blood of the old woman [3].

Another fact that confirms the antiquity of the famous fairy tale is the image of a girl in a hat holding a basket, which is reflected in the exterior decoration of the palace of Jacques Kerr, which dates back to the XIV century in the French city of Burj. The earliest written source for this tale is the story "De puella a lupellis" by Fecunda ratis (full ship), a collection of religious and moral poems, proverbs and parables by Egbert de Liege, a tenth-century Liege religious school teacher.

Over the centuries, more than a hundred variations of this tale have emerged, the most important of which are those of Charles Perrault and the Grimm brothers. It was the Brothers Grimm's interpretation that included the character of the woodcutter who killed the evil wolf and rescued Red Riding Hood and her grandmother [4]. The 156 German folk tales were first published by the Brothers Grimm in 1812 in their original form and in 1814 in a reworked form for children under the title *Kinder und Hausmärchen*, later renamed the Brothers Grimm's Tales which is famous for. Indeed, inspired by the works of the above-mentioned writers and novelists, writers all over the world began to collect and publish fairy tales created in the countries where they were born and raised. Among these writers are Gerard de Nerval of Valu, Andrew Lang of Scotland, and Hans Christian Andersen of Denmark, who have done much effective research in this area [5].

Although the Grimm brothers have already proved clear similarities in the plot of European folk tales, throughout the nineteenth century folklorists devoted their research on the origin of fairy tales to shed light on commonalities in the oral creations of different peoples. The debate between supporters of the two views in this area is intensifying [6]. These were supporters of the School of Comparative Mythology, led by the German philologist Max Müller (1823-1900), and the latter by representatives of the School of Anthropology led by English ethnologist and culturologist, one of the founders of ethnology and anthropology, Edward Burnett Taylor (1832-1917). While philologists have sought to trace the origins of fairy tales through written sources to the culture of Indo-European peoples, particularly Sanskrit, anthropologists, by contrast, have adopted a program of research to study the general origins of human societies. Two different views on the same issue escalated the struggle between the parties. While representatives of the school of comparative mythology argued that fairy tales originated from myths, proponents of the second theory argued that they were created before myths and that they were remnants of a primitive structure in the form of a "wild state" [7].

**Discussion.** Along with the study of fairy tales, dozens of samples were proposed by scholars of the time to classify them, in which the fairy tales were classified mainly by plot. Most notable are the three-volume *Anmerkungen zu den Kinder - und Hausmärchen der Brüder Grimm*, a three-volume work by German scholars Johannes Bolte and Georg Polivka, published in 1913, 1915 and 1918. Under each fairy tale included in the Grimm collection in this book, its variants available all over the world were listed.



At the end of the last volume was a list of more than 1,200 books, including small collections of fairy tales, 1,001 nights, and large collections of 400 fairy tale texts by the Russian scholar Afanasyev [8]. If we talk about Uzbek folk tales, the fact that this genre has existed in our country since ancient times is proved by the use of the term "fairy tale" in the form of "mature" in the work of Mahmud Kashgari "Devonu lug'otit-turk", created in the XI century [9].

Although the term "fairy tale" is very familiar to the population of all regions of Uzbekistan, representatives of different regions have given different names to the genre of works specific to this genre. For example, in the districts and villages around Bukhara, as well as in other places where bilinguals (Uzbek and Tajik) are spoken, it is called "ushuk", the people of Tashkent say "chopchak", the people of Fergana say "matal", the people of Khorezm say "varsaqi", and in some areas there are such terms as "o'tirik", "tutal". Mansur Afzalov spoke about the process of studying this genre in our country [11].

Scientific attention to Uzbek fairy tales began in the second half of the XIX century and was studied by such scholars as Miyon Buzruk Salihov, Hodi Zarifov, Khodi Rasul, Buyuk Karimov. Later such scientists as K.Imamov, G.Jalolov, H.Razzakov, J.Yusupov continued this activity. Uzbek folk tales Imamov and M. Afzalov were of three types: animal tales, fairy tales and household tales. But as in the Aarne catalog, different opinions have been expressed on the issue of adding animal tales to the list of magical tales [12]. M.Afzalov says that fairy tales about animals have different works.

**Conclusion.** In folk tales we can meet all the issues of social, economic and everyday life of mankind, and in most cases it is not difficult to find fairy tales of the same content in the works of different peoples. Based on this, of course, the analysis of the research of folklorists, linguists, ethnographers and psychologists shows that the general way of life of people living in all regions of the world is close, human qualities such as kindness, courage, honesty are glorified in every nation and bad habits are condemned. However, despite the general similarities, even though these fairy tales show different elements of the culture of each nation, they are a value that is part of the spiritual heritage of that nation.

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**IMPACTS OF ZAMIN-M BIOPREPARATE ON INCREASING THE  
STORABILITY OF POTATO STORES**

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**Annotatsiya:** Mazkur maqolada Xorazm viloyatining (Inoyat-Jumaniyoz fermer xo'jaligi) sho'rlangan tuproqlarida yetishirilgan kartoshka tuganaklarini, Zamin-M (*Bacillus subtilis*, *Bacillus megaterium* va *Pseudomonas stutzeri* shtammlari asosidagi) biopreparati bilan ishlov berishning saqlash davriga ta'siri va saqlash davrini uzaytirish texnologiyasiga oid ma'lumotlar keltirilgan. Kartoshka tuganagini biopreparat bilan ishlov berib saqlash davrining harorat rejimiga bog'liqligi ko'rsatib berilgan.

Kartoshka tuganaklarini saqlashga oid tadqiqotlar Xorazm viloyati Urganch shahri «Xorazm baxt ta'minot» ma'suliyati cheklangan jamiyatida olib borilgan. Biopreparat bilan Ishlov berilgan kartoshka tuganaklari davolash davri 10-15 kun davomida harorat 19 °C da olib borilgan. Sovutish davri 14-18 °C haroratda har 2 sutkada 1 °C dan pasaytirib borilib, 32 kundan so'ng qishlash davriga o'tkazilgan. Qishlash davri harorat rejimi 3 °C ni va havo namligi esa 85-95% ni tashkil etgan.



Биопрепарат yordamida kartoshkani saqlash texnologiyasining davolash davrida preparatlar bilan ishlov berish uchun yangi purkagich qurilmaning texnologik chizmasi ishlab chiqilgan va undan foydalanish parametrlari asosida tavsiyanoma berilgan.

**Kalit so'zlar:** kartoshka, tinim davri, biopreparatlar, Zamin-M, davolash davri, saqlash davri

**Аннотация:** В статье приведена информация о влиянии биопрепарата Замин-М (на основе штаммов *Bacillus subtilis*, *Bacillus megaterium* и *Pseudomonas stutzeri* на клубни картофеля, выращенных на засоленных почвах Хорезмской области (фермерском хозяйстве Иноят-Джуманияз) и технологии повышения срока хранения после обработке. Показано, что срок хранения клубней с биопрепаратом зависит от температурного режима. Исследования по хранению клубней картофеля проводились в ООО «Хорезм Бахт ТаминоТ» г. Ургенч Хорезмской области. Обработку клубней картофеля биопрепаратом, проводили при температуре 19 °С в течение 10-15 дней. Период охлаждения снижали на 1 °С каждые 2 дня до температуры 14-18 °С, а через 32 дня переводили на период покоя. температура периода покоя составляла 3 °С, влажность 85-95%.

При усовершенствовании технологии хранения картофеля биопрепаратом была разработана технологическая схема нового опрыскивателя для обработки и дана рекомендация по параметрам его использования.

**Ключевые слова:** картофель, период покоя, биопрепараты, Замин-М, срок обработки, срок хранения

**Annotation:** This article gives information about the effect on the shelf life and the technology of prolonging the shelf life of potato tubers grown on saline soils of Khorezm region (Inoyat-Jumaniyaz farm) on the technology of storage of biopreparation Zamin-M (based on strains of *Bacillus subtilis*, *Bacillus megaterium* and *Pseudomonas stutzeri*) listed. The dependence of the storage period on the temperature regime of the treatment of potato tuber with biopreparation has been shown. Research on the storage of potato tubers was carried out in the limited liability company "Khorezm Bakht Taminot" in Urgench, Khorezm region. The treatment period of potato, tubers treated with biopreparation that was carried out at a temperature of 19 °С for 10-15 days. The cooling period was reduced to 1 °С every 2 days at a temperature of 14-18 °С, and after 32 days it was transferred to the winter period. The winter temperature regime was 3 °С and the humidity was 85-95%.

During the treatment period of potato storage technology using biopreparations, a technological scheme of a new spraying device for drug treatment was developed and a recommendation was made based on its operating parameters.

**Keywords:** potato, dormancy period, biopreparations, Zamin-M, treatment period, storage period.

**Introduction.** The Action Strategy for the Further Development of the Republic of Uzbekistan sets the tasks of " the widespread introduction of modern resource-saving agro-technologies in agricultural production." Implementation of these tasks, as well as in accordance with the Law of the Republic of Uzbekistan "On measures to expand the cultivation of potatoes and further development of seed production in the Republic, provided by the Decree of the President of the Republic of Uzbekistan PD-4704 dated 06.05.2020 The issues of increasing consumption and production of seed



potatoes in the country, expanding clusters and cooperation mechanisms in the potato sector and further state support for the introduction of modern technologies, as well as full satisfaction of domestic market demand for potatoes have been identified. The use of environmentally friendly technologies in potato growing is one of the important issues [1,2].

At present, the State Register of the Republic of Uzbekistan includes more than 100 varieties of potatoes. Preservation of tubers is the ability of potatoes to be stored for a long time in winter, spring and summer, which is an important feature of any variety on the farm [2].

The most important factor in reducing losses during potato storage is the quality of the potatoes: the larger it is, the more likely it is to be well-preserved, which is especially important for the storage of edible potatoes [10]. When using low-quality potatoes during storage, it is difficult to ensure good storage, even when optimal storage conditions are created [3-17].

Before storing potatoes, it is necessary to take certain measures during the growing season. The amount of precipitation during the storage period of potatoes is especially important during the ripening period [18,19].

Pisarev B.A. [20,21] states that lack of moisture can lead to delays in the growth and development of plants, which leads to an increase in mechanical damage to the potato tubers during cleaning and processing, increasing the incidence of tubers.

The factors that determine the shelf life of potatoes are the shelf life and the amount of loss, which is a biological feature of the potato after the end of the dormancy period (physiological dormancy period). Its duration is from 1 to 3 months, depending on the variety, growing conditions and storage conditions [22,23]. The dormancy period plays an important role in determining the technology of storage of potatoes. The mechanism of the dormancy period is associated with specific structural changes and metabolism of the cell. The main role in this is played by activators and inhibitors of growth and development, the amount of which is determined by the physiological state of the tubers.

During storage, the rate of life activity at the ends varies. For example, when the temperature drops to 4 ° C, the plants release 3-6 mg / kg of CO<sub>2</sub> during the dormant period. By the end of the dormant period, the buds in the nodules begin to grow, and the respiratory rate increases to 3-5 or more. However, the process of stratification and development of growth points, that is, their preparation for the next period of growth, will continue in peace. The same processes determine the nature of the dormancy period, ie the biological characteristics of the variety. Covering the damaged area of the tubers, the ability of the tissue to regenerate, is one of the main factors influencing the shelf life of potatoes. When combine harvesters and sorting mechanisms are widely used in potato harvesting, the amount of damaged stalks can increase by 15% or more. Damage healing is usually best done in growing or newly mined areas. This ability is not lost during the initial stages of storage. But then, as soon as the buds start to sprout, they disappear completely. To form peridermal tissue, the temperature should not be below 7 ° C and the air should be almost cool. When potatoes are harvested on time and initially stored for two to three weeks, new peridermal tissue is formed quickly when the air temperature is 10 ° C to 18 ° C and the relative humidity is 90-95%, as



well as well ventilated. It is recommended to spread the immature and uncooked skins in the area near the warehouse before placing them in the refrigerator. After 1-3 weeks, the product is placed in the warehouse for long-term storage. The exchange of starch and sugar is of great technological importance. Under normal conditions, mature tubers contain an average of 15-18% of starch and 0.5-1% of sugar. When the temperature is below 3 ° C, the sugaring of the starch increases and the bulk of it is used for respiration. At the same time, the opposite occurs, or the formation of starch from sugar. Although the accumulation of sugar does not increase when the tubers are kept in a cold place, later in a warm place some of the sugar is converted back into starch. In this case, the physiological health of potato tubers is maintained and the taste returns to normal. When stored in cold conditions, the temperature is lower, and the longer the potatoes are stored, the less the conversion of starch into sugar. In order to return to normal, the tubers are kept in a special warm and bright room for a few days, then placed in containers and taken to the point of sale. Another important feature of potatoes is that they do not emit as much heat and moisture as other vegetables.

This means that in order to store potatoes in moderation, the following conditions must be provided in the warehouse:

- release of metabolic products (heat, water, CO<sub>2</sub>) and provision of fresh air;
- rapid respiration, growth and rot protection;
- protect the nodes from exposure to temperatures below 0<sup>0</sup>C;
- storage of necessary organic matter and water in the tubers.

Important parameters of storage conditions (temperature) are formed by temperature and relative humidity. Different stages of the storage cycle require different conditions. Storage is divided into four stages:

- healing of damaged areas;
- cooling;
- storage;
- heating (before removal from the warehouse).

If the surface of the nodule is wet, the healing process begins with ventilation. Ventilation intensity and duration are determined by moisture content, weather conditions, type of storage and quality of harvested tubers. Ventilation lasts 2-4 days if collected after rain and stored in a pile, and shorter if stored in a container. Ventilation should be stopped as soon as dry dust appears on the surface of the tubers. Excessive ventilation delays the healing of the nodules, leading to weight loss and the development of dry rot. If the nodes are severely damaged by wet and brown rot, ventilation is continued in the damaged nodes until mummification begins. Once the tubers are dry, they need to be kept moist to allow them to heal and prevent excess water from being wasted. Temperatures of 15-18<sup>0</sup>C, high relative humidity and low CO<sub>2</sub> content are the best conditions for the nodes to pass this stage well. Adequate oxygen supply can be achieved by conducting pulsed ventilation and timely reduction of storage temperature and relative humidity. At the end of these, the temperature can drop to 8-10<sup>0</sup>C, usually during the two-week phase. The crucial stage in storage is cooling. In this case, the temperature should be lowered to the optimum, from 2-4<sup>0</sup>C, to avoid large differences.





**The purpose of the study.** The purpose of this study is to develop the storage technology in the Khorezm region through the processing of potato biopreparations.

**Object of research** Potato crops grown in different levels of saline soils of Khorezm region, Zamin-M (*based on Bacillus subtilis, Bacillus megaterium and Pseudomonas stutzeri strains*) biopreparation, Arizona and Evolutionary potato varieties.

**Research objects and methods.** The research was conducted in the limited liability company "Khorezm Bakht TaminoT" in Urgench, Khorezm region.

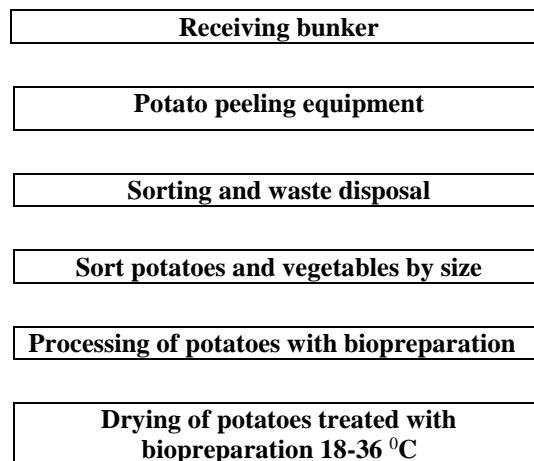
The potatoes were treated with bacterial preparations according to generally accepted methods, and according to this technology, the potatoes were stored for 14 days at a temperature of 18 °C in a warehouse. After the treatment period, the temperature was intensively lowered to 0.5-1 °C per day by slow lowering. All experimental options were then maintained for 1 month at a relative humidity of 90–95 % at 4 ± 1 °C, which is recommended for storage of edible potatoes [24].

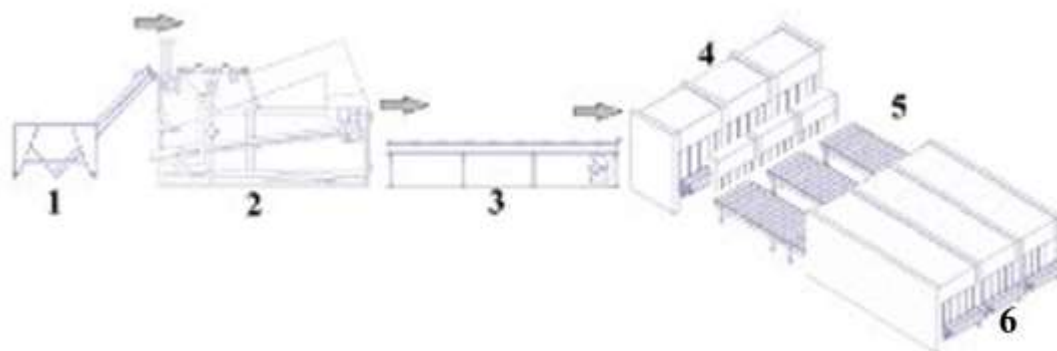
Experimental and control options were placed in the warehouse, processing was carried out at two different temperatures: treatment period 18 ± 1 °C -14 days and storage period 3 ± 1 °C for 21 days [25].

**Research results and their discussion.** As a result of the research, the results of storage of potato tubers were analyzed. At the same time, a scheme of improved technological stages was developed on the basis of Zamin-M biopreparation, which was found to be more suitable for the conditions of the study area than other drugs. The main difference between the technology of storage of potato chips on the basis of the biopreparation we offer is the use of a means based on live microorganisms, which differs from the existing traditional storage technologies. A new modern technology of the device for processing of potato tubers on the basis of biopreparation has been created. The advantage of this technology is the high potato storage.

The process of storing potatoes using biopreparation technology was carried out according to the following scheme: processing of potatoes with biopreparation → treatment → storage → wintering.

A schematic diagram based on potato storage technology using a biopreparation is shown in Figure 1.





**Figure 1. Technology of potato storage using biopreparation**

1st receiving hopper, 2nd cleaning, 3rd sorting and waste removal, 4th sorting equipment, 5th biopreparation sprayer, 6th drying device.

The technology of storing potatoes using biopreparation includes the following processes according to the system shown in Figure 1:

Receipt of raw material (potatoes) is transferred from the hopper (1) through the cleaner (2) to the sorter and waste washer (3). It is divided into fractions on the size of the sorting device (4) and then sprayed with the working liquid of the biopreparation in the ratio of 1: 1000 on the potato finish in the sprayer for processing of the biopreparation (4). Processed potatoes are dried at 30 °C with all sides closed. Ready-made potatoes are stored for 19–15 days at 19 °C. The cooling period was reduced from 14 °C to 1 °C every 2 days, and after 32 days it was transferred to the winter period. The temperature regime of the winter period is 3 ± 1 °C and the humidity is 85-95%.

It is actively ventilated, keeping the temperature and gas content between the air and the exhaust at the recommended level. This storage technology was carried out at Khorezm Bakht Taminoti LLC, Urgench, Khorezm region.

**Natural decrease in potato mass during storage** An analysis of some indicators of Arizona and Evolutionary potato varieties treated with Zamin-M biopreparation is given in Table 1 below.

1- Table.

Decrease in the natural mass of potato tubers during storage, %

Potato variety	Weight before storage, kg	Weight after storage, %	Given relative humidity, %
2021 year			
Evolution	3,5	91	85-95
Evolution (biopreparation)	4,7	92	85-95
Arizona	2,15	82	85-95
Arizona (biopreparation)	2,20	94	85-95

When studying the effect of 1: 1000 treatment of potato tubers with Zamin-M biopreparation on the reduction (%) of the natural mass of tubers during storage (April-July), it was observed that the Evolutionary potato variety was 1% higher than the control, while the Arizona variety Found to be 12% higher. Experience has shown that among the cultivated potato varieties, when used for the Arizona variety, the biopreparation showed the highest results.

Research on the storage of potato tubers was carried out in the limited liability company "Khorezm Bakht Taminot" in Urgench, Khorezm region. The treatment



period of potato tubers treated with biopreparation was carried out at a temperature of 19 °C for 10-15 days. The cooling period was reduced to 1 °C every 2 days at a temperature of 14-18 °C, and after 32 days it was transferred to the winter period. The winter temperature was 3 °C and the humidity was 85-95%.

Technological scheme of a new spraying device for drug treatment during the treatment of potato storage technology with the help of biopreparations was developed and a recommendation was made based on the parameters of its use.

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**SCIENTIFIC BASIS OF WATER RESOURCES AND THEIR  
EFFICIENT EXPLOITATION  
(on the example of Bukhara region)**

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**Annotasiya:** Maqolada global muammolaridan biriga aylangan suv resurslarining o'ta tanqisligi, Respublikamizdagi va Buxoro viloyatidagi sug'oriladigan yerlarning maydonlari, qishloq xo'jaligida ishlatilayotgan suv resurslarini iqtisod qilib ishlatish va ularning samaradorligini oshirish bo'yicha tavsiyalar keltirilgan.

**Kalit so'zlar:** Kollektor-zovur, suv resurslari, intensiv sug'orish, suv resurslaridan samarali foydalanish, tuproqlarning sho'rlanishi.

**Аннотация:** В статье даны рекомендации по острой нехватке водных ресурсов, ставшей одной из глобальных проблем, площади орошаемых земель в республике и Бухарской области, экономному использованию водных ресурсов, используемых в сельском хозяйстве, и повышению их эффективности.

**Ключевые слова:** Коллекторно-дренажная система, водные ресурсы, интенсивное орошение, рациональное использование водных ресурсов, засоление почв.

**Abstract:** The article provides recommendations on the acute shortage of water resources, which has become one of the global problems, the area of irrigated land in



our republic and Bukhara region, the economical use of water resources used in agriculture and increasing their efficiency as well.

**Key words:** Collector-drainage system, water resources, intensive irrigation, rational use of water resources, soil salinization.

**Introduction.** Further improvement of the reclamation of irrigated lands in the country, development of a network of reclamation and irrigation facilities, intensive methods of agricultural production, primarily water technologies, the use of high-performance agricultural machinery are the main tasks facing the industry today, - said Sh. M. Mirziyoyev [1]. The issue of water resources use is one of the most pressing issues facing not only the Republic but also the world community, which is a severe shortage of water resources. Preventing and combating soil salinization is one of the most complex tasks of protecting water and land resources. Soil salinity is one of the most characteristic features of arid landscape. However, we will focus on human economic activity, primarily soil salinization, which occurs as a result of improper irrigation of lands. Irrigation is a powerful factor that changes not only the soil cover, but also the entire landscape and landscape components (relief, surface and groundwater, vegetation, lithology, and).

**Materials and Methods.** When irrigation is carried out properly and the land is used wisely, soil fertility usually increases. However, geomorphological, hydrogeological and lithological conditions are not the same everywhere, except for climatic conditions. This situation requires a very careful approach to the regime and norm of irrigation of lands [5].

Improper irrigation, excessive water supply in areas with low groundwater flow leads to disturbance of the water balance and the rise of mineralized groundwater to the surface, resulting in salinization of the soil. Soil salinization is common in many countries in Asia, Africa, America, and even southern Europe where obikor farming is practiced. As a result of salinization of irrigated lands used in agriculture, they are still out of order. The ancient river deltas of Iran, Pakistan, Mesopotamia, Egypt, and other countries can be seen in many of the lands that were once fertile, saline, and saline deserts as a result of saline drainage ditches.

In some places, even re-(secondary) salinization is widespread. There are many examples of new irrigation systems built without drainage in North Africa, Central Asia, North America, Southern Europe and elsewhere, causing mineralized groundwater to rise and condense and previously saline soils to become saline. Currently, salinization in all regions of the country due to new irrigated lands is 2-3 thousand hectares per year.

### Level of salinity of irrigated lands in the Republic of Uzbekistan

**Table 1**

Name of regions	Total irrigated area. thousand hectare	Including (% of total area)					
		Strongly salted		Moderately salted		Low salted	
		thousand	%	thousand	%	thousand	%
<b>Karakalpakstan Republic</b>	504.0	95.4	18.9	182.7	36.3	154.8	30.7
<b>Andizhan</b>	265.0	0.0	0.0	6.52	2.5	7.4	2.8
<b>Bukhara</b>	274.6	6.26	2.2	58.75	21.3	169.9	61.8
<b>Jizzakh</b>	299.5	6.9	2.3	86.6	28.9	152.8	51.0



<b>Kashkadaryo</b>	507.7	13.8	2.7	51.1	10.1	177.7	35.0
<b>Navoi</b>	131.8	7.3	5.5	20.8	15.8	86.9	65.9
<b>Namangan</b>	282.6	0.9	0.3	7.8	2.8	17.3	6.1
<b>Samarkand</b>	378.1	0.03	0.0	0.41	0.1	9.50	2.5
<b>Surhandaryo</b>	325.7	1.57	0.5	48.0	14.7	65.7	20.2
<b>Sirdaryo</b>	292.2	6.9	2.4	56.5	19.3	220.6	75.5
<b>Tashkent</b>	390.9	0.15	0.0	4.14	1.1	8.9	2.3
<b>Fargana</b>	359.9	7.6	2.1	40.1	11.1	124.5	34.6
<b>Khorezm</b>	263.4	39.0	14.8	78.8	29.9	145.7	55.3
<b>Asross the country</b>	4275.4	185.81	4.3	642.2	15.1	1329.4	31.1

The table shows that 50.5% of the total irrigated area of 4,275,400 hectares in the country is saline to varying degrees. Soil salinity in irrigated areas drastically reduces crop yields. For example, weakly saline soils reduce yields by 10–20 percent, and strongly saline soils by up to 50 percent. The main causes of soil salinity in irrigated areas are as follows;

- a) insufficient consideration of the specific natural and soil conditions of lands in agriculture;
- b) untimely construction of drainage facilities in order to reduce the cost of construction of irrigation systems.

### Salinity of irrigated lands in Bukhara region.

**Table 2**

№	Districts	Area for general irrigation (thousand hectare)					
			Strongly salted (thousand hectare)	Moderately salty (thousand hectare)	Low salinity (thousand hectare)	General salinity (thousand hectare)	In term as of rest %
By region		274.60	6.11	57.70	170.47	234.28	85.3
<b>1</b>	Bukhara district	30.11	0.32	6.09	19.84	26.24	87.2
<b>2</b>	Vobkent	21.52	0.34	3.99	14.11	18.44	85.7
<b>3</b>	Jondor	32.92	1.60	8.10	20.32	30.02	91.2
<b>4</b>	Kogon	18.77	0.31	3.53	11.90	15.74	83.8
<b>5</b>	Olot	21.52	0.94	3.96	3.96	17.60	81.8
<b>6</b>	Peshku	22.78	0.28	4.63	13.98	18.90	83.0
<b>7</b>	Romitan	27.22	0.29	6.60	16.36	23.25	85.4
<b>8</b>	Shofirkon	28.35	0.69	7.31	25.8	24.86	87.7
<b>9</b>	Korakul	25.08	0.34	4.12	17.17	21.63	86.2
<b>10</b>	Karavulboz	19.29	0.08	3.45	17.9	14.97	77.6
<b>11</b>	Gijduvon	27.01	0.93	6.00	15.70	22.64	83.8

It is known from the table that the salinity of irrigated lands in Bukhara region is high in the country. The most tried and tested system of soil salinity prevention and saline leaching is to conduct deep vertical and horizontal drains, which are now widely used. In addition, collector-drainage networks are widely used to reduce groundwater levels and keep them at moderate depths and discharge them (8).

### Results and Discussions

When digging ditches, it is important to place the collector-ditch networks correctly in the layout. It is preferable to erect the ditch between the irrigation canals along the main slope of the land. As the ditches deepen, the effect of groundwater pressure also increases and leads to an increase in water flow in the ditch. The deeper



the ditch, the lower the groundwater level, and the longer the ditch's influence area. When calculating the distance between the ditches, a given modulus of the ditch water flow is considered. The distance between the ditches also depends on the depth of the ditches and the rate at which the groundwater level drops.

### The recommended range of ditches with a depth of 2-2.5 m

**Table 3**

Depth of groundwater before digging the trench, m	Interval of ditches, m		
	Soil with heavy mechanical content	Soil with moderate mechanical content	Soil with light mechanical composition
2-3	250-300	300-400	400-600
1-2	200-250	250-300	300-400
0-1	100-150	150-200	200-300

When digging ditches, attention should also be paid to the composition of the soil. As can be seen from the table, when digging ditches with a depth of 2-3 m of groundwater, their distance should be 250-300 m in soils with heavy mechanical content, 300-400 m in soils with medium mechanical content, 400-600 m in soils with light mechanical content. When digging ditches in areas with shallow water depth of 1-2, their distance should be 200-250 m in soils with heavy mechanical content, 250-300 m in soils with moderate mechanical content and 300-400 m in light soils. Digging ditches in areas where the groundwater level is 0-1 m and their distance is 100-150 m in soils with heavy mechanical content, 150-200 m in soils with medium mechanical content and 200-300 m in soils with light mechanical content. Bukhara region currently has a total of 8743.04 km of collector-drainage networks at the expense of the existing state and water consumers' associations to maintain the reclamation of arable lands, the specific length of which is 32.2 meters per hectare. In fact, this figure should be 45-50 p.meters across the region (7).

### The level of provision of Bukhara region with collector-drainage networks

**Table 4**

Districts	Irrigated area (thousand hectare)	Areas provided with ditches	Here	
			With vertical drainage wells (thousand hectare)	With closed ditches (thousand hectare)
By regions	274.60	224.02	41.31	15.5
Bukhara	30.12	28.37	6.41	1.5
Vobkent	21.52	14.64	8.50	-
Jondor	32.95	30.54	0.10	2.7
Kogon	18.78	17.30	7.65	2.3
Korakul	25.08	22.72	0.3	1.3
Korovulbozor	19.29	14.28	-	1.6
Olot	21.52	20.83	-	2.8
Peshku	22.78	13.80	3.20	1.0
Romitan	27.22	22.70	2.40	1.8
Shofirkon	28.35	22.96	7.75	0.5
Gijduvon	27.01	15.88	5.0	-

As can be seen from the table, 224.02 thousand hectares of land in the region are provided with drainage networks. Of this, 41.31 thousand hectares are provided with vertical drainage wells and 15.5 thousand hectares with closed-pit ditches. These ditches serve to reduce the groundwater level of irrigated areas, as well as improve



their reclamation status. Vertical drainage wells serve 8.50 thousand hectares in Vobkent, 7.65 thousand hectares in Kogan and 7.75 thousand hectares in Shafirkan districts.

### The degree to which irrigated lands are provided with collector-drainage networks

**Table 5**

Districts	Irrigated area (ming ga)	Areas provided with ditches	The permafrost length of about 1 hectare is p.m / hectare
<b>In regions</b>	<b>274.60</b>	<b>224.02</b>	<b>31.8</b>
By region	30.5	28.37	27.1
Vobkent	21.5	14.64	12.0
Jondor	33.0	30.54	37.5
Kogon	18.6	17.30	37.9
Korakul	25.1	22.72	46.9
Korovulbozor	19.3	14.28	22.4
Olot	21.5	20.83	55.8
Peshku	22.6	13.80	19.1
Romitan	27.3	22.70	27.1
Shofirkon	28.4	22.96	18.9
Gijduvon	27.1	15.88	12.8

### Conclusion

The length of inter-farm collector-drainage networks in irrigated areas is well organized in Bukhara district, Jondor, Alat, Karakul, Peshko districts than in other areas. According to the experiments, the existing unsatisfactory land areas in the region are considered to be highly saline, mainly due to the high salt content of the soil, as well as the fact that the groundwater level is close to the surface.

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**REFLECTION OF THE INTERNATIONAL RELATIONS OF THE  
REPUBLIC OF UZBEKISTAN IN THE ARCHIVE MATERIALS**

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**Annotasiya:** Ushbu maqolada mustaqillik yillarida O‘zbekiston Respublikasining xalqaro munosabatlari, xususan mintaqaviy va global ekologik masalalardagi hamkorlik aloqalarining arxiv hujjatlarida aks etishi ko‘rib chiqilgan.

**Kalit so‘zlar:** O‘zbekiston, Markaziy Osiyo, hamkorlik, ekologiya, konvensiya, strategiya.

**Аннотация:** В данной статье рассматриваются отражение международных отношений Республики Узбекистан в архивных документах за годы независимости, в частности, сотрудничество по региональным и глобальным экологическим вопросам.

**Ключевые слова:** Узбекистан, Центральная Азия, сотрудничество, экология, конвенция, стратегия.

**Annotation:** This article discusses the reflection of international relations of the Republic of Uzbekistan in archival documents over the years of independence, in particular, cooperation on regional and global environmental issues.

**Key words:** Uzbekistan, Central Asia, cooperation, ecology, convention, strategy.

**Introduction.** The main principle of international environmental cooperation of the Republic of Uzbekistan in this direction is, first of all, to create a healthy lifestyle in the countries of the region, to maintain a decent lifestyle for future generations and to protect the environment. At present, ecology and environmental protection **has** become one of the most important strategic tasks for any country. Because the life of man and the world of plants is directly connected with the earth, water, air, flora and fauna. Not only the state, but also every citizen is responsible for the conservation of the biodiversity of the region of the Central Asia, as well as the nature, flora and fauna of the world.

Within the framework of the priorities for the next five years, in the "Development Strategy", announced by the President of the Republic of Uzbekistan Shavkat Mirziyoyev, the sixth direction is aimed at finding solutions to global problems at the national and regional levels and coordinating all efforts in this direction, while the seventh one covers the tasks of ensuring peace and security in our country and the development of international cooperation [1].



**Results and discussion.** The main directions of international cooperation of our country in the field of ecology and environmental protection are defined by the foreign policy strategy of the Republic of Uzbekistan. The documents of the National Archive of Uzbekistan serve as a main basis for studying the essence of the main content of the processes in this direction.

In this archive, if we focus on the M-2, M-7, M-37, M-110 and M-114 funds of the independence period, we see that a lot of important information about climate change, the Aral Sea problem and other environmental problems and their solutions has been preserved. These data allow us to study the large-scale reforms implemented in our country during the years of independence, as well as international cooperation with foreign countries. At the same time, the role of the Republic of Uzbekistan in the years of independence as an equal subject of international relations, approaches to creating important areas and legal framework of international environmental policy, in particular, international law, implementation of provisions of national conventions, ensuring environmental security in Central Asia organizational, legal and socio-economic measures.

In particular, the Charter of the Uzbekistan-Kazakhstan, Uzbekistan-Kyrgyzstan, Uzbekistan-Tajikistan and Uzbekistan-Turkmenistan Friendship Societies, minutes of public meetings, announcements and other documents stored in the M-2 Fund of the National Archives of Uzbekistan, various documents from Central Asian countries to Uzbekistan reports on meetings with delegations, materials on economic and cultural cooperation between the Republic of Uzbekistan and the Central Asian countries serve as the main source in conducting scientific research. These materials belong to the Department of the Commonwealth of Independent States of the Ministry of Foreign Affairs of the Republic of Uzbekistan.

Also noteworthy are the reports of the National Association of International Relations of the M-2 Fund of the National Archives of Uzbekistan on the work done by the Department of CIS countries, professional relations and international organizations.

Cooperation between the Republic of Uzbekistan and the Republic of Georgia is of particular importance among the archival documents of the M-2 Fund of the Independence Period of the National Archives of Uzbekistan. A number of agreements on cooperation in the field of environmental protection have been developed between the two countries. On September 4, 1995, in Tashkent, the Government of the Republic of Uzbekistan and the Government of the Republic of Georgia signed a Memorandum of Cooperation in the field of environmental protection [3]. The memorandum consists of 13 articles.

The archival documents of the M-7 fund of the National Archives of Uzbekistan include reports on cultural cooperation between the Republic of Uzbekistan and the Central Asian countries, participation of the Ministry of Culture in various cultural conferences and other materials. In general, information belonging to various ministries and agencies in the Republic of Uzbekistan is a separate group of sources in the Central State Archive. These archives also contain valuable information on interstate cooperation in the humanitarian sphere.



Archival documents in the M-37 fund of the National Archives of Uzbekistan include agreements, records and reports signed by the Cabinet of Ministers of the Republic of Uzbekistan on trade, economic, scientific, technical, cultural and spiritual cooperation with foreign countries. In particular, there is a lot of information on the activities of the Ministry of Foreign Affairs of the Republic of Uzbekistan, the Ministry of Foreign Economic Relations, Trade and Investment, joint ventures of Central Asian countries with Uzbekistan, which allows to cover trade and economic cooperation with Uzbekistan. They contain a lot of valuable information about the development of trade and economic relations of Uzbekistan with the countries of the region, the inflow of investments, joint ventures and investment projects in priority sectors of the economy.

The archival documents of the M-37 fund of the independence period department of the National Archives of Uzbekistan include materials on resolutions of the Cabinet of Ministers of the Republic of Uzbekistan, diplomatic relations of the republic with foreign countries. For example, on May 18, 1993, the Republic of Uzbekistan ratified its rights and obligations under the Vienna Convention and the Montreal Protocol, and since 1994, the Uzhydromet Center has been regularly measuring the total ozone content. Information on this is reflected in the relevant documents.

Another important document among the archival documents of the M-37 Foundation is the ratification by the Oliy Majlis of the Republic of Uzbekistan on May 1, 1998 of the amendments to the Montreal Protocol in London and Copenhagen. The relevant documents reflect that these amendments came into force on 8 September 1998. In order to fulfill the obligations of the Convention in the country and to implement measures to regulate the removal of OEM, the Cabinet of Ministers of the Republic of Uzbekistan on January 24, 2000 No 20 approved the “National Program to Stop the Use of Ozone Depleting Substances”.

Cooperation in this area has been developing from year to year. The next step was taken by the President of the Republic of Uzbekistan on September 7, 2006 by signing the Law on Ratification of Amendments to the Montreal Protocol on Ozone Depleting Substances (Montreal, September 17, 1997) [4] and the Law on Ratification of Amendments to the Montreal Protocol on Ozone Depleting Substances (Beijing, December 3, 1999). Uzbekistan fully joined the ozone protection with the signing of the amendments in Montreal and Beijing in 2006 and their entry into force in 2007.

Among the UN organizations, the FAO – Food and Agriculture Organization has a special place. FAO's environmental activities are aimed at meeting the food needs of the world's growing population through the rational and efficient use of international natural resources. Founded in 1945, the FAO had 194 member states in 1996 [5]. Uzbekistan joined it in 2001. In 2014, the organization opened a representative office in Tashkent, and within the framework of the Hadley Program, which sets out an action plan until 2022, FAO supports the Government of Uzbekistan in three priority areas. Information about this can also be found in the archival documents of the M-37 fund of the Department of Independence of the National Archives of Uzbekistan.

The next agreement in the framework of international environmental cooperation, which is kept in the M-37 fund, is the Ramsar Convention for the Protection of Biological Diversity. The Convention on Wetlands of International Importance, which entered into force on February 2<sup>nd</sup>, 1971 in Ramsar, Iran [6] and entered into force in



1975, is aimed at protecting wetlands. In accordance with the Resolution of the Oliy Majlis of the Republic of Uzbekistan No. 278-II of August 30, 2001 “On accession to the Convention on Wetlands of International Importance as Habitats of Waterfowl”, the Republic of Uzbekistan acceded to the Ramsar Convention. This decision came into force on February 8, 2002.

Due to the biggest problem in agriculture, energy and industry since the independence – structural errors in the former Soviet Union, there is a lot of valuable information on complex environmental and ecological problems, air pollution, accumulation of toxic industrial wastes, pollution of water resources, declining access to clean drinking water, soil salinity and desertification, food security in the archival documents in the M-110 fund of the National Archive of Uzbekistan, State Statistics Committee of the Republic of Uzbekistan.

The documents of this fund reflect the ecological situation in the country in different years. Such negative consequences are manifested in many cases, especially in the Republic of Karakalpakstan, Khorezm region, Fergana and Navoi regions. If we focus on the problems of air pollution in the named regions, it is associated with an increase in the number of enterprises that emit large amounts of toxic gases into the atmosphere from year to year. For example, in the first years of independence, the number of such enterprises was 839, and by 2001, their number had risen to 1962. Most of the enterprises are located in densely populated, central cities of the country [7].

Another document signed by the Republic of Uzbekistan, the UN Concept on Biological Diversity, today focuses on the conservation of biodiversity in the countries of the world and their existing territories. According to the National Strategy and Action Plan for the Conservation of Biological Diversity of the Republic of Uzbekistan adopted in 1998, the main focus in this area is on improving the national legal framework and expanding the area of protected natural areas and developing existing ones. By 2000, the country's specially protected areas were 827,919 hectares, of which 133,177 hectares were forested. Today, protected areas cover about 40 percent of the country's flora and 70 percent of the world's rare species [8].

In the archival documents of the M-114 fund of the National Archives of Uzbekistan, the Committee for Nature Protection (now the State Committee for Ecology and Environmental Protection of the Republic of Uzbekistan), we can see the materials peculiar to the issues like first of all, to study the environmental problems in the country, the drying up of the Aral Sea, which has become a global problem today and the negative impact on human health and flora and fauna in the Aral Sea region, prevention of this man-made disaster, changing the social life of the population of the Aral Sea region, carrying out landscaping activities throughout the country, increasing the number of green areas.

Particularly, the United Nations Framework Convention on Climate Change of the Republic of Uzbekistan, the UN Convention to Combat Desertification and Drought, the Bonn Convention for the Protection of Migratory Species of Wild Animals, the Ramsar Convention for the Conservation of Biological Diversity, the Vienna Convention and the Montreal Protocol, ratification of the Basel Conventions and the participation of our republic in it, materials of reports on the work done on the signed agreements are worth attention.



Among the archival documents of the M-114 fund of the independence period department of the National Archives of Uzbekistan are documents related to the activities of the Central Asian Regional Environmental Center. Today, the Central Asian Regional Environmental Center is a leading regional knowledge center in the field of environment and sustainable development, recognized by national, regional and international partners in finding solutions to global environmental problems. The organization was established in 2001 by the governments of five Central Asian countries, as well as the European Union and the United Nations Development Program, in 1998 by decision of the 4<sup>th</sup> European Conference in Aarhus, Denmark [9].

**Conclusion.** In general, the foreign policy of the Republic of Uzbekistan during the years of independence as a full-fledged subject of international relations, in particular, the development of cooperation in regional and global environmental issues are reflected in the archival documents of the National Archives of Uzbekistan and they serve as an important resource in the study of issues in this area.

Indeed, the importance of analyzing the international relations of our country, especially environmental issues, is growing. After all, one of the main principles of the foreign policy of the Republic of Uzbekistan is to further strengthen socio-economic, cultural and humanitarian cooperation in the Central Asian region, as well as to ensure environmental security in cooperation with neighboring countries. Therefore, the main motto of the New Uzbekistan is to solve any problems that arise together with the Central Asian states in a constructive, mutually beneficial and equal manner.

In this regard, the concept of foreign policy put forward by the President of the Republic of Uzbekistan Sh.M.Mirziyoev, the Strategy of Actions implemented and the issues of the Development Strategy, which is a logical continuation of it, are recognized by the international community.

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## ECOLOGICAL ISSUES OF HOUSING AND URBANIZATION PROCESSES IN KHIVA KHANATE

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**Annotasiya.** Ushbu maqolada Xiva xonligida uy-joy qurilishi va urbanizatsiya jarayonlarining ekologik jihatlariga oid ba'zi masalalar tahlil qilingan. Unda turar joylar qurilishida tabiiy-geografik omillar muhim rol' o'ynagani, shahar infratuzilmasida suv ta'minoti va oqava suvlarni chiqarish tizimlariga e'tibor qaratilgan.

**Kalit so'zlar:** Xiva, iqlim, turar joy, shahar plani, suv ta'minoti, quduq.

**Аннотация.** В статье анализируются некоторые вопросы, связанные с экологическими аспектами жилищного строительства и процессов урбанизации Хивинского ханства. В статье акцентируется внимание на важной роли природно-географических факторов при строительстве жилья, водоснабжения и канализации в городской инфраструктуре.

**Ключевые слова:** Хива, климат, жилье, план города, водоснабжение, колодец.

**Annotation.** In this article some issues related to the ecological aspects of housing and urbanization processes in Khiva khanate are analyzed. The article focuses on the important role of natural and geographical factors in the construction of housing, water supply and sewerage system in urban infrastructure.

**Key words:** Khiva, climate, accomadation, city plan, water supply, well.

**Introduction.** As the climate in Khiva khanate was dry and hot and surrounded by deserts and sand, natural and geographical factors played a primary important role in the processes of urbanization in its territory. Indeed, in the development of cities, their location in the oases, water supply, protection from external threats have played a crucial role in ensuring life expectancy. In past centuries, the problem of water shortage disrupted city life in Old Urgench which had been the capital for many years, and Kat and led to their demise.

From ancient times, the population of desert areas has sought ways to keep rooms warmer in housing architecture. In order to do it, they tried to build houses as small courtyards, closed on all sides. Khorezm courtyards can be an example of this. Khorezm courtyards consisted of two parts (internal and external parts). There was a garden behind or around the yard, and poplars are planted along the canals and ditches. The group of summer rooms consists of high porches, facing more north and northeast. This porch (terrace) is much raised by the house and is designed to block the winding path as they are blowing and direct it to the yard.

The fact that one side of the porches is open, the winter rooms are opposite the summer rooms, which distinguishes them from the summer porches by their inferiority. Therefore, the architects paid special attention to maintaining the closeness of the room to the courtyard. One aspect that is of particular importance in the construction of oasis



housing is a large number of plantations of the maple tree. This tree gives coolness during the summer. The leading typological style in urban housing is defined by the construction of a long porch in this courtyard. In the city housing plan, it still remains.

**Materials And Discussion.** The local population of the Khorezm oasis has had a unique approach to housing construction. Due to the unique structure of each place, first of all, falling of sunlight was main feature, while the next case was to make the construction in which direction the wind blows.

Commenting on the construction of medieval houses in Khorezm, researcher E. Nerazik wrote that the structure of houses was designed primarily on the basis of natural climate conditions, and most importantly in such houses reflected the first signs of adaptation to nature, especially for the winter season [1]. Due to the fact that the Khorezm oasis consists of a desert zone, mainly “jingil” (a shrub growing in the desert, local people call it “yilgin”, “sozak”) was prepared from livestock and created a heating system in the winter. The small size of the winter kitchen, the small size of the doors and frames served to keep the heat in for a long time.

Architects explain why the Khorezmian settlements were cool in summer and warm in winter: the secret was in the unique design and location, especially the fact that the roofs of the awnings had a distinctive design. The porches faced north, receiving fresh wind currents and ventilating the room unhindered. It saved people from the summer heat. Geographically, northern winds blow only over Khiva in summer, while air currents move differently in winter. Wooden doors and shutters helped retain heat during the cold season [2]. Thus, the factors related to the natural climatic conditions of the oasis played a major role in housing construction, urban development and cleaning.

The city of Khiva, the capital of the khanate, is located at an altitude of 90 meters above sea level, in the southern part of the oasis, only 6 kilometers from the vast sand deserts. The urban climate was relatively variable, with hot summers and extremely cold winter. Research O. Shkapsky wrote that in Khiva khanate winter lasts three months, spring one and a half months, summer five months (from mid-April to mid-September), and autumn lasts two and a half months [3].

Regarding the climate of the khanate, the Russian geologist Gelmersen noted: “Khiva is located in the middle of the Central Asian region, surrounded by vegetationless sands, and has a continental climate. Cold winter begins in November or December, with temperatures dropping below -17 even -20 degrees on some days. Winter is followed by a short and dry spring from March, followed by a hot, almost rainless summer, during which daytime temperatures are above 28-30 degrees. The heat is replaced by a cool night in summer” [4].

Another fortress in the khanate – Hazarasp, although smaller than Khiva, was considered the strongest city in the state. The city was surrounded by a cotton wall, surrounded by a ditch full of water. There were many orchards around the city, especially those famous for their apples. New Urgench is much smaller than Khiva. The walls surrounding the city were completely ruined, and the city, with its industry and trade, played an important role in the khanate. The area of Toshovuz is equal to Khiva, surrounded by a wall. The cities of Shavat, Gurlan, Khojayli, and Kungrad are



the same size as the city of Hazarasp, and the walls surrounding them have been demolished.

Orientalist E.Ya. Kileveyn wrote about Kungrad: “Kungrad was located on the left bank of the Khan Canal and the Amudarya, and had a wide bank wall about 4 versts long between the right bank of the canal and the Amudarya. It approaches the river on both sides and forms an elongated rectangle with its banks” [5].

In the early 19<sup>th</sup> century, cities such as New Urgench, Khiva. Khazarasp, Dashovuz, Nukus, Kungrad, Khojaly were reconstructed, while in the late 19<sup>th</sup> century, the city of Petro-Alexandrovsk was newly built. Until the beginning of the 20<sup>th</sup> century, cities of Khorezm kept their traditional appearance. In the early twentieth century, the appearance of urban settlements began to change. Due to water shortage, people moved to surround the villages.

As a result of the development of urban life in Khiva, the inner (Ichan kala) and outer (Dishan kala) cities were formed. The historical topography of the city is not formed by natural landscapes (Ichan kala hill is located in the ring of living springs) and is not limited with only Khiva’s historical ties with neighboring settlements and other neighboring countries. The social structure and spiritual life of Khorezmians were also reflected in the construction of the city. One of the peculiarities of the city gates in Khiva is the presence of pools near them. The local people drank water from these pools and wells.

Water supply in the city has been regulated by canals flowing from the Amudarya. The Polvonyop canal was the main water supply canal of the city. The Polvonyop canal is divided into two large tributaries in the north-eastern part of the city, 300 meters from the city of Khiva – Akyop and Sirchali [6]. The Akyop stream flows out of the city, supplying water to the fields of the surrounding villages. Through the Sirchali stream, Dishon irrigated Rafaniq, Nurullaboy and Nurullobek gardens in the fortress. The Sirchali canal itself is divided into two streams from the center of Khiva. These were the Shikhs and the Humboz streams, which in turn were subdivided into sediments and supplied water to the lands of the city dwellings.

Pools were dug and water was collected to provide the city population with drinking water. These pools were dug mainly near the city gates, choultries, markets and intersections. At the beginning of the last century, the city had 14 large pools: the Great pool in Dishan kala (in front of the Ota Gate), the Garden pool (in front of the Bogcha Gate), the Big pool on the south-eastern side of Polvon Gate, Chitkar pool, Davlatyar Axund, Bol pool, saint Chilla, Sultan jeweler, Madaminkhan, Four Shahboz, Obdol bobo, Bazar pool, Dishan pool [7]. The area around the pool was surrounded by poplar, elm and mulberry trees, and was a shady, picturesque place. Water is poured into the ponds in the spring and stored until late autumn. The water in the pool was not wasted, but flowed in on one side and out on the other. That is why the water was clean and safe to drink at all times.

In addition to swimming pools, the city also has special freezers for water supply. In particular, such a freezer was built by Madaminkhan (1851-1855) in Nurullo Chitkar neighborhood. In the late autumn, as the air-cool and the pools flooded, ice was collected, wrapped in reeds, and stored in glaciers. With the advent of spring, they were thawed and used as drinking water.





In addition, in the Kutlug Murad Inoq madrasah, near the Four Shabbos mosque, there were large wells – “tagzamins” (sardobas). These suboils are full of water in all four seasons of the year, which has helped to provide the population with uninterrupted drinking water [8].

It should be noted that Khiva is a city of wells. Because it was considered normal for every house to have a well on the stage of the masjid-madrasah. Well water was consumed by the population, who irrigated livestock and even arable land. In short, the city has never experienced drought and water shortages. The water supply was perfect, signifying the continuation of ancient traditions.

Digging the well was more laborious and the work was mostly done by hand using a hoe and a shovel. In the villages, maple is planted around the wells. This is due to the climatic feature, the thick shade of maple ensured that the well water was cold in the scorching heat.

A map of Khiva drawn by engineer Nazimov in 1740 clearly shows the level and general appearance of the city. It clearly depicts the gardens, mills, wells and other topographic features around the city [9]. As the architect-scientist Abdusafi Rakhmonov noted, the city was built on a slope. This allowed the city to be supplied with water from the canal, as the “Khey-Wakh” well could not supply the city’s ever-growing population. The slope provided both inflow and outflow of water to all parts of the city. This is exactly what allowed the Khorezmians in the XVII century to have their own sewer system [2]. Wastewater from the city flow through the canal and was absorbed in the sands of the Kyzylkum deserts. According to the expert, regular cleaning of the city’s sewage system is the responsibility of citizens. To do this, every man had to come a few days a year. Those who escaped from this job were punished in public, and could even be expelled from the city.

It is known that in the khanate the chairmen supervised the exact execution of Sharia procedures, religious ceremonies. As part of this work, they also monitored the cleanliness and safety of the city. Each city and village had its own chairman, and the judge was appointed by the khan on the recommendation of the kalon. There is also a separate mirab for each quarter in the city. They involved diggers in the cleaning of canals and distributed water.

Indeed, in the infrastructure of the cities of the Khiva khanate the traditions of the past centuries were fully preserved. In particular, many constructions were carried out in Khiva during this period. Construction of mosques is developed in Khiva khanate. Mosques were built mainly in densely populated areas, in community centers. In large mosques, two or four open spaces are left in the middle of the roof. This served to keep the mosque light and clear the air, as the crowds gathered together making it difficult to breathe.

Central Asian cities have long been famous for their baths. Their construction, architectural style, the structure of the heating network is sharply different from modern bathrooms with special, waterproof walls. At the beginning of the XVII century there were 2 baths in Khiva. The first is an old bathroom, very simple in plan and heating network, built underground.

The second bathhouse which all the rooms of bathhouse are located underground was Abul Ghazi Bahodirkhan’s son Anushahon bathhouse. Built on the basis of precise



technology, the structure is comfortable and simple, this bathroom gives an idea of the construction of utilities in Khiva. The water was taken from a well dug specifically for the bath. The heating structure of the bathroom is very simple – a fire is lit in a special fireplace, from which the walls are also heated by pipes designed for the passage of smoke from the boiler. The rooms were heated by plume of smoke sent through the cleaners that passed under them [10]. The polluted water is discharged into the outskirts of the city through “gulbadavs” [6].

In April 2021, during the repair of roads in the territory of the Ichan-Kala museum reserve, between the Tashhovli Palace, the Mausoleum of the Three Saints, Muhammadamin Inoq and Dost Alam madrasas, buried several decades ago, a depth of 10 meters 60 centimeters, width about 1-1.5 meter well was discovered. According to the ancient tradition, the base of the well, that is the foundation part, is a wooden foundation made of mulberry or maple which is common in Khorezm conditions. The thickness of the wood is about 16 cm. The walls of the well are made of baked bricks measuring 25x25x6 cm. There are rhombic marks on the surface of the bricks [11].

In the past, the largest of these pits, which allow sewage to seep into the ground, was called the “basement” (sardoba). The suboil was also of two types, one of which was used for drinking and the other for carrying excess water underground. It is pumped out of the city through certain systems where water is prepared [12].

The study of such wells – the methods used by our ancestors to supply water to the whole city, to remove excess water from the city, to protect monuments from damage, will allow us to know how effective they are and show directions for future use of these methods.

**Conclusion.** It has been a necessary element in the history of architecture in Central Asian architecture for centuries. Its occurrence was greatly influenced by climatic conditions in the region. The specific climate of Khorezm (located near to the desert), the location of the population, influenced the development of cities and the shape of the housing. Summers here are very hot and winters are cold. In the oasis, as in the whole region, the architecture of each city and settlement has developed on the basis of natural conditions, weather, the economic and social life of the population. We can see that our people have long developed an ecological and traditional culture in housing construction, in the philosophical views of oriental scholars through their structural ideas and experiences.

It is not a coincidence that our ancestors dug canals between the deserts, as well as set up sensible sewer networks within the cities. This was done only to provide cities with irrigation and drinking water. The moisture in the permanent ditches created a certain microclimate, which allowed each settlement to manifest itself as a life-giving oasis.

In this regard, the city of Khiva is a unique region with a high density of attractions per square meter, not only of great history but also aesthetic significance. In the XVII-XIX centuries many beautiful architectural monuments, religious and secular buildings were built here. In particular, the Ichan Kala complex is famous not only for its historical monuments but also for its unique water supply and sewerage system, bathrooms, and other facilities with unique heating systems.



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### **STUDYING THE HISTORY OF THE FERGANA VALLEY DURING THE YEARS OF INDEPENDENCE.**

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**Annotatsiya:** Mazkur maqolada mustaqillik yillarida Farg‘ona vodiysida Shayboniylar davri tarixiga oid manbalar taxlil qilingan, tarixiy tahlil va tanqidiy yondashish asosida ilmiy ishlar orqali o‘rganiladi.

**Tayanch so‘zlar:** Farg‘ona vodiysi, Shayboniy sultonlar, tadqiqot, qo‘lyozma, tarixshunoslik, ilmiy tadqiqotlar.



**Аннотация:** В данной статье на основе объективности, исторического анализа и критического подхода исследуется вопрос налаживания исследований по истории Шейбанидского периода в Ферганской долине в годы независимости посредством научных работ.

**Ключевые слова:** Ферганская долина, султаны Шайбани, исследование, рукопись, историография, научное исследование.

**Annotation.** The article discusses the issues of researching the history of Shaybanids period in the Fergana Valley through scientific works based on objectivity, historical analysis, and critical approaches during the years of the state independency.

**Keywords:** Fergana Valley, Shaybani sultans, research, manuscript, historiography, scientific research.

**Introduction.** After gaining independence, radical changes took place in the coverage of the history of Uzbek statehood. New views and principles have emerged in the study of the history of Uzbekistan. Although no specific research has been conducted on the history of the Shaybanids ruling years in the Fergana Valley, some aspects of the subject have been highlighted in the works of some scholars.

**Literature review:** Books, articles, scientific works and dissertations published during the years of independence serve to enrich the historiography of the subject. B. Akhmedov's book "Lessons from history" based on historical sources contains information about the history of the Shaybanid period in the Fergana Valley. In the book "On the role of the Joybar lords in the socio-political life of the Bukhara Khanate in the XVI-XVII centuries" in this book, religious leaders such as Muhammad Islam, Khoja Sa'd and Tajiddin Hasan had large lands in Akhsikat and were ruled by officials appointed by the lords. The author also said that the governor of Fergana's property, Muhammad Amin, had asked the Jojbor Khojas for help in improving relations with the sultan, the supreme ruler Abdullah II. The article discusses the influence of Sheikh-ul-Islam on the removal of Momin Sultan from the Andijan governorship. In his article "On the date of the coming to throne of the Ashtarkhanids after the Shaybanids", the author states, based on the works "Tazkira-yi Muqimkhaniy" and "Tarikh-i olamoroyi Abbasiy", that after the death of Abdulmomin, the Kazakh khan Tavakkal conquered Tashkent, Aksi, Andijan. B. B. In his article "Manoqiblar - an important historical source", Ahmedov refers to the manaqib "Jame' ul-maqamoti Mahdumi A'zam" written by Hodja Abulbaqo ibn Bahauddin, and says that the work is rich in political, socio-economic and geographical information of the valley during the Shaybanid period. Shaybani sultans Kochkunchikhan, Janibek sultan, Ahmad sultan, Kepak sultan, Dostmuhammad sultans marched on Fergana Kasan, Sultan Saidkhan and Suyunchikhojakhan fought for Aksi, Andijan, as a result of which the tragedies that befell the people were described. The article says that there was a struggle between the Kyrgyz of Fergana and that some Kyrgyz tribes invaded the Safedbulak district of Chust. B. Akhmedov notes that in the mannequin "Jome' ul-maqomoti Mahdumi Azam" among the geographical information there is valuable information about the Fergana Kasani and the Kyzylrabot area of Akhsikat.

**Materials and Methods.** Among the studied literature, the works of S. Jalilov are also important. Several authors' treatises examine the struggle between Shaibanikhan and Babur Mirza, the occupation of Fergana by the Shaybani army, and the activities



of the Mongol emirs in the valley. Referring to such sources as "Boburnoma", "Shayboniynoma", "Tavorix-i guzida - nusratnoma", the scientist tried to restore the image of Andijan at that time. In addition to scientific innovations, such as the creation of a road map out of the valley, Babur Mirza escaped the persecution of the army in the alliance of Shaibanikhan and Ahmad Tanbal. S.Jalilov Shaibanikhan notes that the destruction of the valley cities in 1504 was exacerbated by destruction. For example, he noted that the city of Andijan was completely destroyed. In our opinion, it is impossible to agree with this opinion. The reason for this is that the capital of the Saidiya state, which existed in Fergana between 1511 and 1514, was Andijan. In "Thoughts on Babur" the author mentions that Shaibanikhan ruled his son Janibek sultan in Andijan. In fact, Janibek is the son of Sultan Shaybanikhan's uncle Khoja Muhammad Sultan, that is, his cousin.

A.Zamonov's work "Army structure and military management of the Bukhara Khanate", dedicated to the Shaibani period, deals with political processes, administrative-military positions and their tasks, army formation, military training, methods of warfare. This masterpiece also contains information on the subject under study. The conquest of Fergana by the scholar Shaibanikhan and the events that took place after his death until Abdullah conquered the valley in 1583 are not mentioned. Speaking about the centralization of the Bukhara Khanate, the author did not comment on Fergana, giving the property of Suyunchikhoja and his descendants as Tashkent. When A.Zamonov informed about the composition of the army of Navruz Ahmadkhan and his descendants, they did not pay attention to the fact that they included valley troops.

**Results and Discussion.** In the work of R. Shamsiddinov and A. Ishakov "Excerpts from the history of Andijan" there is information about the first quarter of the XVI century in the valley. The book contains information about the struggle for the throne of Babur and his brothers Jahongir, Nasir, their relationship with the amirs in the valley, the fate of Ahmad Tanbal in Andijan, the conquest of Fergana by Shaibanikhan. The play examines the activities of the Mongol khan Sultan Saidkhan in Andijan during the reign of Sultan Shaybani Janibek, 1511-1514, on the basis of historical sources. The authors limit the coverage of Andijan's history to the activities of Babur Mirza and Sultan Saidkhan. In his monograph on the history of Uzbek statehood, Azamat Ziyov also spoke about the conquest of the Fergana Valley by Shaibanikhan. The author notes that with the conquest of Fergana in 1504, the issue of the conquest of Movarounnahr by the Shaybanis was resolved.

In her dissertation on "Relations of the Bukhara Khanate with the Kazakh and Yorkend khanates in the second half of the XVI century" G.Sultanova fled to Kashgar after the defeat of Andijan governor Mumin Sultan Abdullah II. Also, based on the author's "Abdullanoma", the Kazakh sultans Shigaykhan and his son Tavakkal were given the tribute of Khojand region, the activity of Mavlono Lutfulloh Chusti of the valley in spreading the rules of Islam among the people of Dashti Kipchak Abdurashidkhan's treatment has been correctly analyzed on the basis of historical sources. Although the scholar mentions that in 1594 Abdullah Khan II marched against the Yorkent khanate, he did not mention that the army moved through the cities of Aksi, Andijan, Margilan, Osh and Uzgen in the Fergana Valley.



K.Rajabov and O.Ergashev's pamphlet on the activities of the Shaybani ruler Ubaydullakhan embodied Abulgazi Ubaydulla Bahodirkhan as a skilful politician, master of military art, researcher, poet and patron of scientists. It is said that Ubaydullah learned mysticism first from Mawlana Muhammad Qazi and after his death from Mahdumi Azam Qasani, a student of the valley. The authors did not comment on aspects of the Shaybani ruler's activities in the Fergana Valley.

B. Mirzaev in his pamphlet "Ubaydullah - the ruler of the Shaybanid state" based on the above work of K. Rajabov and O. Ergashev. When the author thinks about the Battle of Jam between Ubaydullah and Shah Tahmasp on September 25, 1528, Navruz Ahmadkhan, the son of Sevinchkhojahan, did not mention his participation in the Shaybani army with the soldiers of Tashkent and Fergana.

The fundamental work "History of Uzbekistan (in the first half of the XVI - XIX centuries)" published under the editorship of D. Alimova is one of the great achievements in the study of the history of our country. This study, based on primary historical sources, is of great importance in the study of the history of the Shaybanid period. The materials written by R. Mukminova for the first chapter of the work contain some information about the history of the Shaybanid period in the Fergana Valley. It is mentioned by the author that Shaibanikhan conquered Fergana in 1503. In our opinion, Shaibanikhan did not completely subdue the valley in 1503. The valley was left under the rule of Ahmad Tanbal, who recognized his rule. After the revolt of Ahmad Tanbal, in 1504, Fergana was completely captured. The next information about the history of Fergana in the Shaybanid period in the work consists of short notes about the activities of Dost Ahmad sultan Axsikat, Muhammad Amin sultan, who were the children of Navruz Ahmadkhan, as the governor of Andijan. The scholar did not pay attention to the role of the Fergana Valley in the struggle between Abdullah II and Bobo Sultan, the looting of the Kazakh Sultan Tavakkal in Tashkent and Fergana.

Academician D. Yusupova's article "Manuscripts on the history of the Fergana Valley in the XVI-XVIII centuries" there is talk of manuscripts. The article includes Tawarikh-i Guzida Nusratnama, Fayzullah Ruzbehan's Mehmonnomai Bukhara, Bina'i's Shaybaniynoma, Muhammad Salih's Shaybaniynoma, Abdullah Ibn Muhammad Ibn Ali Nasrullahi's Zubdat al-asar, Hafiz Tanish ibn Mir Muhammad al-Bukhari's "Or" Sharafnomayi shokhiy ", Muhammadyar Ibn Qatagon's "Musahhir al-bilod ", Khojamqulibek's "Tarihi Kipchakkhoni "contain important information about the history of the Fergana Valley during the Shaybanid period, and the study of these works is important in the study of the valley's history.

I.Kholbekov's article "Establishment of Sultan Saidkhan's rule in the Fergana Valley" examines the situation in the Fergana Valley during the political and military tensions that began after the death of Shaibanikhan and the transfer of power to one of the Mongol princes Sultan Saidkhan. Zahiriddin Muhammad Babur's recapture of the throne of Movarounnahr and his great influence on the political changes in the Fergana Valley are based on the work "History of Rashidi".

**Conclusion.** Basing on the above mentioned, it should be noted that the research conducted during the years of independence in scientific research on the history of the Shaybanids period contains some information about the analysis of political processes in the Fergana Valley. They include the inclusion of Fergana in the Shaybanid state, the



sultans who ruled the valley, and the role of Fergana in the efforts to establish a centralized state led by Abdullah II. However, there are also some chronological errors and confusion in the description of historical events. This requires a critical approach to the above research.

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## THE ROLE OF PROPAGANDA IN THE EXPLOITATION OF THE ECONOMY OF THE UZBEK SSR

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**Annotatsiya:** Maqolada 1953-1956 yillarda O‘zbekiston SSRda Sovet hukumatining iqtisodiy siyosati targ‘iboti haqida so‘z boradi. Asosan xo‘jalik tarixiga e‘tibor qaratilgan bo‘lib, shunga mos ravishda VKP (b) MK va O‘zbekiston KP MK tomonidan agrar siyosatni ishlab chiqish bo‘yicha chiqarilgan qaror va ko‘rsatmalar berilgan. Bundan tashqari, maqolada O‘zbekiston SSR xalq xo‘jaligining rivojlanishi birlamchi va ikkilamchi manbalar hamda adabiyotlar asosida ham tanqidiy va tahliliy jihatdan tadqiq etilgan.

**Kalit so‘zlar:** O‘zbekiston SSR, targ‘ibot, VK(b) MK, paxta, iqtisod, agrar siyosat, kolxozlar.

**Аннотация:** Статья посвящена пропаганде экономической политики советского правительства в Узбекской ССР в период 1953-1956 гг. Основное внимание в работе уделено экономической истории, исходя из этого, в работе приводятся постановления и инструкции по развитию аграрной политики, изданные ЦК ВКП(б) и ЦК Компартии Узбекистана. В статье критически и аналитически рассматривается вопрос о развитии народного хозяйства Узбекской ССР на основе первичных, вторичных источников и литературы.

**Ключевые слова:** Узбекская ССР, пропаганда, ЦК ВКП (б), хлопок, экономика, аграрная политика, колхозы.

**Abstract:** The article deals with the propaganda of the economic policy of the Soviet government in the Uzbek SSR during the periods 1953-1956. The work focuses mainly on economic history and accordingly contains resolutions and instructions on the elaboration of the agrarian policy issued by the Central Committee of the CPSU (b) and Central Committee of the Communist Party of Uzbekistan. In addition, the paper critically and analytically examines the development of the Uzbek SSR's national economy on the basis of primary and secondary sources and literature as well.

**Keywords:** Uzbek SSR, propaganda, Central Committee of the CPSU (b), cotton, economy, agrarian policy, collective farms.

**Introduction.** Propaganda of the economic policy of the Soviet government in the Uzbek SSR in 1953-1956 was considered an important task. In particular, one of the newspapers published at that time wrote about it: The task of party and Soviet organizations is to lead this selfless struggle of rural workers, to ensure the full and effective use of all labor and technical resources available to collective farms, MTS and state farms, to organize all means and forms. mass political and organizational work is better than ever." [1]





**Materials And Methods.** In Soviet times, cotton was considered as the basis of the economy of the Uzbek SSR. Even during the Second World War, the Soviet government began efforts to increase the amount of cotton raw materials in the republic. Specifically, in the Resolution of the Central Committee of the CPSU (b) of March 6, 1944 "On the work of the Central Committee of the Communist Party of Uzbekistan", the political leadership of the republic was sharply criticized about the state of cotton growing. The document says that "the Central Committee of the Communist Party of Uzbekistan forgot that Uzbekistan is the main cotton base of the country, underestimated the cotton issue, and this was the main reason for the sharp decline in cotton production in recent years." On July 14, 1945, after the end of the war, a joint resolution of the Central Committee of the CPSU and the Central Committee of the CPSU "On measures for the restoration and development of cotton growing in Uzbekistan" was adopted. In it, the Soviet government demanded that the political leadership of the Uzbek SSR "ensure the further development of cotton growing in the future." In September 1945, the XII Plenum of the Central Committee of the Communist Party of Uzbekistan demanded that all party and Soviet organizations of the republic organize the implementation of decisions of the central government.[2]

**Results And Discussion.** In the Resolution of the Cabinet of Ministers of the USSR and the Central Committee of the CPSU (b) dated February 3, 1948 "On the mistakes of the Central Committee of the Communist Party of Uzbekistan and the Cabinet of Ministers of the Uzbek SSR in 1947", the central government once again subjected the leadership to harsh criticism. As a result, these decisions of the Soviet government in the post-war period and other decisions taken by it under pressure on the political leadership of the republic changed the trend of economic processes in Uzbekistan and strengthened the monopoly of cotton in agriculture. However, the center did not take into account the limited economic, human and material resources of the republic. In consequence of an overly ambitious plan for the development of cotton growing in Uzbekistan, the set goals were not fulfilled in 1949 and 1950. The development of cotton production was achieved by increasing the areas allocated for cotton. The increase in acreage under cotton was achieved by reducing the private land holdings of ordinary people and their households. In Soviet times, plans for cotton were extremely burdensome, and collective farmers could not implement them. In 1945-1950, those who did not implement the cotton plan were prosecuted, and some were persecuted.[3] In 1953-1956, other methods of growing cotton began to be used. The most effective of them were propaganda measures aimed at developing cotton growing in cotton fields and increasing cotton yields.

In the 1950s, the task of the primary party organizations of the collective farm, as well as agitators and propagandists, was to mobilize collective farmers to obtain a high cotton harvest. It was often repeated in the newspapers of that time that an important task of party organizations was to mobilize cotton growers for high labor productivity with the help of all kinds of mass agitations.[4]

On September 3-7, 1953, the next plenum of the CPSU Central Committee was held in Moscow. This plenum is historically known as the September plenum of the Central Committee of the CPSU. At this plenum, a resolution was adopted "On



measures for the further development of agriculture in the USSR." This decision became the main guideline in the economic sphere of the Uzbek SSR in 1953-1956. After the XI Congress of the Communist Party of Uzbekistan, a lot of work was done in the republic to create new and strengthened joint ventures. The first party organizations were created in almost all collective farms, and in 1000 of them there were elected party bureaus. There was such a creation of 2,450 parties, including 1,180 in collective farms. The primary parts of the MTS organization have grown and strengthened organizationally, the composition of the secretaries has strengthened, more than half of them had higher and illegal higher education.[5]

The XIX Congress of the Communist Party of the Soviet Union set tasks for the Soviet people: Further development of the economy, providing an abundance of food products and raw materials for light industry in the shortest possible time, ensuring unconditional fulfillment of the main tasks in agriculture, gradual increase in the yield of all agricultural crops and an increase in the number of livestock, simultaneously increasing their productivity, increasing the commodity productivity of agriculture and animal husbandry, radically changing the work of MTS and collective farms, strengthening the social economy of collective farms. Therefore, the propaganda of the decisions of the XIX Party Congress, explaining them to the population and mobilizing the attention of workers for its implementation were considered as the most important and priority task facing the press as the most important means of influencing the masses.[6]

The press played a huge role in fulfilling the tasks set by the party and the Soviet government to agriculture. Editorial office of the Kaganovich district newspaper "Victory" of the Ferghana region has done a great job in promoting the resolution of the September plenum of the Central Committee of the Communist Party of the Soviet Union "On measures for the further development of agriculture of the USSR". For example, the newspaper was published according to a strict schedule approved by the regional party committee. Since the publication of the resolution of the September plenum of the Central Committee of the CPSU until the end of 1953, 316 messages were printed on the pages of the newspaper. Of these, 125 reports and articles were published on agriculture, 65-on cotton growing, 39-on the development of animal husbandry, 9-on vegetable growing, 28-on improving the level of operation of tractor stations. These reports and articles are devoted to the development of diversified agriculture, the socialist race for the abundance of agricultural products, the promotion of the achievements of advanced Soviet agrobiological science, agricultural innovators and advanced agricultural cooperatives that produce a plentiful harvest of cotton and other agricultural crops. Every year, special attention was paid to popularizing the methods of work and increasing the activity of the primary party organizations of the collective farm.[7]

The decision of the September Plenum of the Central Committee of the CPSU caused serious attention of the periodical press. For example, the newspapers "Stalinskiy put" and "Stan Yuli" in Kokand publish 181 articles and a note to promote the topic within three months after the announcement of the plenum's decision. In addition, in order to promote the issues raised at the plenum, the following contests are announced among journalists: "Agriculture is our blood business" in the issue of



October 9, "Expand the fight for quality products" in the issue of November 13, "How to be served" in the issue of December 5. A total of 13 contests for the decisions of the meeting have been published.[8]

Overall, materials devoted to the promotion of economic policy were published in almost all newspapers of the country. In general, materials devoted to the promotion of economic policy were published in almost all newspapers of the republic. For example, in 1953, the Kuvasoy district newspaper *Leninskoe Znamya* published a program for the further development of agriculture for the development of the economy“, ”Kuvasay workers are determined to apply for the tasks set by the Plenum of the CPSU Central Committee“, “The Path to abundance“, “Patriotic duty of industrial workers“, “An obligation unconfirmed by the case“, “The interests of the state should be above all“, “criminal mismanagement“, “start preparing for next year's harvest“, “bistro rebuilds the work of MTS” and “winter tractor repair is an important task of MTS.”[9]

**Conclusion.** In September 1953, the plenum of the Central Committee of the CPSU was held, which was of great importance in the struggle of the party for the rise of agriculture, for the Leninist principles of economic management. In the resolution of the plenum, with Leninist directness and integrity, major shortcomings and mistakes in the management of agriculture were revealed, a specific program for the development of collective and state farm production was developed. The Central Committee called on the party and the people to ensure that, while developing heavy industry in every possible way, as the basis of the entire national economy, in the shortest possible time to ensure a sharp increase in the production of agricultural products for the population, raw materials for washing.[10]

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## A HISTORY OF NEWSPAPER STYLE

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**Annotatsiya.** Maqolada gazeta uslubi turlari, kelib chiqish tarixi haqida qisqacha ma'lumotlar keltirilgan. Shu bilan birga gazeta uslubi misollar yordamida tahlil qilingan, bundan tashqari gazeta uslubining rivojlanish tarixida turli olimlar tomonidan berilgan izohlar keltirilgan.

**Kalit so'zlar:** gazeta uslubi, zamonaviy gazeta, to'g'ridan-to'g'ri qo'lda yozilgan xabar, xorijiy yangiliklar, qo'lyozmalar, nashr oraliqlari, nashriyot.

**Аннотация.** В статье дан краткий обзор видов газетного стиля, истории его возникновения. Однако газетный стиль проанализирован на примерах, а также на комментариях различных ученых к истории развития газетного стиля.

**Ключевые слова:** газетный стиль, современная газета, прямое рукописное сообщение, зарубежные новости, рукописи, интервалы публикации, издательство.

**Abstract.** The article gives a brief overview of the types of newspaper style, the history of its origin. However, the newspaper style has been analyzed using examples, as well as comments made by various scholars on the history of the development of the newspaper style.

**Key words:** newspaper style, modern newspaper, direct handwritten message, foreign news, manuscripts, publication intervals, publishing house.

**Introduction.** The modern newspaper is European invention. The oldest direct handwritten message was widely circulated in Venice in 1566. This week's news was full of information about wars and politics in Italy and Europe. The first printed newspapers were published weekly in Germany from 1609 onwards. Typically, they were severely censored by the government and reported only foreign news and current prices. After the British government relaxed censorship in 1695, newspapers flourished in London and several other cities, including Boston and Philadelphia. By the 1830s, high-speed presses could print thousands of papers at low prices, allowing daily costs to be reduced.

The first or newspapers appeared in Venice in the mid-16th century. They are printed on one sheet each week and folded to form four pages. These publications covered a wider audience than the manuscripts of the first period of Rome. Their format and their occasional appearance have had two major impacts on the newspaper we know today. The idea of creating a weekly manuscript bulletin went from Italy to Germany and then to the Netherlands. [2]

**Literature review.** The term "newspaper" was common in the 17th century. In Germany, however, publications that we consider to be newspaper publications appeared as early as the sixteenth century. They were prominent newspapers for the following reasons: they were published, dated, appeared in regular and frequent



publication intervals, and contained a variety of news items (as mentioned above); as opposed to single article news). The first forms of periodicals were the Messrelationen ("trade fair reports"), which was compiled twice a year for the major book fairs held annually in Frankfurt and Leipzig since the 1580s. Nevertheless, the German-language communication aller Fürnemmen und gedenckwürdigen Historien, published by Johann Carolus in Strasbourg since 1605, is the first newspaper. The emergence of the new media department was based on the proliferation of the publishing house from which the publishing house took its name. Historian Johannes Weber says, "At the same time, printing was invented in a physical and technological sense, and printing was created in a broad sense." [3]

**Analysis.** Other early newspapers include the Dutch Courante ut Italien, Duytslandt, and others, founded in 1618 by Caspar van Hilten. It was the first periodical to be published in the form of a folio in the Amsterdam newspaper. As a center of world trade, Amsterdam quickly became the home of many foreign newspapers, originally designed in the same style as the Van Hilten edition and sometimes even having a similar name.

The first English-language newspaper, Korrant out of Italy, Germany, was published in 1620 in Amsterdam. A year and a half later, Corante or weekly news from Italy, Germany, Hungary, Poland, Bohemia, France and other countries. In the UK, "N.B." published by (Generally thought Nathaniel Butter or Nicholas Bourne) and Thomas Archer.

The first newspaper in France was La Gazette (originally published under the name Gazette de France) in 1631.

The first newspaper in Portugal, A Gazeta da Restauração, was published in 1641 in Lisbon. The first Spanish newspaper, the Gaceta de Madrid, was published in 1661.

One of the most distinctive features of Dutch Corantos is their format. The German title, which is highly described in Corantos, has been replaced by the title at the top of the first page of the publication: a headline common in today's periodicals. In line with this more reasonable page layout, Corantos show optimal use of space for text. The Dutch Corant had two text columns, which covered almost the entire page, and, unlike earlier German papers, adopted a single text column whose edges resembled a book. More economical use of space is also reflected in the minimal indications of paragraphs and the absence of completely empty lines. Various posts are highlighted with slightly larger headlines, which usually cover the city or country from which the news came. The final new feature of the Corantos format was their size: they were the first newspapers to be printed in foil instead of half a page. An example of a Coranto in this format is the Opregte Haarlemsche Courant, in addition to the Courante ut Italien, Duytslandt, and others mentioned above. This Haarlem-based newspaper was first published in 1656 by Abraham Castellin and his wife, Margareta van Banken, and is still available today in tabloid format, not original folio.

On November 7, 1665, The London Gazette (originally called The Oxford Gazette) began publishing. It radically changed the look of the British News Publishing House, which had a two-column Coranto format, a clear headline and a clear date;



published twice a week. Other English newspapers began to be published three times a week, and then the first daily newspapers appeared.

Newspapers usually had short articles, headlines, some pictures, and service articles (images). They are often written by multiple authors, although the identity of the authors is often anonymous. They started adding some ads and they didn't include sections yet. Popular market newspapers, including Sunday newspapers, appeared to allow workers to read in their spare time. The Times embraced new technologies and set standards for other newspapers. The newspaper covered major wars among other major events.

The front page of The New York Times on November 11, 1918, the day of the truce. In 1690, in Boston, Benjamin Harris published his work, Foreign and Local Public Events. It is the first newspaper in the American colonies, although only one edition was published before it was suppressed by colonial officials, probably due to censorship and control issues. It followed a two-column format and was a single sheet printed on both sides.

In 1704, the governor allowed The Boston News-Letter to be published weekly, and it became the first regular newspaper in the colonies. Soon, weekly newspapers began to appear in New York and Philadelphia. The second English-language newspaper in America was Weekly Jamaica Courant. These first newspapers followed the British format and were usually four pages long. They carried mainly British news and the content depended on the interests of the editor. In 1783, the Pennsylvania Evening Post became America's first daily newspaper.

In 1751, John Bushell published the Halifax Gazette, Canada's first newspaper. Although printing presses have been available in China since at least 849 AD, and a printing press was invented there, Germany was the first to use it in Europe, and the first newspapers were produced there. However, Germany was so divided into rival states that before the unification in 1871, no newspaper played a dominant role. An example of such merchants is Fugger, a 16th-century German financier [5]. He received not only business news from his correspondents, but also sensational and gossipy news. As can be seen in Fugger's correspondence with his network, both fiction and fact were important parts of the early news publications. 16th-century Germany also saw subscription-based, handwritten innovations. Subscribers to these publications were usually low-ranking government officials as well as traders. They could not afford to buy other types of news, but they had enough money to pay for a subscription, which was expensive at the time [6].

**Discussion.** During the 16th and 17th centuries, a number of publications appeared, covering the wars, treaties, kings, epidemics, and special events [7]. In 1609, Johann Carolus published the first regular newspaper of short notice in Strassburg. By the 1620s, 4-8-page newspapers began to be published at random intervals in many major cities; all were severely censored. The first daily newspaper appeared in 1660 in Leipzig. Prussia became increasingly the largest and most dominant of the German states, but it had weak newspapers that were very tightly controlled. Advertising was banned and budgets were very low. In 1766, the Dutch adventurer William Bolts proposed opening a newspaper for an English audience in Calcutta. Before his plans came to fruition, he was deported by an East Indian company [8].



In January 1780, James August Hickey published Hickey's Bengal Gazette, the first newspaper in India. That four-page newspaper was 12 x 8. Hickey accused members of the East India Company, including Governor-General Warren Hastings, of corruption. In retaliation, Hastings banned the post office from carrying Hickey's Bengal Gazette and later sued Hickey for libel. In November 1780 an Indian newspaper was published; he supported the company government [9].

In 1814, The Times purchased a printing press capable of producing 1,100 impressions per hour. It was soon adapted for printing on both sides of the page at the same time. This innovation made newspapers cheaper and thus available to a larger section of the population. In 1830, the first penny press appeared on the market: Lynde M. Walter's Boston Transcript. Penny press papers accounted for one-sixth of the price of other newspapers and attracted a wider audience. Newspaper editors exchanged copies and published the materials freely [10]. By the late 1840s, telegraph networks connected large and small cities, allowing them to communicate overnight. The invention of paper from wood pulp in the 1840s significantly reduced the cost of newspaper paper previously made from rags. The rise of literacy in the 19th century also increased the audience of newspapers.

**Conclusion.** To achieve such coverage, agencies avoid overt bias. Apparently, the correct information is their trading shares. Traditionally, they link their information to a press secretary, press or other sources and report with a low level of responsibility. They avoid judgment and avoid doubt and uncertainty. Even if their founders didn't use the word, impartiality serves as a philosophical basis for their business - or, if that's not possible, widespread neutrality.

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## THE ROLE OF LIVESTOCK AND PRODUCTS IN DOMESTIC AND FOREIGN TRADE OF TURKESTAN IN THE LATE XIX AND EARLY XX CENTURIES

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**Annotatsiya:** 19-asr oxiri — 20-asr boshlarida Turkistonda aholining kundalik hayotida chorvachilik muhim o‘rin tutgan, xususan, Turkiston o‘lkalarida qo‘y, ot, tuya va qoramollarning yirik savdosi amalga oshirilgan. imperiyaga va Yevropa davlatlariga eksport qilinib, Turkistonda temir yo‘llar qurilishiga olib keldi, buning natijasida Rossiya va xorijiy kapital, shuningdek, mamlakatga chorvachilik mahsulotlarini qayta ishlovchi xorijiy kompaniyalar kirib keldi.

**Kalit so'zlar:** qoramol, ot, chorva bozorlari, chorvachilik mahsulotlari, qo'y jun, teri, temir yo'llar, eksport, import, investorlar, savdo kompaniyalari, xorijiy kompaniyalar.

**Аннотация:** В конце 19-начале 20 веков животноводство играло важную роль в повседневной жизни населения Туркестана, в частности, в Туркестанских областях велась масштабная торговля овцами, лошадьми, верблюдами и крупным рогатым скотом. вывозилась в империю и европейские страны, что привело к строительству железных дорог в Туркестане, что повлекло за собой приток российского и иностранного капитала, а также иностранных компаний, перерабатывающих продукты животноводства в стране.

**Ключевые слова:** крупный рогатый скот, лошадь, рынки скота, продукция животноводства, овечья шерсть, кожа, железные дороги, экспорт, импорт, инвесторы, торговые компании, иностранные компании.

**Annotation:** In the late 19th and early 20th centuries, livestock played an important role in the daily life of the population in Turkestan, in particular, large-scale trade in sheep, horses, camels and cattle was carried out in Turkestan regions. was exported to the empire and European countries, which led to the construction of railways in Turkestan, which resulted in the inflow of Russian and foreign capital, as well as foreign companies processing livestock products in the country.

**Keywords:** cattle, horse, cattle markets, livestock products, sheep wool, leather, railways, export, import, investors, trading companies, foreign companies.

**Introduction.** In the late 19th and early 20th centuries, livestock and products in Turkestan played an important role in domestic and foreign trade. In the late 19th and early 20th centuries, large-scale trade in sheep, horses, camels and cattle took place in the Syrdarya. Rate of sale usually change from time to time, and this situation can be assessed as mobile commodity markets. Only the transition of the nomadic pastoralists to a sedentary lifestyle led to the cessation of these trades. There were several large commodity markets in the Syrdarya region. The largest of them were located in the cities of Tashkent, Avliyota, Turkestan, Perovsk, Kazalinsk, Petro-





Alexandrovsk, as well as in the villages of Merke, Sayram, Pskent, Kereuchi, Boka, Toy-tepa [1].

**Materials and Methods.** Unlike other markets, camels were traded in the Turkestan market, which was also attended by traders from Iran, Afghanistan, Bukhara and the Caspian region. In addition, there has been a large trade in livestock products such as leather and wool in this market. Every year, from May 1 to June 1, a large fair for the sale of sheep opens in Avliyota. A small part of the livestock products sold in all commodity markets of the Syrdarya region remained for processing in the region itself, while most of it was exported to the western part of the Russian Empire and European countries [2]. In 1913 alone, wool worth only 6 million rubles was exported. In addition, other livestock products were shipped by rail. S.S. Zdenitsky writes: "Livestock products such as hides, wool, horns, hooves and horse hair were brought to the railway stations to be sent to the Russian Empire. In addition, dry and wet salted animal intestines are sent to Germany from the [Turkestan] regions." [3]

**Results and Discussion.** Livestock trade in Fergana differs from other regions of Turkestan. While the herders of Syrdarya and Samarkand regions mostly intended to sell their livestock on the domestic and foreign markets, the number of livestock in Fergana did not meet the demand of the population. Therefore, in the late XIX - early XX centuries, the import of livestock from neighboring areas to the Fergana region was high [4]. To meet the demand for livestock products, many livestock were driven from the Syrdarya and Ettisuv regions. In the 1970s, some of the sheep driven from Avliyota and Tokmak to Fergana passed through Namangan, Andijan and Osh and were sold at the Kokand markets. This further strengthened Fergana's trade relations with neighboring provinces.

In the 1860s, trade in livestock and livestock products between the Russian Empire and Turkestan had two characteristics. Firstly, the state trade of the region's cattle-breeders had not yet been developed, and secondly, the influx of entrepreneurs of the Russian Empire into Turkestan had not yet been increased. At that time, mainly for the needs of military units in the country, the administration of the Russian Empire purchased livestock and livestock products from local breeders. In the 1860s, the Ettisuv region played a key role in strengthening trade relations with the Russian Empire. In the early days of the colonial administration, livestock products were also included in trade relations between the Russian Empire and Turkestan. In particular, the export of leather from Tashkent to the Russian Empire in 1865-1867 was volatile, while the export of wool products increased [7].

With the construction of the Tashkent railway in Turkestan, the export of livestock and livestock products from the country to the major markets of the Russian Empire has been developed. In the early years, there were a number of challenges in implementing this process. Gathering livestock from all regions of Turkestan to Tashkent and feeding them in temporary storage facilities required a lot of money. The definition of transporting each pet by rail was expensive, ranging from 38 to 40 rubles per pet. Leather, wool, animal hooves, horse hair, and cattle horns were shipped to the Russian Empire by rail, while animal intestines were exported to Germany.

Archival sources also contain information about the export of livestock from Turkestan during this period, and archival funds contain a telegram that in January



1915, 225 wagons were taken from the Central Asian railway station in Tashkent and 20 wagons from the Keles railway station [9]. In January 1915, at Tashkent stations, 2006 head of sheep were loaded on wagons and 107 head of sheep and large horned cattle were unloaded from wagons, according to archival data [10].

At the end of the 19th century, trade relations between Turkestan and Afghanistan developed. About 800,000 pounds (Pud - an ancient unit of weight. Value = 16.4 kg) of wool, 100,000 - 150,000 pieces of astrakhan skin, sheep skin worth 100,000 rubles were imported to Turkestan from Afghanistan annually. The total value of livestock imported to Central Asian markets from the northern Afghan provinces of Kunduz, Maymana and Andhoy was estimated at 1.5 million rubles. Afghan traders benefited greatly from trade with Turkestan. [11]

Appointed Governor-General of Turkestan in 1867, KP Kaufman paved the way for Russian and foreign capital to enter the country. In the late 60s and early 70s of the XIX century, trading houses and industrial enterprises began to be established in the country. In particular, trading houses of I. Pervushin, M. Khludov, K. Trupchaninov and others were opened in Tashkent, and in a short time they began to compete with local traders [12].

Later, the activities of companies and firms trading in livestock and livestock products in the country expanded. Louis Zalm, a German capitalist who began working in Turkestan in 1890, rented trading houses, warehouses and gut factories in Tashkent, Samarkand and the Fergana region through his representatives of Russian traders. He started a big business on gut preparation, spending 150,000 rubles just for the rented space itself. On the eve of World War I, Durshmidt-Zalm acquired 15 of the 19 intestinal cleaning plants registered in Turkestan, pushed all its competitors out of the market, and became the sole leader in intestinal processing. The company earned more than 100,000 dollars from the sale of gut and other processed raw materials to Western Europe and the United States.

In addition, foreign companies such as Rusni Juni, Aka-uka Asevlar, Stupen va K, Jakobi va Zorganin, and El Trilling and Sons, process wool from Turkestan cattle and sell it to foreign markets. are the five largest firms in the industry. The main shareholders of Stupen and K and Jacobi and Zorganin were the capitalists of England, the United States, Germany and Belgium. These investors were active not only in local but also in Russian and world markets [14].

**Conclusion.** In short, in the late 19th and early 20th centuries, the sale of livestock and livestock products in Turkestan played an important role in economic life. In particular, there were commodity markets in all regions of the country. Some of them only served the residents of the area, while large cattle markets were traded by herders from outside the area. Also, as a result of the establishment of the railway by this period, it became possible to transport livestock and products abroad by train. This, in turn, will increase the possibility of exporting livestock from Turkestan to foreign countries. In particular, the Tashkent railway station was a leader in this direction. In the late 19th and early 20th centuries, exports of livestock and products from Turkestan to Russia increased. Most of these products were shipped to imperial markets, while some entered the Western European market through the Russian Empire. In addition,



during this period, as in previous periods, trade relations with Eastern countries in this area continued.

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