ACTUAL PROBLEMS OF MODERN SCIENCE, EDUCATION AND TRAINING

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CONTENTS

MODERN PROBLEMS OF TOURISM AND ECONOMICS

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SUPPORTING MANAGEMENT ABILITIES OF SMALL AND PRIVATE ENTREPRENEURS BY DEVELOPING INVESTMENT ACTIVITIES IN THE REGION

Ruzmetov Davron Ibrogimovich
PhD. Vise rector for international relations
Urgench Ranch University of Technology
davron.ruzmetov@utu-ranch.uz

Annotatsiya: Rivojlangan mamlakatlarning taraqqiyot tarixi tadbirkorlik sub'ektlarini moliyaviy qo'llab-quvvatlash orqali mamlakat iqtisodiyotida davlat ulushini kamaytirish va shu orqali iqtisodiy taraqqiyotga erishish imkoniyatlarini ko'rsatishi mumkin. Xususan, mamlakatdagi iqtisodiy va ijtimoiy jarayonlarning muqarrar markazsizlashuvini hisobga olgan holda, mintaqaviy rivojlanish milliy o'sishning asosiy tayanchiga aylanishi kerak. Bunday sharoitda qonunchilik va institutlar nuqtai nazaridan tegishli tarkibiy o'zgarishlarni ta'minlashi lozim bo'lgan davlat va uning institutlarining hududlarni rivojlantirishdagi roli ortishi aniq. Shu nuqtai nazardan qaraganda, hududlarning iqtisodiy salohiyati, jumladan, uning tarkibiy qismlari, ya'ni investitsiya salohiyati masalasini ko'rib chiqish maqsadga muvofiqdir, chunki investitsiyalarni rag'batlantirish va rivojlantirish orqali davlat iqtisodiyotni yaxshilashga, yangi investitsiyalarni yaratishga qodir. investitsiyalar, ish o'rinlari yaratish, yangi ishlab chiqarish quvvatlarini yaratish, kichik va o'rta biznesni rivojlantirishni rag'batlantirish; investitsiyalarni davlat tomonidan tartibga solish mexanizmi mahalliy va xorijiy investorlarni jalb qilish imkonini beradi.

Mazkur maqolada tadbirkorlik sub'yektlarining to'gri ishni tashkil qilish, boshqaruv qobilyatini rivojlantirish, ayniqsa, hududlarda investitsiya faolligini yanada jadallashtirish bo'yicha tahlillar o'rin olgan va tavsiyalar ishlab chiqilgan.

Kalit so'zlar: Tadbirkorlik sub'ektlari, kichik biznes, sarmoya, real sektor, hududiy iqtisodiyot, mahalliy va xorijiy investorlar.

Аннотация: Прогрессирующая история развитых стран может показать возможности снижения доли государства в экономике страны путем оказания финансовой поддержки субъектам предпринимательства, тем самым достигая экономического развития. В частности, учитывая неизбежную децентрализацию экономических и социальных процессов в стране, региональное развитие должно стать главной опорой национального роста. В таких условиях очевидно, что роль государства и его институтов, которые должны обеспечить соответствующие структурные изменения в законодательстве и институтах, в региональном развитии возрастает. С этой точки зрения целесообразным является рассмотрение вопроса об экономическом потенциале регионов, в том числе его составляющих, то есть инвестиционном потенциале, поскольку, поощряя и развивая инвестиции, государство способно оздоровить экономику и создать новые. инвестиции, создание рабочих мест, создание новых производственных мощностей, стимулирование развития малого и среднего бизнеса; именно

механизм государственного регулирования инвестиций позволяет привлечь местных и иностранных инвесторов.

В данной статье проведен анализ развития субъектов предпринимательства, развитию управленческих навыков особенности дальнейшего ускорения инвестиционной деятельности в регионах и разработаны рекомендации.

Ключевые слова: Субъекты предпринимательства, малый бизнес, инвестиции, реальный сектор, региональная экономика, местные и иностранные инвесторы.

Abstract: The progressing history of developed countries can show the possibilities to reduce the share of the state in the country's economy by providing financial support to business entities, thereby achieving economic development. In particular, taking into account the inevitable decentralization of economic and social processes in the country, regional development should become the main support of national growth. In such conditions, it is clear that the role of the state and its institutions, which should ensure appropriate structural changes in terms of legislation and institutions, in regional development is increased. From this point of view, it fits purpose to consider the issue of the economic potential of the regions, including its components, that is, the investment potential, because by encouraging and developing investments, the state is able to improve the economy and create new investments, creation of jobs, creation of new production capacities, stimulation of small and medium business development; it is the mechanism of state regulation of investments that allows to attract local and foreign investors.

This article includes the analysis of the development of business entities, development of management skills, especially in the further acceleration of investment activity in the regions and recommendations are developed.

Keywords: Business entities, small business, investment, real sector, regional economy, local and foreign investors.

Introduction. The most important thing for any business entities in the real sector of the region's economy is management efficiency, where financial resources play an important role. It is the investment resources that ensure the growth of the business entities' potential and efficient operation. In the economic literature, there is no single approach to the interpretation of the category of financial support of investment activities. The content of this category should be relevant to market requirements and time. Today, the need of business entities for investment resources, in particular, those involved, remains acute.

Accordingly, there was a need to explain the category of "financial support of investment activities". In particular, economists L. Gitman and M. Jonk having looked through the category of "investment" they noted that "investment is a method of capital distribution, which should ensure the maintenance or growth on the amount of capital" [1]. The category of "Investment" is multifaceted, and the content of investments depends on what their investment object is and their goals. Investment as an economic category is closely related to investment activity.

Literature review. In this regard, the economist T.V.Mayorova emphasizes that investment activity is a set of practical actions of citizens, legal entities and the state to

make investments. [2]. A.A.Peresad, agreeing with T.V.Mayorova, defined: "investment activity is a coherent set of actions of its subjects (investors and participants) to make investments for the purpose of obtaining income or profit."

Yu. Matkin puts forward the opinion that defines investment activity as the main means of socio-economic development, the process of making investments of various types and forms[3]. So, this opinion allows us to understand the activity of individuals as well as business entities in terms of investment activities in the real sector of the economy of the region in terms of making investments in accordance with the set goals and ensuring the development process. Financial supply is the main component of the financial system and affects the formation of financial relations in the field of investment activities of economic entities.

Therefore, it fits the purpose to determine the nature of financial support of economic entities as a method of financial mechanism. The difference in defining the nature of this category by economists lies in the existence of different forms and components of financial support. Most scholars define financial provision as a method, a set of measures, economic relations, etc. We fully support S.P. Glady, who interprets the external appearance of the mechanism and its structural elements as specific manifestations of the categories of the financial sector, based on the topic of research, "financial supply" as a generalized method of investment through financial forms.

A number of local expert scientists also gave opinions on investment, investment activities and processes in their research. For instance, in the researches of D.G'.G'ozibekov, T.M.Koraliev, it is said that "Investments reflect the sum of all types of property and intellectual assets as long-term investments in the sectors of the national economy" [5]. B. T. Baikhanov defined the investment process as "the analysis of supply and demand for the investment, the formation of its fund, the study of risks and payback periods in it, the evaluation of its effectiveness, and the implementation of the stages of investment policy selection" [6].

Basing on the above mentioned, we believe that financial support for the investment activities of business entities should be understood as a set of economic relations to support the economic growth of business entities in the field of investments, in order to find, attract and effectively use investment resources for the purpose of financing investments. Among the forms of financial support for the investment activities of business entities, we can distinguish activities such as investment, lending, state financing, self-financing, insurance, leasing, investment consulting, charity activities.

In our opinion, it is appropriate to consider the category of "financial support" as a component of the financial support mechanism. The principles of financial support for investment activities of business entities are also changing according to the demand of the era. In this sense, it should be considered as an integration of the principles of legality, scientificity, proportionality, comprehensiveness, adequacy, efficiency and flexibility, timeliness, purposefulness, continuity, innovation, and financial planning (Figure 1.2.1).

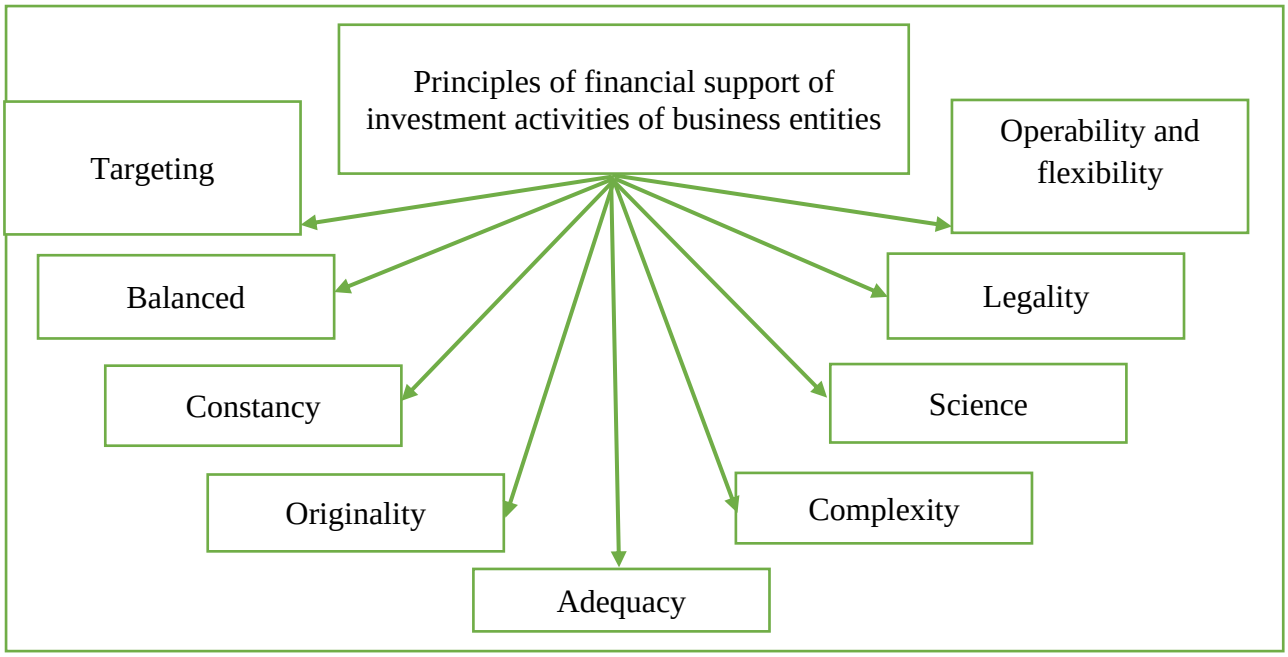

Figure 1.2.1. Principles of supporting investment activities of economic entities

In accordance with the problem of our research, we plan to develop a mechanism of financial support for investment development of business entities. By "mechanism" we understand the set of economic relations and processes of the operation and development of economic entities. Economist, scientist I.Ya.Chugunov defines the relationships in the state budget sphere as foreign policy and budget affairs necessary to perform state functions between state and reproduction entities which appear in the process of social, economic management, formation of cash and their use[7]. Therefore, if state intervention in the economic sphere and the relationship between the market parties is directed due to the state interests, the objective basis of the activity of the financial mechanism is changed.

As economist L.V. Lisiak noted, studying the performing methods of financial mechanisms is an understanding of the development logic of the country's budget relations; predict their development; allows to avoid creating a situation of contradiction to financial mechanisms, which leads to a general deterioration of the state economy [8].

The mechanism of financial support for the investment development of business entities can be presented as a set of different forms and methods of using financial resources to ensure the implementation of investment policy within the economic system of the region. The elements of this mechanism include the forms of financial resources, the methods of their formation, the system of legal norms and standards. This determines the abundance of financial relations, the use of a large number of types, forms and methods of their organization.

Complex use of all components of the mechanism ensures its efficient operation. The result of the activity of the mechanism of financial support for the investment activity of economic entities is considered as a growth of profitability and the increase of their competitiveness in the market conditions. Basing on a systematic and complex

approach, taking into account the regulatory and legal, information and communication provision, we develop the mechanism of financial support for the investment activities of business entities in the form of a strategic plan, business plan, insurance contributions, subsidies, subsidies, investment programs, insurance payments, guaranteed payments, incentives, sanctions and tools, a balanced system of business entities and a coordinated system of using other tools.

Therefore, financial support works as a component of the general system of formation and implementation of investment activities of business entities. Volumes and forms of financial support, priority and the ratio between them affect the decision-making management mechanism and their further implementation in the course of investment activities of business entities.

Research methodology. The study of existing scientific research and statistical data on increasing the investment potential of business entities and economic SWOT comparison and analysis, logical thinking, information grouping methods were widely used.

Analysis And Results. One of the main measures to eliminate the problems of financial support of investment activities of business entities is to assist with the attraction of foreign investments in various sectors of the economy at the state level. Support within the framework of regional policy includes, in particular, financial support for economically backward regions, structural transformation of regions and border regions, combating long-term unemployment and supporting the development of business entities. State financial policy is an integral part of the state regional economic policy.

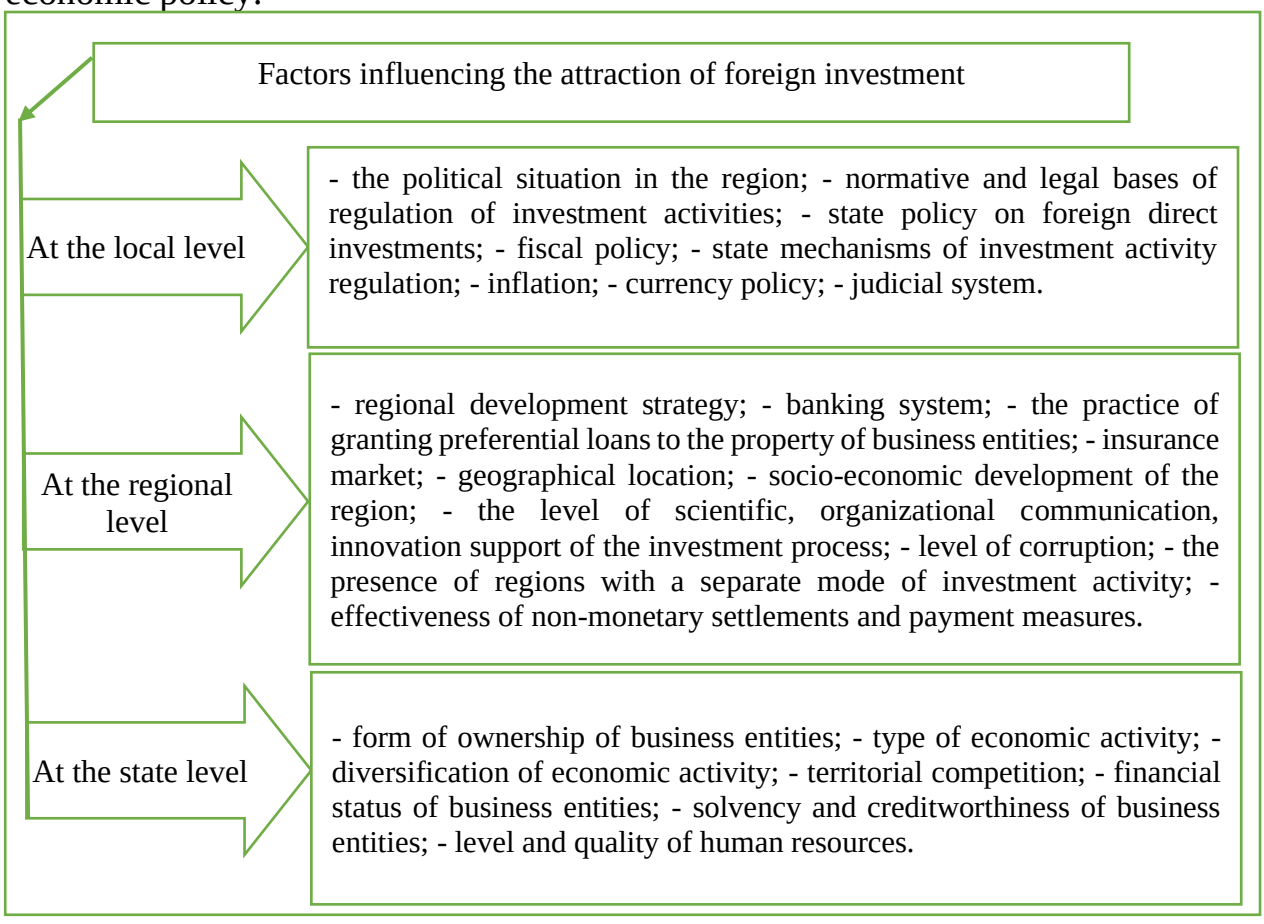

Figure 1.2.2. Investment attractiveness factors in attracting foreign investments to the economy

Attracting foreign direct investments is the most useful financing method in the conditions of lack of financial resources of economic entities, because direct foreign investments do not affect the external debt of the state. Foreign direct investments also have positive aspects, in particular, they compensate for the deficit of domestic mortgage in the national economy. Encouragement of foreign investment is to obtain higher income, expand sales markets and seek innovative activities. In this sense, it is appropriate to consider in detail factors which were selected as a research object that form the investment attractiveness of the region by dividing it into three groups in order to attract foreign investments to the economy of Khorezm region, (Figure 1.2.2).

Among the factors influencing the attraction of foreign investments, three groups can be distinguished. When it was studied in terms of regions, local level factors have become important - the type of economic activity is changed with changes in economic conditions. That is why we fully agree with S.Schultz's opinion that the diversification of economic activity in the conditions of intersubjective and interspecific territorial competition is one of its results and an important factor in the formation of investment attractiveness. Territorial competition of economic entities should be understood as the struggle for internal sales markets of products, goods or services.

Regional competition is the driving force of socio-economic development of the region and at the same time it is the main means of saving financial resources of business entities. The process of influence of regional competition on the investment activities of business entities is shown in Figure 1.2.3 below (Figure 1.2.3).

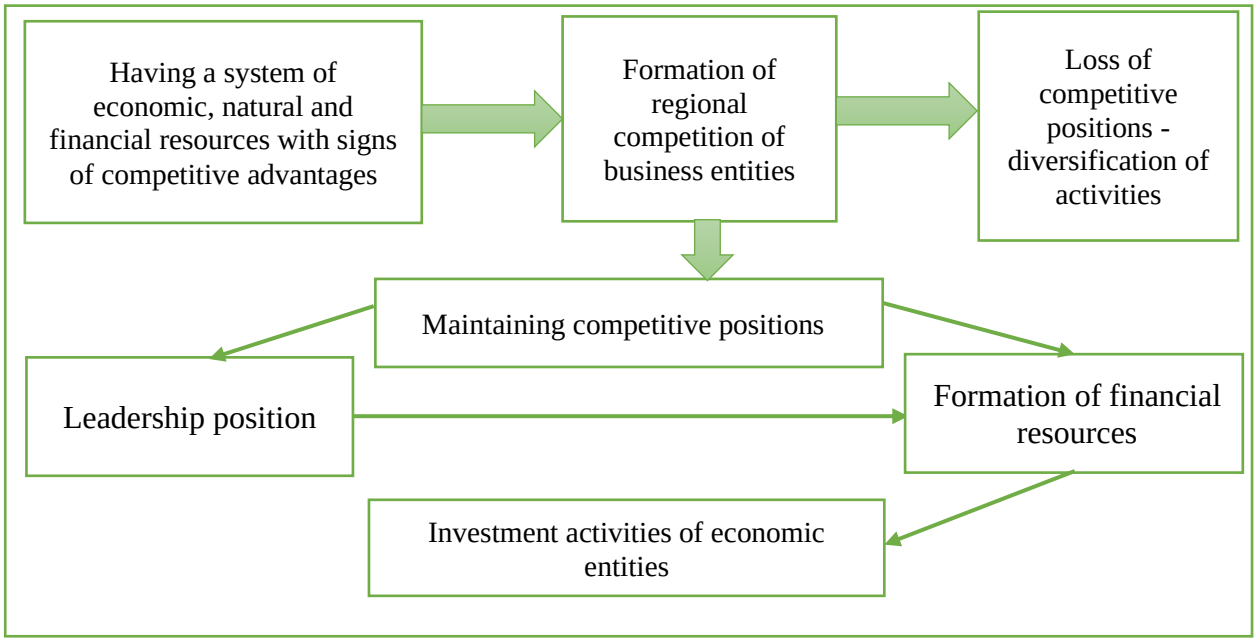

Figure 1.2.3. The impact of regional competition on the investment activity of business entities[9]

The main goals of the state regional financial policy on financial support of investment activities of business entities defined in legal documents, in particular, the Constitution of the Republic of Uzbekistan and legal documents, are to create social and economic conditions. for comprehensive development of the area; priority in

providing financial assistance to business entities that do not have sufficient funds to perform the functions and tasks assigned to them; creation of conditions for efficient and rational use of natural resources of the area; is to expand the possibilities of using internal factors of economic growth of business entities on the basis of ensuring financial independence in investment activities. In this sense, we propose a mechanism for implementation of financial support for investment activities of business entities (Figure 1.2.4).

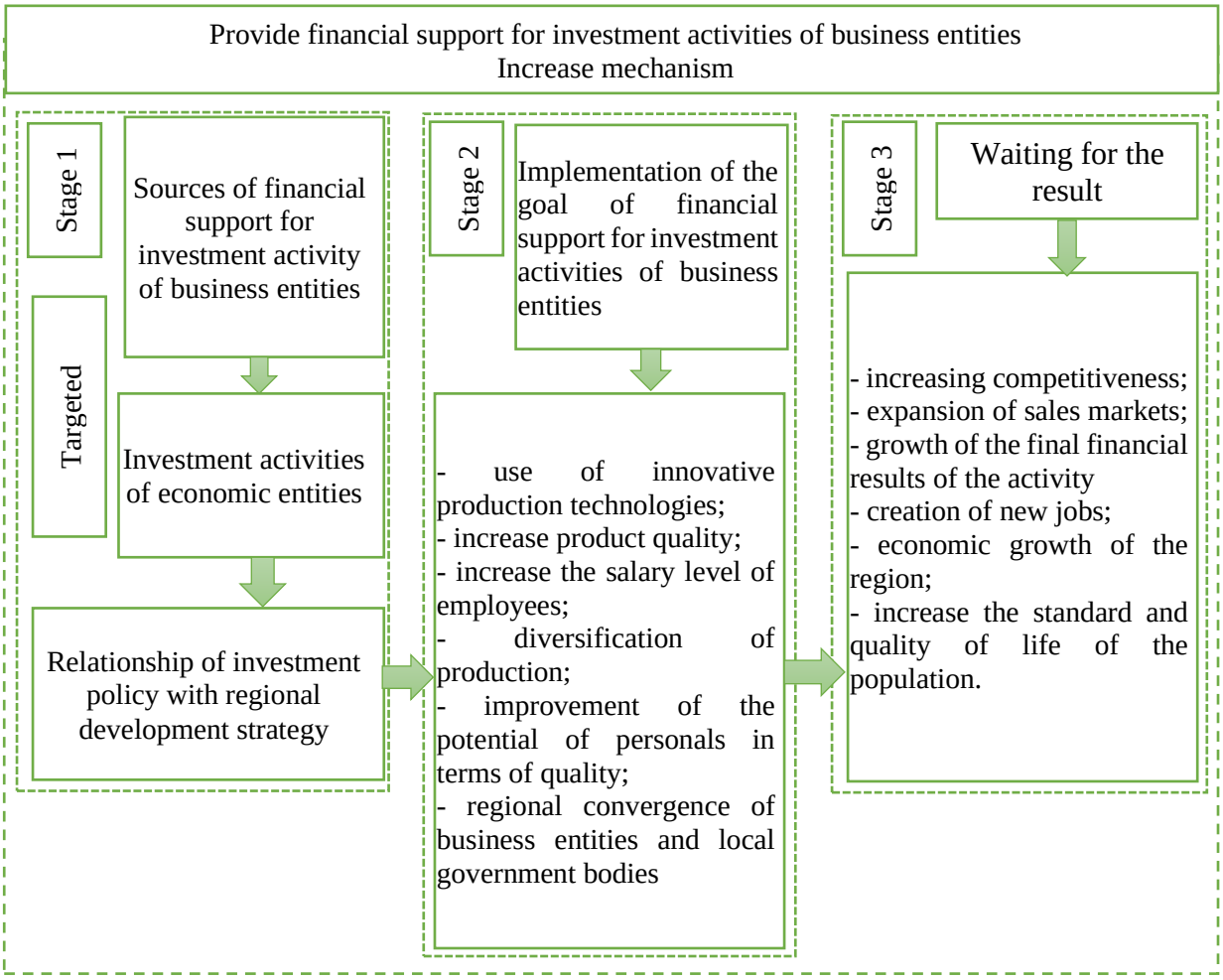

Figure 1.2.4. Financial support mechanisms implementation on investment activities of business entities

This mechanism reflects the interaction of the tools indicated at the initial stage for the purpose of turning investment resources into an economic system to achieve the set goals. At the initial stage, it is necessary to determine the prior directions of investment activities of business entities that correspond to the strategy of the region's development.

The second stage is characterized by the transformation of investment resources into the economic system of the region (where local self-government bodies have a significant impact), and then its transformation into expected results (the third stage). All three stages are closely related to each other. Depending on the type of economic activity, the boundaries of these stages might be different. The expansion of the influence of market mechanisms in the economy, the deepening of integration

processes, and the entry into the world market have given the local producer the task of maintaining a competitive position in the modern economic environment, as a priority for the investment activities of business entities to increase the efficiency of their activities.

Effective investment activity of economic entities is impossible without the correct composition and structure of sources of financial support, taking into account specific regional conditions where environmental factors are of great importance. A SWOT matrix was formed on the basis of conducted research and taking into account the influence of environmental factors on the financial support of investment activities of business entities. Its main elements are analysed in terms of dividing factors into four categories (Table 1.2.1).

Table 1.2.1

SWOT-matrix of financial support of investment activities of business entities

Strong side	**Weak side**
- state and regional targeted programs in the field of investment;	- the weakness of the material and technical base of business entities;
- convenient location of the state;	- ecological situation in the area;
- attractive investment environment	- low standard of living coast of population
- high comparative weight of ecologically clean resources;	- gradual reduction of resource potential;
- own resource potential of business entities;	- insufficient capital investments in environmental protection;
- a wide range of regional international environmental programs;	- lack of working capital;
- stable environmental situation	- low level of ecological culture.
Opportunities	**Threats**
- determining prior directions for the development of business entities;	- imperfection of the current legal base of investment activity,
justification of the most effective sources of financial support for investment activities of business entities;	- inconsistency of regulatory legal documents;
determining the factors affecting the investment attractiveness of the area;	- financial instability of business entities;
- a systematic and comprehensive assessment of the interdependence and interaction of environmental factors in the financial support of investment activities of business entities.	- high interest rates on loans for business entities;

The effective development of any country requires the creation of an integrated economic complex with the effective use of local resources, the advantages of territorial division of labour, as well as the prevention of complications on a political, economic and international basis. Therefore, the conceptual place in the relevant issue

is occupied by the development of individual regions capable of ensuring economic growth at the national level.

Financial support and encouragement of investments, despite the adoption of regulatory legal documents aimed at creating legal and economic conditions for financial support of investment activities at the state level, creating legal and economic conditions for the formation of the investment attractiveness of regions, business entities, a number of problems, such as the development of business entities, the predominance of own funds of enterprises and organizations in the structure of funding sources, dependence on funding from the state budget and bank loans.

Also, resources whose value is lower than the average profitability of the investment project should be attracted in the formation of sources of financial support for investment resources. Therefore, it is necessary to study not only the formation of sources of financial support for the investment activity of business entities, but also the efficiency attracting them.

A potential source of attracting financial resources for regional development can be international project financing programs based on joint financing programs with regional and local authorities. Economic development of the region and new opportunities for obtaining additional financial resources can be provided by international programs of financing projects based on co-financing with local authorities, which, on the one hand, strengthens the role of local authorities in state management, and on the other hand, brings the region closer to global integration processes.

In lending to local development programs, the common thing between public authorities and these entities is joint financing based on returnability, timeliness and repayment, which implies the use of all possible sources of attracting funds for the implementation of this or that program. In other words, local authorities should not rely only on the financial support of international financial or non-governmental organizations - it is necessary to expand the scope of searches and choose the most appropriate funding sources.

At the regional and local level, the situation is complicated by the problems of implementation of administrative reform and the declarative nature of financial decentralization processes. Financial support is an important issue of the process of investment activity of business entities, which should be aimed at determining the prior directions of the development of the regional economy. The sources of financial support for the investment activity of business entities depend on the economic conditions in which they operate and the environmental factors that affect the results of production activities.

Therefore, taking into account the inevitable decentralization of economic and social processes in the country, regional development should become the main milestone of national growth. In such conditions, it is clear that the role of the state and its institutions, which should ensure appropriate structural changes in terms of legislation and institutions, in regional development is increased. From this point of view, it is advisable to consider the issue of the economic potential of the regions, including its components, that is, the investment potential, as by encouraging and developing investments, the state is able to improve the economy and create new

investments. Creating jobs, creating new production facilities, stimulating the development of small and medium-sized businesses; it is the mechanism of state regulation of investments that makes it possible to attract domestic and foreign investors, as a result of which the above problems can be properly resolved.

Conclusions and suggestions. According to the results of the research, it can be said that the own funds of business entities are the main source of financing investment activities. Nowadays, fields of the economy such as construction; whole sales; retail sales; motor vehicle and real estate transactions can be considered as prior directions among the investment fields. In the process of solving the problem of financial support of business entities with financial resources, it is necessary to take into account not only the set of sources, forms and methods of financial support, but also the economic and political conditions of the activity of business entities, in particular, the market situation, the spectrum of the characteristics of the activities of management entities.

Attracting foreign direct investment is the most useful financing method in the conditions of lack of financial resources of business entities, because direct foreign investment does not affect the external debt of the state and at the same time covers the deficit of domestic savings in the national economy.

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INCREASING THE EFFECTIVENESS OF NEW CAPACITIES ESTABLISHED BY SMALL BUSINESSES AND ENTREPRENEURIAL ENTITIES WITHIN THE FRAMEWORK OF INVESTMENT PROGRAMS IN THE DEVELOPMENT OF THE NATIONAL ECONOMY

Khakimov Akbar Anvarovich
Independent researcher of the Namangan Institute of Engineering and Construction.
akbarjon_hakimov@mail.ru

Annotatsiya: Mazkur tadqiqotning maqsadi investitsiya dasturlari doirasida tashkil etilgan quvvatlardan samarali foydalanishni tashkil etishda kichik biznes va tadbirkorlik subyektlariga har tomonlama ko‘maklashish tizimini joriy etish jarayonini tahlil qilishdan iborat. Bunda tadbirkorlik subyektlarini qo‘llab-quvvatlash O‘zbekiston iqtisodiyotini yanada rivojlantirishda muhim ahamiyat kasb etishi ta’kidlandi.

Kalit so'zlar: kichik biznes va tadbirkorlik sub'ektlari, investitsiyadan keyingi monitoring tizimi, milliy iqtisodiyot, ishlab chiqarish quvvati, eksport salohiyati.

Аннотация. Целью данного исследования является анализ реализации системы комплексного содействия малому бизнесу и субъектам предпринимательства в организации эффективного использования потенциала, созданного в рамках инвестиционных программ. При этом было подчёркнуто, что поддержка субъектов предпринимательства важна для дальнейшего развития экономики Узбекистана.

Ключевые слова: субъекты малого бизнеса и предпринимательства, система пост инвестиционного мониторинга, национальная экономика, производственный потенциал, экспортный потенциал.

Abstract. The purpose of this study is to analyze the implementation of the system of comprehensive assistance to small businesses and entrepreneurial entities to organize the effective use of capacities established within the framework of investment programs. In this, it was highlighted that the support of business entities is important for the further development of the economy of Uzbekistan.

Key words: small business and entrepreneurial entities, post-investment monitoring system, national economy, production capacity, export potential.

Introduction. The development of the country's economy based on different forms of property, based on the requirements of the market economy, is considered one of the most urgent tasks of the current period. The role of small business and private entrepreneurship is increasing, based on competition, in the development of the national economy.

In recent years, Uzbekistan, reformed the national economy, liberalized foreign trade, tax, and financial policy, supported entrepreneurship and guaranteed the integrity of private property, organized deep processing of agricultural products, and ensured the rapid development of regions, legislative reforms are being carried out and through

this, attention is paid to the production of competitive, exportable and high-margin products in the world market.

Literature review. During the study of the topic, the decision PQ-4937 of the President of the Republic of Uzbekistan and the draft action strategy, as well as a number of economists, including Muminov N.G. "Industrial economy" [7], "Economic analysis" co-authored by Pardayev M.Q., Abdykarimov I.T., Israilov B.I. The literature "Economic analysis" authored by Ibrohimov M.M., Karimova Z.H., as well as internet information was used.

Research methodology. The methods of economic analysis, statistics, comparison, balance, recalculation, chain substitution and the use of relative amounts were used to reveal the efficiency improvement of new capacities established by small businesses and entrepreneurial entities as part of investment programs aimed at the development of the national economy.

Results and discussion. In particular, during 2017-2023, he made revolutionary decisions to support private business, which is the driver of the modern economy. More than two hundred licenses and permits were cancelled in this field. The total number of taxes was reduced from 13 to 9, some tax rates were reduced by 2 times. From 2023, the value added tax rate has been reduced from 15% to 12%.

Due to these created opportunities, due to the direction of investments by small businesses and private business entities in the further development of industrial sectors, the volume of production of industrial products in the regions is increasing year by year. In particular, by the end of 2022, small businesses and private enterprises will produce 143.9 trillion soums worth of industrial products, which has increased by 2.3 times compared to 2017.

Also, in 2022, compared to 2017, the volume of services increased by 2.6 times, the volume of trade by 2.5 times, the volume of agricultural products by 2.3 times, and the volume of export products by 2.1 times.

To achieve these target indicators, within the framework of investment programs adopted in 2017-2022, business entities have invested nearly 62.1 billion dollars, and 60.8 thousand projects have been implemented. Due to these projects, 342.5 trillion soums of production (services) capacities and 1.1 mln. creation of new jobs has been achieved. The created jobs accounted for 8% of the employed population of our republic.

In addition, 20,900 industrial projects with a total value of 39.4 billion dollars have been launched by entrepreneurs of our republic involving foreign partners during 2017-2022. Due to these, production capacities worth 321.8 trillion soums per year were created and more than 533 thousand jobs were created.

Due to the creation of new industrial enterprises, modernization, and expansion of existing ones within the framework of investment programs, industrial products worth 1.8 billion dollars were exported in 2017 alone, and by the end of 2022, industrial products worth 4.5 billion dollars will be exported, or 2.5 billion compared to 2017. double growth has been achieved.

Also, due to the newly created capacities, the production of industrial products in the regions increased by 3.7 times in 2022 compared to 2017. Especially Navoi (6.5 times), Jizzakh (4.5 m.), Khorezm (4.5 m.), Tashkent (4.3 m.), Jizzakh (4.2 m.), and

Andijan (4. 1 m.) the volume of production of industrial products increased sharply in the regions.

By the end of 2022, the share of small business and entrepreneurship in the gross domestic product was 51.8 percent, in industry 26 percent, in construction 71.5 percent, in employment 73.9 percent, and in exports 29.6 percent.

Acceleration of investment processes is of great and decisive importance for the improvement of the country's economy, and the construction and reconstruction of new enterprises equipped with modern equipment and technologies. Foremost, it provides an opportunity to solve the most important social problems, such as increasing the employment of the population, wages, and income. That is why it is one of the most important issues to make full use of the capacities created at the expense of investments in our country and to provide economic stimulation and necessary conditions for enterprises that achieve this.

Uzbekistan of the President of the Republic of December 28, 2020

With the decision of PQ-4937, the Department of Post-Investment Monitoring was established in the Ministry of Investments, Industry, and Trade, and its main task is to analyze the level of utilization of production facilities and facilities created within the framework of investment programs, technical and economic analysis of investment projects. The project initiators were assigned the task of helping to achieve the indicators.

For 3 years, the established department has been coordinating the post-investment monitoring of relevant state administration bodies, organizations, economic associations, the Council of Ministers of the Republic of Karakalpakstan, regions, and Tashkent city administrations in projects launched within the framework of investment programs.

In particular, state administration bodies, organizations, economic associations, the Council of Ministers of the Republic of Karakalpakstan, and regional and Tashkent city administrations go to places and study the level of utilization of production capacities in enterprises every month. In particular, the implementation of the production (services) plans on the technical economical basis and business plans of the projects are studied. Proportion is determined by comparing the actual production volumes with the established plans for production (services) capacities in enterprises.

Determining the reasons for the decrease in production volume, proposals for their elimination will be developed and submitted to the Investment Projects Post Monitoring Department of the Ministry of Investments, Industry and Trade.

The department of post-monitoring of investment projects has compiled the received proposals, in agreement with the relevant ministries and agencies, developed a plan of measures aimed at solving the existing systemic and individual problems of bringing production to full capacity in enterprises operating at low capacity, and the Republic of Uzbekistan It will be submitted for approval to the Government Commission on Foreign Trade, Investments, Development of Local Industry and Technical Regulation.

Relevant state administration bodies, organizations, economic associations, and the Council of Ministers of the Republic of Karakalpakstan, regions, and Tashkent city administrations will be monitored for the implementation of the approved measures, and information will be submitted to the Government Commission.

Based on this system, to organize the effective use of the capacities created by business entities in the fields of industry, service, and agriculture, post-monitoring works are carried out every month, and measures are being implemented to solve the identified problematic issues.

During the year 2023, the problematic issues that harm the production process of the enterprises that were launched as part of the investment programs in 2017-2022, but are working at low capacity, are identified and focused on implementation.

In particular, 878 different problematic issues affecting the production process of 731 enterprises were positively resolved by relevant ministries and agencies. As a result, the existing production capacities of 24.5 trillion soums, export opportunities of 149.6 million dollars, and more than 25.9 thousand jobs were restored in these enterprises.

Conclusions. Based on the studies within the topic, I think it is appropriate to make the following suggestions and recommendations about further increasing the role and importance of private property in the development of our country's economy.

1) Radically increasing the role and role of private property in the economy;

2) creation of necessary conditions and opportunities for rapid development of private property and private entrepreneurship;

3) to continue large-scale work on improving the business environment by expanding the use of material and credit resources.

If these works are carried out, the growth of our country's economy will be achieved through the development of private property.

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STRUCTURAL FORMS OF TERMINOLOGY IN ENGLISH AND UZBEK LANGUAGES

Ermetova Jamila Ismailovna,
associated professor k.f.f
Urganch State University
jamilaismailovnae@gmail.com

Annotatsiya: Maqolada ingliz va o‘zbek tillaridagi atamalarning strukturaviy shakllarini qiyosiy o‘rganish va tahlil qilishga bag‘ishlangan bo‘lib, bu bizga ularni shakllantirishning eng samarali usullari va modellarini yaratish imkonini beradi.

Tayanch so'zlar: terminologiya tizimi, terminologik birikmalar, sodda va murakkab atamalar, atamalarning formal va semantik tuzilishi, terminologik birikmalar.

Аннотация: Статья посвящена *исследованию* и анализу структурных форм терминов в английском и узбекском языках в сопостовительном плане, что позволяет установить наиболее продуктивные способы и модели их образования.

Ключевые слова: терминологическая система, терминологические сочетания, простые и сложные термины, формальная и семантическая структура терминов, терминологические словосочетания

Abstract: The article is devoted to the study and analysis of the structural forms of terms in the English and Uzbek languages in a comparative manner, which allows us to establish the most productive methods and models of their formation.

Keywords: terminology system, terminological combinations, simple and complex terms, formal and semantic structure of terms, terminological collocations.

Introduction. In linguistics, the concept of terminology underlies the general theory and is interpreted as the science that studies the collection, definition, formation and representation of lexical units belonging to a specialized field in one or more languages.

Despite extensive research in the field of terminology, it remains a significant challenge in modern linguistics. The level of development in any field is determined by the precision of its terms and terminology. Therefore, studying the word-formation and lexicographic features of mathematical terms in Uzbek and English languages from a cross-sectional perspective is crucial to address this issue.

As independent sections of terminology, we can consider the theory of terminology in texts. This theory lies at the intersection of terminology and private text theory and deals with issues such as the typology of texts containing terms, terminological analysis of the text, and textual analysis of the term (Table 1).

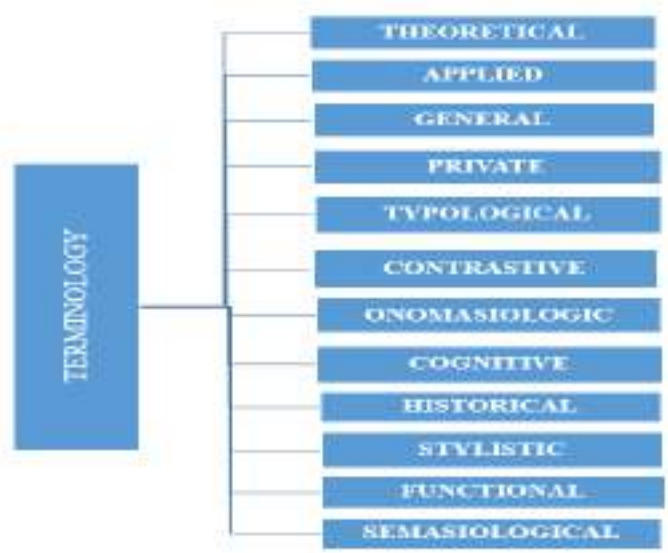

Table 1. Research areas in Terminology Studies

Additionally, we know the history of terminology, which deals with the formation and improvement of the subject, methods and structure of terminology, its place in the system of sciences, and the development of its theories and principles, as well as individual terminological theories and principles.

Literature review: In modern linguistics, starting from the second half of the XXth century, the study of terminological units has become the object of many scientific researches. Over the years, several scientists in the world linguistics, including V. V. Vinogradov, , A. A. Reformatsky, S.V. Grinev, V.A. Tatarinov, V.M. Leitchik, V.P. Danilenko, E. J. Field, R. I. Harrison, H. Felber, J. S. Sager, M. T. Karbe, R. Temmerman, K. Kageura, B. N. Golovin have attempted to classify the main mechanisms of the formation of new terms.

Several scientific studies have been conducted in Uzbek linguistics related to the study of the linguistic peculiarities of terms in various disciplines and fields. Uzbek linguists S. Akobirov, O. Usmanov, A. Madvaliev and Kh. Dadaboev have made a significant contribution to Uzbek terminology through their scientific research. Many other linguists have also studied terms as the object of their research, and examples of such studies include X. Khojaeva, Sh.N. Abdullaeva, D.S. Saidgadirov, R.Zh. Sharopova, F.Sh. Kadirova, A.M. Kurganov, and N.A. Ayakulov, D. Paluanova, O.S. Akhmedov, I.Zh. Yuldashev, O.T. Orinova, P.P. Nishonov, D.Khadirbekova, and T.G. Valiev have also contributed to this field.

Research methodology: The extralinguistic need to express new concepts is the determining factor in the development of the system of term formation and the productivity of individual models by means of which the vocabulary of any language is enriched. In the history of the English language, the rapid expansion of the vocabulary with new words took place in the XIV century. It is when after the conquest of the British Isles by William the Conqueror a flood of French words poured into the English language; in the XVI century, English borrowed many words of Latin origin; in the XIX century, the expansion of the English language took place primarily due to the rapid development of science and technology. Nowadays, the "expansion of the vocabulary arsenal" of the English language is no longer due to the borrowing of new words from other languages. We may notice it "is a reflection of the inner richness of

word creation, honed by the age-old tradition of maximum use of linguistic material to reflect reality in the process of socio-political and economic development of society and the corresponding communicative development [1].

According to sociolinguistic studies, the structure of a term is determined by its content during the formation and development of terminology in any field of knowledge. As science and technology progress, the linguistic means used to denote new objects, phenomena, and concepts become increasingly complex. This process is influenced by extralinguistic factors. A term is considered an essential component of a system, which is defined as a collection of interconnected elements. The structure of the system is determined by the connections between these elements [2].

Analysis and results. The analysis of the structural forms of terms is crucial for mutual understanding. It allows us to establish the most productive ways and models of their formation, and predict the further development of any term system. As noted by E.K. Dresen, the possibilities of constructing new terms and establishing links between the form and meaning of the term are determined by the structural features of the language [3].

The formation of scientific terms is characterized by the specialization of linguistic means used to express scientific concepts, as well as the systematic and regular classification of term formation models that correspond to the systematicity and regularity of the concepts they represent. The formation of terms is influenced by various factors, including linguistic means such as units of the national language, borrowings from other languages, and artificial formations. It is also influenced by the ways in which terms are formed, such as semantic, morphological, and syntactic methods. Additionally, the formal and semantic structure of a term can also influence its formation.

The results of the above studies, we can distinguish the following main structural ways:

semantic, consisting in the use of a word or word combination taken from the common language as a term;

morphological, i.e. the creation of a new term by using affixes;

morphological-syntactic, i.e. word addition, the creation of a new term by adding word bases;

syntactic, i.e. the formation of terminological combinations; formation of abbreviations, i.e. the creation of a new term by truncating word bases.

The syntactic method is the most productive way of forming structural terms. This method involves transforming ordinary free word combinations into complex “word equivalents”. According to research, this method accounts for 60% to 95% of the composition of various terminologies in European languages. This indicates the predominance of terminological word combinations (compound terms) over single-word terms as a characteristic feature of modern terminology [4]. The term “terminological word combination” refers to a unit of nomination within a given terminology system. It is a semantic and grammatical union of two or more fully valued words that serve as the name for a special professional concept.

The structure of a terminological collocation indicates “the position of the concept it names within the system of related concepts. The generic word, which is the nuclear

component of the phrase, indicates the group to which the concepts called by the phrase belong. This word is distinguished in a word combination by the stability of its place, and the process of formation of combinations is usually reduced to the addition of new words or word combinations to it" [4].

A collocation is a coherent whole, for example a group of subjects or a group of predicates in a sentence, a combination of a definition and a definite word, etc. Not only does it have a complex grammatical structure, but it also expresses a thought that is complex in its logical nature. "It is unified and represents a combination of several concepts, each of which is different from the whole combination taken as a whole" [5].

A collocation is built according to the principle of semantic distribution of a word. Usually, when studying a phrase combination, we proceed from the fact that it has some properties of a word (functions as a unit of nomination) and it is opposed to a sentence (manufacturing processing – ishlab chiqarish jarayoni; coefficient of friction – ishqalanish coeffitsienti).

During the development of a terminology system, one-component terms that express simple concepts play a crucial role. As science progresses, concepts become more specific, resulting in an increase in the number of components in a term. Simple terms are defined as one-word terms that are formed through morphological and semantic methods. For instance, "blind" becomes jaluzi; manufacturer – ishlab chiqaruvchi; process – jarayon.

The vocabulary of the English language is in a state of constant replenishment. The morphological methods such as affixation (affixation is a method of word production by which new words are created by adding word-forming affixes, i.e. prefixes and suffixes, to the bases of various parts of speech), make "a dominant contribution" [6] to the enrichment of the English vocabulary at the present stage of its development. The researches carried out in relation to suffixation and pre-fixation in English testify in favour of the fact that languages gravitate more towards the way of forming new words by means of suffixation and less towards pre-fixation.

The formation of nouns using modern productive morphological processes, mostly by means of suffixes, is a recent innovation that emerged in the late 20th century. Prefixes, which are word-forming morphemes that precede the root and alter the lexical meaning of a word, typically do not affect its classification within a particular lexico-grammatical category [6]. During suffixation, the categorical meaning of the word is preserved and it does not change its part of speech. The resulting word belongs to a specific semantic series. Below contrastive analysis shows the differences and similarities of examples:

In **English "anti**freeze" – a flied to keep water temperature low in the cooling system of automobile. In **Uzbek t**he word "Antifreeze" is a loan word the gives peculiar meaning**:** avtomobil sovutish tizimida haroratni past tutish uchun suvga qo`shiladigan suyuqlik;

Undercarriage – a tool to shift the car without breaking or spinning; in Uzbek is a phrase combination: Avtomobil yuvish qismi;

Demultiplicator – the height of the higher step and the separation of the staircase, this word is borrowed in Uzbek.

Displacement – internal engine parameter measured in cubic centimeters or in liters; in Uzbek “ish hajmi” word combination.

Most compound words are derived from collocations, but some are formed by adding root bases by analogy with existing compound terms. A compound term is formed from base terms that have certain structural-semantic relations similar to those of linguistic formations of word combinations or sentences. Complex terms are terms formed by compounding words:

Starting device – a device for the preparation of combustion engine suitable for use for the cold grind motor;

Dependable break – part of the brake system designed to hold the car on relatively rugged surfaces;

Cardan joint – the motion shifting section of the shafts between the arrows; [7].

A compound word is formed from the bases of words that have a specific structural-semantic relationship with each other. These relationships are a unique variant of the semantic-structural relations of words in a collocation. When designating a subject or phenomenon, the attribute is expressed differently in compound words compared to collocations. Compound terms are made up of whole words and can be written with a conjunction or a hyphen. They should be used when they convey meaning more precisely than a similar non-technical term. Compound terms are made up of whole words and can be written with a conjunction or a hyphen.

Compound words place the main semantic emphasis on the second element, with a subordinating semantic relation between the meanings of the two elements.

When it comes to nomination, a complex term is considered to be more flexible and capable of denoting a significant number of different phenomena [5]. The process of forming complex terms involves singling out, clarifying, or specifying the features of a subject or phenomenon. Both complex and derivative terms belong to a specific semantic group of terms.

Conclusion. The extralinguistic need to express new concepts is a determining factor in the development of the system of word formation and the productivity of individual models. The extralinguistic need to express new concepts is determinant in the development of the system of word formation and the productivity of individual models, the selection of which can most adequately express a new phenomenon. Thus, the analysis of structural features of terms in English has shown that the most productive way of structural term formation is the syntactic method

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CORPUS LINGUISTICS AS A METHODOLOGY: A SET OF METHODS BASED ON THE CORPUS ANALYSES

Ataboyev Nozimjon Bobojon o'g'li,
PhD in philological sciences,
Associate professor,
Bukhara State University
n.b.ataboyev@buxdu.uz

Annotatsiya: Maqolada korpus lingvistikasi va korpus tahlillari muammolari ko'rib chiqiladi. Korpus natijalaridan foydalanish muammoli bo'lishi mumkin, shuningdek, turli lingvistik sohalarda korpus tahlillarini qo'llashda kamchiliklar paydo bo'lishi mumkin. Tadqiqot metodologiyasi nuqtai nazaridan korpus qo'llanilishini isbotlash uchun amaliy tahlillar quyidagi maqolada hisobga olingan.

Tayanch so'zlar: korpus tilshunosligi, korpus lingvistikasi metodologiyasi, empirik tizim, lingvistik korpus

Аннотация: В статье рассматриваются проблемы корпусной лингвистики и корпусного анализа. Использование результатов корпусного анализа может быть проблематичным, а также могут возникнуть недостатки при применении корпусного анализа в различных лингвистических областях. Практический анализ, подтверждающий применение корпуса с точки зрения методологии исследования, был принят во внимание в следующей статье.

Ключевые слова: корпусная лингвистика, методология корпусной лингвистики, эмпирическая система, лингвистический корпус

Abstract: The article deals with the problems of corpus linguistics and corpus analyses. The use of corpus results can be problematic as well as the shortcomings might emerge while applying corpus analyses in the different linguistic fields. The practical analyses to prove the corpus application in terms of research methodology have been taken into account in the following paper.

Key words: corpus linguistics, corpus linguistics methodology, empirical system, linguistic corpus

Introduction. We consider it necessary to divide the corpus linguistics methodology into an empirical system of six methods, aimed at creating corpora based on the principles of the corpus and their application in applied research:

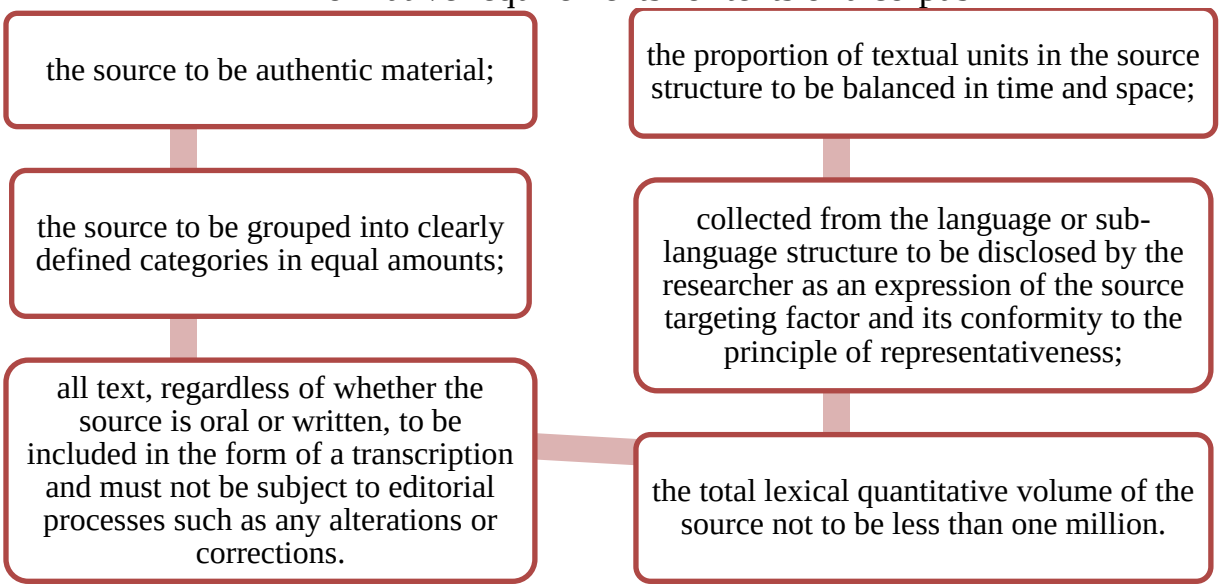
Main part. It is reasonable to say that the first type of methods are ***the aim-oriented methods*** before the creation of the corpus. Of course, based on the *aim-orientation* of the corpus, the corpus compiler must clearly define what kind of research the linguistic corpus being created is intended for.

It would be appropriate to call the second stage methods ***data-collection*** methods. These methods focus on working with the collection of texts and the sorting them in accordance with the genre, period of time and others. At the same time, requirements have been developed for the text sources that are part of the corpus, and it is recommended that each corpus compiler collects texts based on these six requirements.

Given the fact that insufficient research has been conducted on the criteria for the collection and selection of corpus texts, it is relevant to propose criteria requirements for the textual linguistic information included in the corpus. Accordingly, normative requirements were developed for the textual content of the linguistic base within the scope of the corpus, and they constituted six (see diagram 1).

Diagram 1

Normative requirements for texts of a corpus



The third stage methods consist of ***metadata addition methods***. The methods included in this group aim to add reference data to the selected texts for inclusion in the corpus. A clear representation of the database is a very simple method, and it allows the information to be searched by category (newspaper material, word of mouth, etc.) and linked as a reference in the example given in the concordance row. The tagging method is important at this stage, and today it is mostly done using computers.

Any syntactic device can also be tagged during the research process. For instance, grammar structure of *I am* can be tagged as PPSS+BEM (PPSS – non-third person nominative personal pronoun ва BEM – am form of Be).

Table 1.

Tagging set of the verb forms

Sing /VB	Be /VB	Do /VB	Have /VB	Go /VB
Sings /VBZ	Is/VBZ	Does /VBZ	Has /VBZ	Goes /VBZ
Sang/VBD	Was/VBD	Did/VBD	Had/VBD	Went/VBD
Singing/VBG	Being/VBG	Doing/VBG	Having/VBG	Going/VBG
Sung /VBN	Been /VBN	Done /VBN	Had /VBN	Gone /VBN

In this case, if VB comes for *the verb*, the third person Z added to it is the present simple tense suffix, while D denotes the verb form in the past tense, G represents the gerund form, and N represents the past participle forms of the verb.

The tag set is formed as the final systematic sum of these individual tags. The labeling system for the Penn Treebank corpus lists a total of 48 tagging codes, including: CC – coordinating conjunction, CD – cardinal number, DT – determiner, FW – foreign word, JJ – adjective, JJS – adjective in superlative degree, JJR – adjective in comparative degree, NN – noun, NNS – plural noun, NNP – proper noun, RB – adverb, RBR – adverb in comparative degree, RBS – adverb in superlative degree and others.

The fourth stage methods are ***automation methods*** aimed at converting the cases into a fully electronic form. The methods at this stage work with all the collected, sorted, linked metadata, and verified texts in the form of an electronic corpus and its design. It is also at this stage that work is carried out to incorporate a wide range of possibilities, such as the formation of concordances in the corpus, the color of the search word and the words it combines, and the ability to graphically express the results obtained on the basis of corpus analysis.

In the fifth stage, it is important to use ***evaluation methods***. The perfection of the created corpus can be determined by identifying whether they can respond to each of the stated principles of the concept of corpus. In this case, each feature of the case must be evaluated.

In the sixth, final stage, ***frequency search-analysis methods*** can be introduced in the compiled corpora. It is possible to include methods that allow to draw conclusions by looking at the frequency of use of words in the corpus. In general, the importance of frequencies is high in all corpus-based analyses, and working with them also requires a clear distinction, because the frequency of words use that are part of the corpus enables us to draw comprehensive conclusions about them. T.S. Gries[1] states the corpus frequencies can be of 3 types:

Raw frequencies – the frequency of use of the word in the corpus in the search, which is given in exact numbers. For example, in COCA, the verb *give* is used 202515 times, which is its raw frequency (RF).

Normalized frequencies – the ratio of the exact number of frequencies indicated by the corpus to the levels of 10 (1000, 1000000, etc.). For example, to find the NF of the verb *give*, we calculate the total amount of COCA (TA), i.e., 570 million. In this case, to find the normalized frequency (NF) of a word relative to a million, we need to divide its RF by 570. It is appropriate to provide the following formula:

[1] Gries S.Th. Quantitative designs and statistical techniques/ English Corpus Linguistics edited by Douglas Biber and Randi Reppen. – United Kingdom: Cambridge, 2015. – P. 52.

$$\text{NF(million/1)} = \frac{\text{RF}}{\text{TA}/1000000}.$$

It can be seen that the NF(million/1) of the verb *give* in COCA is approximately 355,2. This is important when comparing monolingual corpora or interlingual corpora.

Logged frequencies – the degree derived from the primary frequency embedded in a clearly selected grounded logarithm (e = 2.7182818). That is, the logarithm is the inverse function to exponentiation. If we look at the formula $\log_b x=y$, if b = 10, if x = 100, then y = 2. Simply put, the answer to the question of how many levels of 10 will be 100 is 2. In deriving the logarithmic frequency, the above formula b = 2,7182818 (base), x = 202515 (raw frequency), and from this the logarithm shows that the degree is y = 12,218569364782, which is the logged frequency (LF) of the use of the verb *give* in COCA.

It is advisable to compare the corpus data by means of the above mentioned frequencies. In our view, this comparison process can take three different forms*: Internal comparison in a corpus; Interlingual comparison in different corpora of one language; Intercollectual comparison in the corpora of different languages.*

Conclusion. We proposed to divide the Corpus linguistics methodology into six groups of methods, aimed at creating a corpus and applying it in research. It is through the integration of these systematic methods that the creation of an experimental corpus aimed at studying the language features of Corpus linguistics can be justified. Accordingly, the corpus planned to be created is formed in accordance with this process.

As we consider, Corpus linguistics is considered as a methodology of linguistic research, a group of six-step methods that include specific processes based on the consistency of its research methods – aim-oriented methods; data-collection methods; metadata addition methods; automation methods; evaluation methods and frequency search-analysis methods have been improved.

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TERMS USED IN THE PROFESSIONAL VOCABULARY OF FOOD TECHNOLOGY

Djabbarova Dilfuza Gayratovna
Lecturer, Foreign Languages Department
Karshi Engineering-Economics Institute
djabbarova1012@gmail.com

Annotatsiya: Maqola oziq-ovqat va uni qayta ishlash sanoatining kasbiy faoliyatida ingliz tilida terminologiya va terminologiyani shakllantirish jarayonini o'rganishga bag'ishlangan. Oziq-ovqat sanoati rivojlanishi bilan yangi atamalar o'zgaradi yoki paydo bo'ladi, ularning nomlari oziq-ovqat ishlab chiqarish jarayonlari bilan bevosita bog'liq. Maqolada ingliz tilidan olingan oziq-ovqat sanoati sohasidagi professional atamalar muhokama qilinadi. Ushbu sohadagi shartlarni to'ldirishning asosiy usullari to'g'ridan-to'g'ri olish va "kalka" hisoblanadi. Tadqiqot materiali sifatida o‘zbek tiliga o‘xshash tarjimasi bo‘lmagan asbob-uskunalar, pazandachilik texnologiyalari va kasblar nomlari tanlandi.

Kalit so'zlar: chet tili, kasbiy atamalar, qarzlar, oziq-ovqat sanoati, etimologiya, qayta ko'rib chiqish, melanjer, tez tayyor bo'ladigan bo'tqa.

Аннотация: Статья посвящена изучению терминологии и процессу формирования терминологии на английском языке в профессиональной деятельности пищевой и перерабатывающей промышленности. По мере развития пищевой промышленности изменяются или появляются новые термины, названия которых напрямую связаны с процессами производства продуктов питания. В статье рассматриваются профессиональные термины пищевой промышленности, заимствованные из английского языка. Основными способами пополнения запасов в этой сфере являются прямое заимствование и «калька». Материалом исследования были выбраны названия оборудования, технологий приготовления пищи и профессий, не имеющие аналогичного перевода на узбекский язык.

Ключевые слова: иностранный язык, профессиональные термины, заимствования, пищевая промышленность, этимология, переосмысление, меланжер, быстро развариваемая каша.

Abstract: The article is devoted to the study of terminology and the process of terminology formation in English in the professional activities of the food and processing industry. As the food industry develops, new terms change or appear, which names are directly related to the food production processes. The article discusses professional terms in the food industry borrowed from the English language. The main ways to replenish terms in this area are direct borrowing and «calquing». The names of equipment, cooking technologies and professions that do not have a similar translation in Uzbek were chosen as research material.

Keywords: foreign language, professional terms, borrowings, food industry, etymology, rethinking, melanger, instant porridge.

Introduction: Scientific and technological progress in the food industry has led to the emergence of new devices and equipment, technologies and processes for food production, as well as the names of new professions [3].

Let's consider the etymology and formation models of some terms denoting equipment, production processes and professions. The food industry, the purpose of which is the production of food, is one of the main sectors of the economy throughout the world. Demand, mass production, profitability and resistance to economic changes have made the food industry a leader. The food industry is developing, and its terminology is becoming wider, so studying the terms in this area is of particular interest to linguists. The object of our research is English language terms in the food industry.

The purpose of the study is to determine the structural features of English terms in this field. The research material was 220 English-language terms selected by a continuous sampling method from special texts related to the food industry [4]. Recently, more and more attention has been paid to the study of terminology systems [6]. In addition, over the course of many years, linguistic scientists (V.P. Danilenko, S.V. Grinev-Grinevich, V.M. Leichik) have attempted to classify the central mechanisms of the formation of new terms [1; 2; 3]. Among the main ways of forming terms, we can highlight: morphological-syntactic - creating a new term by adding the stems of words, compounding; morphological - creating a new term using affixes; semantic, which consists of using a word or phrase as a term that is taken from the common language; syntactic – terminological combinations are created; abbreviation - the formation of a new term by shortening words. Based on the works of L.B. Tkacheva, terms can be divided into the following groups [5]: 1) Simple, or one-component, terms that are formed by rethinking commonly used words, affixation, or borrowing from other terminological areas. 2) Complex - two-component terms, which are characterized by complete design, are formed by rethinking or adding a generally accepted compound word or borrowing from other terminological areas. 3) Terminological phrases – multi-component terms that are formalized separately; These are semantically integral phrases that are formed by combining two, three or more elements. English terms related to the food industry include individual words and phrases of special vocabulary. Single-word terms can have different numbers of word-forming components. Having analyzed the structure of English-language terms in the field of the food industry, we identified the following groups, according to the methods of forming the terms:

1. Terms consisting only of the base (35%): boil - qaynatmoq, cream - qaymoq, custard – shirin krem, fit - o`rnatish, food – oziq ovqat, press – bosmoq, skin - tozalamoq, aroma – muattar xid, chip - tarasha, scone – bug`doy non.

2. The structure of the term is formed by one stem and one or more affixes (31%): aging - yetilish, condiment - ziravorlar, mixture - qorishma tarkibi, bakery - novvoyxona, boiler - qozon, converter -konvertor, couverture - shokoladli glazur, curler - tikuv mashinasi, fermentation - fermentatsiya, immerser -suvga cho'mish qurilmasi, leaching - yuvish, reduction - maydalash tizimi, salinity - tuzlilik, refillable - qaytariladigan. The most commonly used prefixes are re-, in- and suffixes -er, -ture, -ency, -ing, -ion.

3. Terms formed by compounding (15%): in-bottle - in bottles, locksoy - soya sousli guruch unidan makaron, lukewarm - biroz iliq, oatmeal - jo‘xori uni, off-season - mavsumdan tashqari davr, packpaper - mavsumdan tashqari davr

4. Terms that are formed by adding bases and affixation (13%): afterripening - pishishdan keyingi, antiadhesiveness - yopishmaslik xususiyati, freeze-dried - sublimatsiyalangan, muzlab quritilgan.

5. Terms formed by abbreviation (5%): HACCP (Hazard Analysis And Critical Control Points) - oziq-ovqat xavfsizligini boshqarish tizimi, ICC (International Association For Cereal Science And Technology) - don fanlari va texnologiyasi xalqaro assotsiatsiyasi, Q&FC (Quality & Food Safety) - sifat nazorati va oziq-ovqat xavfsizligi, AAFCO (The Association Of American Food Control Officials) - oziq-ovqat mahsulotlarini tartibga soluvchi hukumatlarning Amerika assotsiatsiyasi.

The word entered the vocabulary as a household electrical appliance for mixing ingredients in the middle of the 20th century. Until this time, from about the 17th century, “*mixer*” meant a worker involved in mixing. In the Uzbek language there are translation options - “*qorishtirgich*”, but they have not taken root in cooking [5].

“Mixer” (*mixer*: English *mix* - “*aralashtirmoq*” + suffix *-er*): *Planetary mixers consist of a bowl and an agitator* .

“Melanger” (*melanger*: French *mélange* - “*qorishtirmoq”*): *Chocolate melanger mixing raw* ingredients. The word was first introduced in the 19th century. with the invention of a device for rolling raw materials in the production of chocolate. In rare cases, in the Uzbek language you can find a translation - “*tegirmon*” [7]. “Blender” (*blender* : English “*blend*” - “*aralashtirmoq,qorishtirmoq*” + suffix *-er*): *Countertop blenders are designed to mix, puree, and chop* food since 1872, "*blender*" has meant a person or thing that is combined. Since 1942 - an electric device for grinding products and whipping them [7].

“Slicer” (*slicer*: English “*slice*” - “*kesmoq” bo`lak, tilimga*): *Slicers can be adjusted easily to cut slices of variable thickness.*

The word "*slicer*" has been used since the end of the 15th century and was used to indicate who is cutting or what is being cut. In 1909, the word began to be used as a mechanical device for cutting food, in particular for bread, eggs, sausage and cheese. In the Uzbek language there are variants with translation: for cutting sausage, cheese - “*slicer*”, for bread - “*bread slicer*”, for eggs - “*egg cutter*”, which refer to the device invented in 1909. However, with the invention of electrically driven universal slicers, *the* word “*slicer*” *began to be used in the* food industry [5] *macroscopic air voids within the moldable mixture* .

Among the terms in the food industry, two-component and three-component units are also distinguished. Two-component terms are represented by the following structure: 1) Adjective + Noun: natural color - tabiiy bo'yoq, raw meat - xom go'sht, thermal agitation - qizdirilganda aralashtirish, irregular can - shaklli quti, instant porridge – tez tayyor bo`ladigan bo`tqa, whole grain - butun don. 2) Noun + Particle: fall back - faoliyatni kamaytirish, bone in – suyak bilan, fishing-out - ovlash. 3) Participle II + Noun: chopped meat - qiyma go'sht, heated lid - isitish qopqog'i, kibbled peas - maydalangan no'xat, tableted tea - tabletkali choy, mixed acid - kislota

aralashmasi, nonwithered tea - quritilmagan barglardan tayyorlangan choy. 4) Noun + Noun: dairy dessert - sutli desert mahsuloti, confectionery products – qandolatchilik mahsulotlari, catering establishment – umumiy ovqatlanish korxonlari, cake baker – pishiriq-nonvoyi, milk powder - sut kukuni.

Production processes and technologies:

Conching (*conching*: English "*conch*" - "*chig`anoq*" + ending *-ing*): *Conching redistributes the substances from the dry cocoa that create flavor into the fat phase.* This the process of prolonged mixing of chocolate mass in a conche machine. The conche machine got its name due to its shape resembling the shell of a sea snail.

Poaching (*poaching: English "poach" - "cook"* + ending – *ing*): *Poaching is often considered a healthy cooking method because it does not use fat for cooking or flavoring the food.* Poaching is a type of boiling of eggs and delicate fish at a low boil at a temperature of 90-97°C. The prepared dishes are called poached. In cooking, this term was first mentioned at the end of the 14th century, when it was borrowed from the Old French word "*poche*" ("*put in pocket*") due to the peculiarity of preparing poached eggs, in which the egg white envelops the yolk, creating a kind of "pocket." [6].

Professions: Chocolatier (*chocolatier*: Spanish: "*chocolate*" + ending *–ier): Chocolatiers must understand the physical and chemical aspects of chocolate.* This profession means a confectioner who makes chocolate products.

Remuer (*remuer*: French "*remuer*" - "to stir"): *Remuer lowered the wine bottle.* This a specialist shakes bottles of ripening champagne, during which the sparkling wines are rid of sediment.

Sommelier (*sommelier*: French "*sommier*" - "*employee in charge behind provisions*"): *A professional sommelier also works on the floor of the restaurant and is in direct contact with restaurant patrons.* A sommelier specializes in serving wine and other alcoholic beverages while serving restaurant guests.

Barista (*barista*: English "*bar*" - + ending *-ist*): *Baristas generally operate a commercial espresso machine, and their role is preparing and pulling the shot.* A barista prepares and serves coffee and coffee drinks.

Food stylist (*food-stylist*: English "*food*" - "*food*" + "stylist, fashion designer"): *The role of the food stylist is to make the food look attractive in the finished photograph.* This profession is new and in demand at present and means a specialist in creating compositions from products and dishes, gastronomic still lifes [2].

Undoubtedly, the food industry is actively developing: specialists are using new equipment with interest, new technologies and methods of food production are being mastered, and new vacancies are appearing [4].

As for professional terms, based on the research carried out, the following conclusions can be drawn:

Rich sources of professional terms for the food industry are English and French.

Equipment names most often have a word formation model: verb stem + suffix *-er* .

The names of technologies and processes when forming terms consist of the verb stem + suffix - *ing* .

Professions can be translated descriptively.

Conclusion: A structural analysis of English terms in the food industry showed that most of them are represented by simple terms (43%), slightly less of them are two-component terms (39%), and only 18% are three-component terms. Single-part terms consist of only a stem (35%), one stem and an affix (31%), two stems (15%), two stems and an affix (13%). Among single-component terms, units formed by abbreviation are also distinguished. Two-component terms have predominantly the structure Noun+Noun, less often Noun+Adjective.

The analysis of English lexemes in the field of processing (dairy) industry allows us to conclude that in the Uzbek language there are words from the Germanic group of the Indo-European family of languages, in this case from English.

As a result of our research, we found out that professional vocabulary in the dairy industry sometimes has a foreign language nature and lends itself quite well to assimilation.

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RITUALS ARE A MEANS OF NATIONAL CULTURE, SPIRITUALITY AND MORAL VALUE

Adizova Obodon Istamovna
PhD in philological sciences,
professor, Bukhara State University
obodon63@gmail.com

Annotatsiya: Maqolada fransuz va o‘zbek folklorshunosligida marosimlarning mohiyati, mavzuiy turlari va badiiyati, ularning kelib chiqishi, evolyutsiyasi, xususiyati va tuzilishiga oid ma’lumotlar keltirilgan. Ikki noqardosh mamlakat folklorshunosligining boy tarixiy taraqqiyot bosqichlariga ega ekanligi yoritilgan. Marosimlarga xos urf-odat, qadriyat, an’ana va milliylik tushunchalari o’rganilgan.

Tayanch so‘zlar: folklorshunos, xalq og’zaki ijodi, to’y, mavsumiy, oilaviy marosim, urf-odat, tarixiy etnografiya, an’ana, milliylik, qadriyat.

Аннотация: В статье представлены сведения о сущности, тематических видах и искусстве обрядов во французском и узбекском фольклоре, их происхождении, эволюции, особенностях и структуре. Подчеркивается, что фольклористика двух небратских стран имеет богатые исторические этапы развития. Изучены понятия обычая, ценности, традиции и национальности, характерные для обрядов.

Ключевые слова: фольклорист, фольклор, свадьба, сезонный, семейний обряд, обычай, историческая этнография, традиция, национальность, ценность.

Abstract: The article presents information about the essence, thematic types and art of rituals in French and Uzbek folklore, their origin, evolution, features and structure. It is emphasized that folklore studies of the two non-brotherly countries have rich historical stages of development. The concepts of custom, value, tradition and nationality characteristic of rituals are studied.

Key words: folklorist, folklore, wedding, seasonal, family ritual, custom, historical ethnography, tradition, nationality, value.

Introduction. Ritual is one of the most important forms of human culture as well as an effective tool for its development. The ceremony is a public event that attracts a large audience among the forms of folk art and culture. Ceremonies are of great importance in educating young people, as they embody, preserve and develop the best traditions, customs, moral rules of the people, and make them polite and moral.

The ceremony is a vital event aimed at celebrating important events in a person's life, taking place in an official and spiritual situation, with its own symbolic actions and special sayings. Ritual is a set of actions that have entered into a strict tradition among the people, specially held for the purpose of wishing a person good health, prosperity in his life, good luck in his daily life, or to record and celebrate important points of a person's life. .

Main part. Family rituals are important in folklore. Because the main life of a person is spent in the family. It has become a unique tradition to record a person's birth, a certain stage of maturity, good days, and death through special ceremonies in the family. This tradition exists among all nations. According to their relevance to human life, family and household rituals are divided into two large groups.

1. Folklore of wedding ceremonies
2. Folklore of mourning rituals

Folklore of the wedding ceremony. A wedding is a ceremony characteristic of all peoples of the world. The term "wedding" means an important turning point in the life of a certain person through the meanings of "to feed", "to give a feast to the nation". Therefore, a wedding is a ceremony of both material and spiritual nourishment. Wedding ceremonies are celebrated in all nations, but in the nations of Central Asia, khatna (circumcision) weddings and cradle weddings are also organized. Due to the fact that these ceremonies are held with different relationships, the genres of folklore performed in them are diverse.

Folklore of cradle weddings. Usually, a cradle wedding is held for the first (eldest) child in the family and it is celebrated. Sometimes this arrangement can change depending on the family's financial status.

Folklore of weddings. Among wedding ceremonies, weddings are distinguished by the richness of paintings, rituals, and the diversity of folklore material. Such diversity and high spirits are related to the purpose and mission of the ceremony, which is to celebrate a person's entry into a new period of his life through special joy.

In fact, the wedding is considered the happiest and most memorable ceremony that happens in the life of young men and women. Because after this ceremony, they look at life with different eyes, that is, with the eyes of people who have reached maturity both physically and mentally.

If the wedding ceremony is considered as a whole with all its parts, it includes a rather long period. Because the ceremony begins with the events of choosing a girl and ends with the ceremony of calling the groom, which takes place some time after the wedding night.

Folk genres such as olan and lapar belong to the first stage of Uzbek weddings.

France is the cultural center of Europe. It has many ancient museums and forts. If you don't dream of visiting a country like France, you feel like you haven't found a person. Also, in France, a wedding is considered the most beautiful and unforgettable ceremony. The word "wedding" is derived from the imperfect verb "to’y qilmoq" and means a gathering with a big party. A wedding, as its name implies, is not only full of sweet food, but also the gathering of close relatives and friends, relaxing tunes and songs, and various interesting entertainments that share joy. Here we want to think about weddings in Europe, especially in France.

Officially registered foreigners who have lived in France for at least thirty days are allowed to hold a wedding in France. If you are a permanent legal resident of this country, a ceremony can be held in a city hall, then this wedding must take place within the time limit set by the state, so that this marriage will be recognized in other countries.

Let's get acquainted with a wedding ceremony that will take place in France. At the wedding ceremony, the guests arrive in a group and a luxurious celebration begins with them. Such a traditional wedding ceremony will be a holiday. Organizing a wedding in France is a difficult thing. It will be like a holiday, and then another one will take place in another place. We present you some interesting scenarios.

In some cases, wedding parties rent an old French castle and can hold the ceremony there as a celebration.

Wedding ceremonies can be held by car and train, and in almost all French cities, wedding ceremonies can be held in Orthodox churches. Weddings can also be arranged at Disneyland. This wedding will be very attractive and interesting. In this topic, you will definitely be able to watch a game, eat ice cream, watch a group show. Orthodox wedding ceremonies are held in many churches and cathedrals. Among the most famous are the cathedral churches of Saint Genevieve, Bois and Alexandra Nevskaya located in Paris - honeymooners.

Considering the prestige and luxury of the wedding, such weddings are liked by everyone. Then they organize wedding parties in many places like St. Tropez, Cannes or any other famous holiday destination, France, Cote d'Azur.

Another opportunity for those who want to celebrate royal wedding ceremonies is the Palace of Versailles. The inside of this building is very beautiful, it may be difficult to hold ceremonies there, but it is allowed in its territory. If the park is decorated on a wedding theme, it is considered a royal holiday. In France, special flowers are made for weddings. These are unique flowers that have been made and preserved for several centuries and can decorate the wedding hall. Each flower and plant has a symbolic meaning and is considered to be of special importance for young people. At a wedding in France, both the bride and the groom must drink wine from a special cup, and the words of the bride and groom must be said in the traditional way. It is impossible to leave the wine. Because such wine is very valuable and is a tradition passed down from generation to generation.

There is an old custom in the villages, on this day, in the morning, the bride-to-be husband leaves his house and takes the bride. Before that, children had to cut the ribbon when the bride and groom walked on the way to the church. For the laurel ceremony, a cup of wine is sprinkled on the road and the children are sent away. In French weddings, funny scenes from the life of young people are shown, and in some cases, atrocities can be shown.

The fun part of weddings always starts with champagne, that is, with traditional wine drinking.

In the first part of the event, special attention is paid to the guests, then the young people should come to all the guests and thank them for coming to the celebration.

First of all, flowers play the main role in the organization of holidays and wedding ceremonies and events in the French style, and these flowers need to be prepared separately. It is necessary to skillfully prepare even trivial things for guests and other young people. Including, every wedding should be uniquely decorated. Especially when decorating places, the expression of the image of the Eiffel Tower should be decorated with pink flowers. In these places, guests immediately gather like on a holiday and express their wishes in a beautiful and good mood.

Wedding dresses should be age appropriate. The bride wears fitting and laminate. This is good, especially in the villages they pay a lot of attention to it. They also pay attention to the bride's shoes. Because this is a shoe that belongs to him, decorated with flowers. "Parisian bride" accessories complete the image. For example, a beautiful girl is considered a beautiful girl by her behavior on the screen. Special attention is paid to make-up. Of course, the appearance of the bride will be emphasized, she should have a refined, natural look. They express very good, warm thoughts about the bride. These

weddings should be fun and beautiful, expensive restaurants. It should also be noted that the groom should present the bride with soft pink flowers, chocolates, figurines and fresh flowers (peonies and orchids) and decorate the table.

Like all weddings, French weddings must have French music. The best option is a live orchestra. The best dance for young people at French weddings is the waltz. At the entrance of the restaurant, guests are greeted by the hosts. They welcome guests with harmless jokes. They pay attention to the guests during the event. Caricaturists are also invited, who will remain as a memory among the guests and show a wonderful repertoire, as well as entertainment for beautiful ladies and master classes on French hat decoration.

The French style of wedding is considered the most romantic holiday of this country, and we witnessed how the alternative proposal shows some unique customs. In France, newlyweds stick to an old tradition and drink water for their happiness from a large two-handled bowl.

According to the French wedding tradition, relatives and friends organize a loud "concert" under the windows of the house where the newlyweds spend their wedding night. For this, they use spoons, pots, lids and other utensils. To get peace and the opportunity to retire, the newlyweds should bring refreshments and drinks to the guests. For a bride, her wedding day should be one of the most important days in her life. Wedding traditions vary from country to country (and often from region to region), but many places have things in common. Although more and more honeymooners are abandoning some of the old traditions in favor of a modern style, French culture still places great emphasis on and influences the celebration of this special day.

Conclusion. Rituals influence the development of people's life and living needs. It is inextricably linked with changes in the regular form of development. Therefore, when a new thing or phenomenon arises, the second one develops, the third one does not meet the requirements of life and gives way to other forms. Life traditions, customs and ceremonies follow the same laws.

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ACTUAL PROBLEMS IN MODERN ART AND ARCHITECTURE

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INTEGRAL APPROACH TO MUSIC LESSONS

Matyakubova Umida Gayibaevna.
Lecturer, Faculty of Sports and Arts,
Urganch State University, Uzbekistan.
umida.matyakubova.83@mail.ru

Annotatsiya: Musiqa darslarida integratsiya musiqani o‘rganishda yangilik va o‘ziga xoslikka olib keladi. Bu ta’lim oluvchilar uchun ma‘lum afzalliklarga ega: u kognitiv qiziqishni shakllantiradi, musiqiy dunyoning yaxlit tasavvurini yaratishga, musiqiy bilimlarni tizimlashtirishga, ko‘nikmalarni rivojlantirishga, estetik idrokni, tasavvurni, e‘tiborni, musiqiy xotirani rivojlantirishga yordam beradi.

Kalit so'zlar: integratsiya, an’anaviy dars, musiqa uslublari, musiqa idroki, sahnaviy musiqa asarlari, musiqiy xotira

Abstract: Integration in music lessons brings innovation and originality to music learning. It has certain advantages for students: it forms cognitive interest, helps to create a holistic view of the musical world, systematize musical knowledge, developing skills, aesthetic perception, imagination, attention, and musical memory.

Keywords: integration, traditional lesson, music styles, music perception, performance music, musical memory

"...When the student moves from subject to subject, it seems that he is walking in different gardens. Before you can see one, another begins. As the saying goes, "every new thing has its own taste", he is interested in seeing them and wants to look at them. The same thing is tiring, makes the memory boring."
Abu Rayhan Beruni

Introduction. The music lesson is the main form of organizing music education at school; it is a constant creative connection between music - teacher - children. A modern music lesson is an up-to-date lesson that combines the priorities of the field of

education and the peculiarities of music perception. The integrity of the perception of the "musical world" plays an important role in here. Without integration as a leading idea in the implementation of educational content, it is difficult for students to form a holistic picture of this world.

Integration is a means of accepting new ideas on the border of premed knowledge. First of all, it is necessary to fill the unknown places among the classified knowledge, to establish connections between them [1.230].

Integration in music lessons is done on several levels. First, it is integration within the subject, if the original problem does not disappear from the perspective of the students, the scope of knowledge related to it will expand and deepen. For example, it is an integration between the development of music theory and history, combined with the logic of knowing the language of music in the historical context of the development of musical styles. The second level of integration is interdisciplinary integration. It is the integration of several academic subjects around a specific main theme or key concepts.

A teacher who plans to conduct an integrated lesson should take into account that an integrated lesson is not a traditional lesson, but an interaction of two or more subjects in one subject, that is, music, arts and literature; music, reading and history; it means to conduct such things as physical education, mathematics and music equally in one lesson.

The more the conversations in the integral music lessons go beyond the boundaries of the topic, the more the students can observe integral connections, that is, the deeper their perception of music and the wider their worldview. It is very important that music should not be separated from other forms of art in the minds of children, but should reveal its connection with them as clearly as possible. It is this interconnected teaching of the humanities that enriches students' knowledge, broadens their worldview, involves the mind and emotions in continuous work to feel and more accurately understand the era created by creators.

Methods and research. Integration in music lessons brings innovation and originality to music learning. It has certain advantages for students: it forms cognitive interest, helps to create a holistic view of the musical world, systematize musical knowledge, develop skills, and develop aesthetic perception, imagination, attention, and musical memory.

Conducting integrated classes increases the professional skills of the teacher, as it requires mastering new technologies and an active approach to education in the educational process [2].

Below is music for 5th grade A sample of integrated practical exercises that can be used in the lessons of culture is brought to your attention.

"Performance works of music"subject can be taught as an integrated lesson with the following subjects.

Literature	Biology	Visual arts	Physical education
"In the world of fairy tales"	Vertebrates	Still life in painting. Artistic perception of works created in the genre of still life	Action games

Open lesson sample in music in integrated way for grade 5
Topic: Stage music works

The goal:

1. Educational- To provide an understanding of stage music works, to expand the imagination of musical genres

2. Developing- development of thoroughness, agility, independent thinking skills

3. Educational–Ballet and dance art, musical drama and comedy, musical fairy tales for children - education of sophistication in students through performances

Type of lesson: A new knowledge provider.

Lesson method: conversation, presentation, introduction, independent work.

Teaching equipment: Music textbook, piano, sheet music, image of characters from musical fairy tales.

The course of the lesson:

I. Organizational part.

a) Greeting b) Attendance determination. c) Preparing students for the lesson,

g) Ballet and dance art, musical drama and comedy, musical fairy tales for children - talk about shows.

A conversation is conducted by showing still life and discussing the tools that help to reveal the content of the works in the thematic pictures related to these works.

II. New topic presentation.

The purpose of the lesson is stated, and a preparation for the lesson will be done

1. The topic of the lesson is explained using the "Brainstorming" method.

- Can you list the existing theaters in our republic?
- What is the term fairy tale called in different regions of our republic?
- Which theaters have you been to or would you like to go to?
- What kinds of performances are included in stage musical productions?

Stage musical works include opera, operetta, ballet, musical drama, musical comedy, fairy-tale shows created for children. Such works are certainly presented in musical drama theaters, and only then, the audience can deeply understand the content of the work. In our country, the Grand Academic Opera and Ballet Theater named after Alisher Navoi, the Republican State Theater named after Mukimi, the operetta theater, It includes the Uzbek and Russian Theater of Young Audiences, the Republican Puppet Theater and state theaters in various regions.

Composers such as H. Azimov, S. Abramova, P. Khalikov, G. Kadyrov wrote a lot works for children's musical education. There are some operas ("Yoriltosh", S. Boboyev;"Alovuddin's magic lamp", S. Varelas;"Malikai is ayyor", S. Jalil;"Ali Baba and forty robbers", V. Milov;"The king of animals", A. Mansurov and others) and ballets ("Golden key", B. Zeidman;"Beautiful Vasilisa", A. Berlin), musical comedy ("The wise girl and the foolish king", D.Zokirov and others) were created.

Among the composers, T. Toshmatov, N. Norkhojayev, M. Bafoyev, A. Ergashev, A. Nabiyev, A. Mansurov and others created music for performances staged in puppet theaters and other young audiences [3].

Including "Swan Lake" ballet of the composer P. Chaikovsky is also one of the works of stage music. Ballet shows two worlds - real and fantastic, but there is no uncrossable line between them. Enchanted by an evil sorcerer, the swan princess Odette

is held captive, yearning for human warmth and love, but only at night is she allowed assuming her true form as a young beauty. (Through listening to music, a piece from the ballet "Swan Lake" by P. Chaikovsky will be listened to and musical-theoretical analysis will be performed.)

2. "Work in pairs"

We learned about swans through the music listening activity above. Swans are a type of vertebrate and belong to the class of birds. Its neck is equal to the length of the body. Feathers are mostly white. There are 3 types of them in Uzbekistan: croak swan, whooper swan, a small swan. Draw a picture of swans that are counted. An exhibition will be organized from the drawings. Swans drawn based on visual pictures are described, students work in pairs and give examples of swans, one answering the question "how" and the other "what". Swans are defined and concluded with the help of the teacher.

3. Based on your pictures, make a statement about the types of swans. Make up a story based on what was said, for example:

- Swans – large birds that are related to geese family. Swans swim and fly very well; feeds on plants, small aquatic animals. They are kept in zoos because they are beautiful. Breeds in captivity [4].

The teacher asks a question:

-Which bird is adapted to swim in water? Which bird is a predator? What for? What about birds? Do you know the songs? [5]. Children count. Then it is suggested to hum a short melody of a song.

At this stage, work is carried out with the music textbookthe song will be played.

1. In a team Qambar Ota poem The lyrics of the music by A. Mansurov "Song of Borderers" performed in the lesson, singing activity are written in a notebook, sung together and the content is discussed;

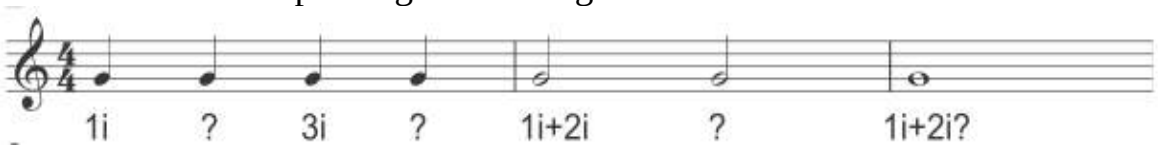
2. The song is described and discussed in the photo album. A "gallery" will be organized based on the pictures.

Physical Minute:

(musical-rhythmic movements are performed according to the "Frontiersman's Song")

Blossoming Uzbekistan
Perfect for Kamalim.
Always my limit
QoI'm a brave man.

In the activity of "Music Literacy" oStudents will be introduced to scales in music and learn the function of speaking and writing scales.



After that, students try to determine the meter of the learned song in the group singing activity

III. Strengthening.

Do the pieces of music you listen to differ from each other? Speak about it. When and where are the measures of a piece placed in music?

IV. Ending the lesson. Homework assignment.

Students who actively participated in the lesson are evaluated. Homework, listen to the excerpt from the ballet "Swan Lake" and tell the theme, sing the "Song of the Frontiersmen" expressively with dynamic signs.

Thanks to the integrated educational methodology, work experience shows that students develop an objective and comprehensive perception of the world, students begin to actively apply their knowledge in practice, because knowledge reveals its practical essence more easily [6].

Conclusion. Integration in music lessons brings innovation and originality to music learning. It has certain advantages for students: it forms cognitive interest, helps to create a holistic view of the musical world, systematize musical knowledge, develop musical skills, and develop aesthetic perception, imagination, attention, and musical memory. Conducting integrated lessons increases the professional skills of the teacher, as it requires mastering new technology methods and an active approach to education in the educational process.

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THEORETICAL FOUNDATIONS OF MUSICAL EDUCATION OF CHILDREN

Najmetdinova Nigora Irkinovna
Researcher of Urgench state University,
Urgench, Uzbekistan
nigora-6868@mail.ru

Annotatsiya: Ushbu maqolada bolalarning musiqiy rivojlanishining nazariy asoslari, shuningdek, maktabgacha yoshdagi bolalarni musiqiy tarbiyalashda musiqa ta'limining vazifalari ko‘rib chiqiladi.

Kalit so‘zlar: maktabgacha ta'lim, musiqiy faoliyat, estetik tarbiya, san'at, yosh rivojlanishi.

Аннотация: В данной статье рассматриваются теоретические основы музыкального развития детей, а также задачи музыкального воспитания в музыкальном образовании дошкольников.

Ключевые слова: дошкольное образование, музыкальная деятельность, эстетическое воспитание, искусство, возрастное развитие.

Abstract: This article discusses the theoretical foundations of children's musical development as well as the tasks of musical education in the music education of preschool children.

Key words: preschool education, musical activity, aesthetic education, art, age development.

Introduction. History teaches tell us that art is an integral part of human activity, that a person’s personality can be fully revealed and formed only with the help and participation of art. In the education of a modern person, along with science, art occupies an important place. It helps to shape his feelings in the spirit of humanism and human community, and develops his creative abilities. In an effort to educate a modern person, it is necessary to take care of the development of his aesthetic sensitivity, so that he is able to use in his life and work the experiences received from communication with art. Therefore, aesthetic education is an integral part of the education system of the younger generation.

Theoretical aspects of the study. It is impossible to talk about the aesthetic education of the entire people without taking into consideration the age-related development of a person. From early childhood, the child develops the ability to perceive, feel, and understand the beautiful in life and art, and the desire to participate in the creation of beauty. The child gets involved in artistic activities. He develops a certain attitude towards nature, work, social life, everyday life, the child learns to see beauty in them and create it independently. Part of aesthetic education is artistic education, carried out through the means of art.

Hence, art, on the one hand, serves as a means of understanding the world around us, and on the other, as a means of education. The art of music, which directly and strongly influences a person already in the first years of his life, occupies an important place in his overall cultural development.

Many writers, composers, and musicologists have repeatedly emphasized that

working on musical and aesthetic education must be carried out systematically, that it must be an integral part of the activities that teachers conduct to educate a harmoniously developed person. In this process, musical work with children is especially important. Musical propaganda among the masses will never produce full results without this foundation. [7, 86]

The level of musical culture of the younger generation currently largely depends on solving the problems of aesthetic education and upbringing. Music is close to the emotional nature of a child, under the influence of music, his artistic perception will entirely develop, and his feelings will become richer.

Upbringing comprehensively developed people: physically perfect, spiritually rich and morally impeccable, it is impossible not to pay due attention to the musical development of children, the formation of their interest and love of music. Evoked in childhood, they have a great influence on the further musical development of a person, preventing the formation of bad skills and tastes, which are much more difficult to eliminate or change than to formulate good musical taste.

Methodology aspects of the study. The tasks and content of musical education are determined by the general goals of the comprehensive development of the individual and, in particular, aesthetic education. It is well known that such goals are: introducing children to activities in the field of art, developing aesthetic perception and emotional responsiveness to musical works, nurturing a love of music, developing musical abilities, developing musical taste and cultivating the desire to express oneself as much as possible in musical activities, i.e. development of artistic and creative abilities in children.

Considering the enormous impact of music on emotions and the child's desire to understand and feel its content, it is especially important to use musical works that artistically specifically reflect the reality that is close and accessible to him. It is studied that one of the sources of the emergence of musical images are the real sounds of nature and human speech – everything that the human ear perceives in the surrounding world.

The basics of the theory of musical education of children is the enormous cognitive and educational capabilities of the art of music. Childhood impressions are deep and strong, sometimes indelible; using musical art to deepen these impressions is an important task that teachers strive to accomplish in the process of educating preschool children. They use music as one of the means of a child's emotional and figurative cognition of the surrounding life and the formation of his personality. [2, 64]

The kindergarten does not set itself the task of educating future professional performers. Its goals are to educate the child's feelings, character and will through the art of music, to help music penetrate his soul, evoke an emotional response, a living, meaningful attitude to the surrounding reality, and deeply connect him with it.

Exploring the world through an artistic musical image enriches the child's personality, promotes the comprehensive development and formation of his worldview. Therefore, every musical and artistic impression, every musical and artistic image, in addition to its aesthetic purpose, should serve to familiarize the child with the phenomena of the life around him. Hence, the musical education of the

younger generation is understood as a process of transferring to it the socio-historical experience of musical activity with the aim of preparing it for future work in all areas of life.

A child, mastering the ways of musical and artistic activity, comprehensively enriches his personality. With the help of musical art, he seems to enter the life, reflected in the light of a certain worldview. At the same time, it is very important that the experience of an image create a certain attitude towards it, forms moral assessments that have much greater power than simply communicated and assimilated assessments. Therefore, musical education must be used to form the worldview of children.

For the reason of the entire sum of various musical influences in childhood, a person must become a true lover of music, a cultured listener, capable of having his own judgment about it. However, not every musical work in its content corresponds to these important educational tasks. Musical material for children must be carefully selected. Children, especially small ones, should be brought up on folk songs with a clearly identified modal basis. One should compose music in a traditional classical manner, but improving its techniques.

The following artistic and pedagogical requirements should meet be used in works with preschool children:

♦ be highly ideological, contribute to the awakening and development of humane feelings,

♦ be artistic,

♦ be emotionally rich,

♦ be meaningful and entertaining in plot,

♦ be melodious,

♦ be simple in form and accessible in content

Nevertheless, not only musical material, varied in theme and artistic in form, has an educational effect on children, they also should facilitate methods of its presentation. It is not enough just to pay attention to the technically accurate performance of the work. It is necessary to subordinate the technique to consciously expressive interpretation in order to help children more deeply perceive a musical image and comprehend its content. In this regard, the principles of consciousness and activity play paramount importance in the process of musical education. Nothing should be learned without understanding the meaning; and meaning is the expressive properties of musical phenomena. This implies the need to use the principle of clarity, i.e., the formation of musical impressions based on specific musical images.

Finally, all the knowledge acquired by children must find application in practical musical activities appropriate to the child's age. If they receive a variety of impressions and engage in various types of musical activities, then their special abilities for music develop fruitfully and successfully. These fundamental principles form the basis for organizing various types of musical activities for children.

When engaged in singing, listening to music and musical-rhythmic movements, it is necessary to rely on knowledge of the mental characteristics of young children, the nature of the emergence of their aesthetic feelings, needs, and inclinations.

Conclusion. Teachers in many countries argue about whether music should be taught

to all children or only to the especially gifted. Modern pedagogy believes that music as a profession should be taught to children who have an attraction to it and excellent musical abilities, but general musical education should apply to all children. Moreover, the main task of musical education is considered by music teachers not so much to teach music, but to influence through music the spiritual world of students, primarily their morality.

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FACTORS OF PERSONAL ETHICAL EXPERIENCE IN INCREASING THE ETHICAL FEATURE OF A MUSIC TEACHER.

Khasanova Navbakhor Hamrakulovna
Jizzakh state pedagogical university,
The Faculty of Preschool Education
Associate Professor of
The Department of Music Education
khasanova@gmail.com

Abstract: This article reflects a music teacher’s personality in the connection with spiritual and moral culture and the emotional sphere manifested in the ability of emotional tenderness, politeness, emotional response to human and artistic events, and the ability to empathize. The moral culture of a teacher includes the culture of thinking, the culture of feelings and the culture of behavior, which are considered from the point of view of the moral value of his subjective motives. It is an integral part of the spiritual culture of the individual that reveals the objective moral meaning of the teacher’s behavior and gives a subjective assessment of this behavior. The main characteristics of a teacher’s methodological culture are: the skills in designing the pedagogical process; the ability to recognize, formulate and creatively solve problems; the ability

to carry out methodological reflection; as well as factors such as the formation of the need for scientific and pedagogical knowledge which are highlighted.

Key words: teacher culture, music education programs, innovative ideas, preschool education, music teacher, student music, professional culture, aesthetic, cognitive, Nanotechnology, communicative, modern education, television, personality.

Аннотация: В статье это отражено в связи духовно-нравственной культуры с эмоциональной сферой личности учителя музыки, проявляющейся в способности эмоциональной нежности, такта, эмоционального реагирования на человеческие и художественные события, способности сопереживать.

Нравственная культура учителя включает в себя культуру мышления, культуру чувств и культуру поведения, которые рассматриваются с точки зрения нравственной ценности его субъективных мотивов. Оно является неотъемлемой частью духовной культуры личности, раскрывает объективный нравственный смысл поведения педагога и дает субъективную оценку этому поведению. В качестве основных характеристик методической культуры учителя: навыки проектирования педагогического процесса; способность распознавать, формулировать и творчески решать проблемы; способность осуществлять методическую рефлексию; Выделены такие факторы, как формирование потребности в научно-педагогических знаниях.

Ключевые слова: педагогическая культура, программы музыкального образования, инновационные идеи, дошкольное образование, учитель музыки, студенческая музыка, профессиональная культура, эстетическая, познавательная, нанотехнологии, коммуникативная, современное образование, телевидение, личность.

Annotatsiya: Maqolada ma'naviy-axloqiy madaniyatning musiqa o'qituvchisi shaxsiyatining hissiy sohasi bilan aloqasida ruhiy noziklik, xushmuomalalik, insoniy va badiiy hodisalarga hissiy munosabatda bo'lish, hamdardlik qobiliyatida namoyon bo'lishi aks ttirilgan. O'qituvchining axloqiy madaniyati uning sub'ektiv motivlarining axloqiy qiymati nuqtai nazaridan ko'rib chiqiladigan fikrlash madaniyati, his-tuyg'ular madaniyati va xulq-atvor madaniyatini o'z ichiga oladi. Shaxs ma'naviy madaniyatining ajralmas qismi bo'lib, o'qituvchi xatti-harakatining ob'ektiv axloqiy ma'nosini ochib beradi va bu xatti-harakatga sub'ektiv baho beradi. O`qituvchi uslubiy madaniyatining asosiy belgilari sifatida: pedagogik jarayonni loyihalash malakalari; muammolarni tan olish, shakllantirish va ijodiy hal qilish qobiliyati; uslubiy aks ettirishni amalga oshirish qobiliyati; ilmiy pedagogik bilimlarga bo'lgan ehtiyojini shakllantirish kabi omillar yoritilgan.

Kalit so'zlar: o'qituvchi madaniyati, musiqa ta'limi dasturlari, innovatsion g'oyalar, maktabgacha ta'lim, musiqa o'qituvchisi, talaba musiqasi, kasbiy madaniyati, estetik, kognitiv, Nanotexnologiya, kommunikativ, zamonaviy ta'lim, televizor, shaxs.

Introduction: All the ideas in the musical and educational program are reflected in the creative work of the music teacher. Therefore, the sign of professional culture is "the typical representative of the most elegant jacket type in its own status. Thus, professional culture of a music student is colored by scientific, general pedagogical and artistic aspects, and it consists of the following main components:

- the rich spiritual world of a personal teacher who can master the aesthetic, cognitive and educational effects of musical art;

-love and professional interest in musical events based on personal values;

- to fully imagine the essence, nature and laws of musical art;

-creative enthusiasm for the music-pedagogical profession;

- active self-education

- artistic activity in the field of music pedagogy [1.4.10.7128]

The social aspect of the requirements for learning music is manifested in the readiness to have active parficipation in activities taking into account the socio-objective situation and in accordance with the position of personal moral standards and conscious responsibility. The school needs a teacher who do not only hava high professional training, but also embodies an ideal in his personality, who is an unchanging source of light that gives life to a young soul.

Analysys and results: The spiritual and moral experience of a person reflects the moral aspect of a music teacher, worldview, the path and style of professional culture in general. The moral aspect of the professional culture of a music teacher is manifested in his moral culture as a system of moral relations that forms the basis of every pedagogical action, thinking and communication.

In order to ensure comfortable living conditions and upbringing of the child, to form the foundations of a well-rounded personality, it is necessary to strengthen and develop close and mutual relations between the kindergarten and the family.[2.233-234]

It is at school age that all the main characteristics of the child's personality are formed and the quality of his further physical and mental development is determined. If you ignore the specific features of the development of a child at this age, it can have a negative impact on his future life. Each school educational institution do not only educate the child, but also advises parents on raising their children.

A school teacher is not only a teacher of children, but also a partner of parents in their upbringing. In today's rapidly changing times, raising and raising a child properly is not an easy and labor-intensive process.[3.747]

A modern teacher, working directly with children in pre-school educational institutions, faces new problems of teaching and educating school-aged children that did not exist ten years ago.

The main problem of social and moral education is related to the fact that in the modern world, a person lives and develops every day surrounded by many different sources of positive and negative influence on the child's weak intellect. It is known that it is impossible to live in society and be free from society. No matter how high demands are placed on the school institution, the problems of social and moral education cannot be solved only within the framework of school education. The introduction of nanotechnology into life and general use began to play a major role in the development of children in society.[4.556-557]

In addition, the basic knowledge system has ceased to play its previous role today. For a person of the twenty-first century, what they hear on the radio, what they see on TV, what they read in newspapers, what they learn from conversations are more important than the amount of basic knowledge they get in the family or at school. So

there are problems in modern education. Without communication, it is impossible to develop the communicative skill of the children.

A child's full development is impossible without the cooperation of parents and kindergarten. [7.7002-7010]. At the same time, a number of shortcomings appeared in school education.

The shortcamings can be observed in sharp decline in cognitive development of school-aged children, increased emotional discomfort and decreased desire for active participation in social events. The withdrawal of role-playing games from the child's life has resulted in a decrease in the sphere of volition and motivational needs.[6.75-76]

Decreased interest and imagination in preschool children indicates the underdevelopment of the internal action plan. The insufficient development of fine motor skills and, accordingly, graphic abilities in school-aged children indicates that the relevant structures of the brain, including those responsible for volition, are not developed; The school should hire those who really want and know how to work with children, who like to communicate and are ready to learn, who strive for constant growth, who will master the best, new things and implement them in kindergarten. To provide the kindergarten with such staff, they should be paid a decent salary. [8.545-548]

Conclusion: Children's development largely depends on the material environment that surrounds them: toys, manuals, drawing, modeling, materials for design, books, musical instruments, physical education equipment etc. Unfortunately, the state provides little funding and also underfunds didactic materials and methodical literature for teachers. Teachers themselves organize activities with children, because at this age children absorb information like a "sponge". A child is often active in learning new things and is interested in new things, so it is necessary to introduce modern technology and methods into modern school education that is suitable for the new era.

Empirical aspect: examples of comparative approaches based on today’s methodological specifications are presented concerning the methods of teaching the future generation to strive to create personal interest and creativity with their own hands using modern technologies.

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MODERN PROBLEMS OF PEDAGOGY AND PSYCHOLOGY

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ORGANIZING ACTIVITY BASED ON MEDIA EDUCATION IN FUTURE PRIMARY CLASS TEACHERS

Atajonova Anorgul Jumaniyazovna
Urganch State Pedagogical Institute,
head of the "Primary Education Methodology" department, associate professor
anorgulatajonova005@gmail.com

Annotatsiya. Ushbu maqolada media va mediamadaniyat tushunchalarining mazmuni va mohiyati, shuningdek, boshlang'ich sinf o'qituvchilarining media-ta'limini rivojlantirish dolzarb pedagogik muammo ekanligi haqida so'z boradi.

Kalit so'zlar: media ta'lim, media madaniyat, pedagogik muammo, axborot va telekommunikatsiya, media makon, mediasavodxonlik, media matn.

Аннотация: В данной статье рассматривается содержание и сущность понятий медиа и медиакультура, а также актуальная педагогическая проблема развития медиаобразования стримеров начальных классов.

Ключевые слова: медиаобразование, медиакультура, педагогическая проблема, информационные телекоммуникации, медиапространство, медиаграмотность, медиа текст.

Abstract. This article discusses the content and essence of the concepts of media and media culture, as well as the fact that the development of media education of elementary school teachers is an urgent pedagogical problem.

Key words: media education, media culture, pedagogical problem, information and telecommunication, media space, media literacy, media text.

Introduction. Today, fundamental socio-economic changes taking place in modernized Uzbekistan are causing a drastic change in the quality and quantity of the

media environment of the society. These events are taking place in the conditions of the rapid development of telecommunication means and information technology systems, and in the field of social management in this society, information and telecommunication processes and the sum of information factors at different levels are becoming a fulcrum. In this situation, the need to develop media education among future primary school teachers is increasing. Adapting to the media space and improving media literacy are becoming one of their urgent tasks. Today, it is difficult to imagine almost all areas of society, including the development of education, without media (ie: television, radio, cinematography, mass publications, computer information systems).

In our republic, the education system has been fundamentally reformed, and major changes have been made in the system of continuous education, including higher education. In the implementation of these processes, the main tasks of pedagogues include the effective use of the environment of information and communication technologies, the training of national personnel, and bringing the young generation to maturity. Experts determine the main goal of developing media education by creating the necessary pedagogical conditions to ensure the professional and personal development of pedagogues, determining psychological and pedagogical conditions, and developing a mechanism for monitoring and evaluating its quality.

In the context of the globalization of the information space and its "openness", the flow of new knowledge, facts, views, and concepts is rapidly increasing, and the problem of using information provided through mass information communications is emerging.

LITERATURE ANALYSIS AND METHODOLOGY. Currently, it is becoming difficult to control both the content of information and the methods and ways of their distribution through mass media networks. The problem of the teacher's independent thinking under the influence of such a mixture of information, the issues of the formation of his views, values and ideals in the mind of the teacher requires the search for ways to organize the world of information, to develop a system of new methods and skills for dealing with information. requiring exit and formation. In addition, research in this field in the world educational practice began in the 70s of the last century, and a unique direction in the science of pedagogy - media education - has appeared and is being formed.

The process of rapid development of information communication and media technologies affects all areas of modern society based on the use of knowledge and information. Accordingly, the educational system should adapt flexibly to the rapidly changing conditions of the information society. The introduction of the latest technologies into the educational space leads to a rethinking of the role of students, they change the approaches to the organization of all educational activities and effectively use media opportunities in the integration with innovative pedagogical technologies, update the content of educational materials should be filled with multimedia content and thereby create conditions for the formation of new competencies. Today, the work of a pedagogue is related to working with a completely new generation of schoolchildren, that is, the generations of the digital age. The main characteristics of this generation are difficult communication skills, intensity of

psychosocial development, pragmatism, attention deficit hyperactivity disorder, multitasking phenomenon, etc. These are representatives of a new type of communication culture, they quickly master the basics of computer literacy. In Sweden, media education has been taught as a separate subject in educational institutions since 1980. The main goal of introducing media education is to develop the ability of future elementary school teachers to critically perceive media messages, to form their own opinions about messages from various information sources, as well as to make their own opinions about watched films and TV programs. Was to form the ability to express one's opinion. Since the fall of 2000, media education has been officially included in the Swedish national curriculum.

Research methodology. The term «media» was originally used in the 20th century to refer to the tools that form mass culture [3]. According to the European Union documents, media education is media competence, which should be understood as a critical and thoughtful attitude to the media in order to educate responsible citizens who are able to express their opinion based on the information received. Development oriented education. This means using the necessary information for citizens, analyzing it, identifying economic, social and cultural interests related to them.

Media culture is a set of knowledge, skills, and abilities needed to analyze, evaluate, and create various media works [2]. Media culture is a necessary part of the culture of a person, familiarization with the types of mass media, the information distributed through them, the acquisition of theoretical knowledge, practical skills, skills in the relevant fields based on their selection, sorting, analysis and evaluation. Thorough acquisition, the sum of abilities to skillfully apply this knowledge in professional, everyday, cultural, spiritual and educational (practical) activities. In essence, the acquisition of media culture by a person is not a spontaneous process, but is based on evolutionary development in several stages.

The goal of media education is to form the skills to sort out the information disseminated by them while understanding the priorities and shortcomings of each media, and the main task is to limit it by understanding the manipulative power of any information consumed by people. Young people are the most active consumers and producers of mass media. Various digital devices are regularly used in everyday life. However, within the framework of the ideology of the information society, it is no longer enough to have only general use skills. Around the world, to one degree or another, it is observed that more and more young people are in the digital world. There is a gradual narrowing of real space by entering virtual space. Complicating the situation is the possibility of almost constant (often uncontrolled) online participation in it. It will not be superfluous to remember that modern mass media have a hidden potential to socialize the growing generation. It is of particular concern that indirectly (with the help of various manipulative technologies that are actively distributed) they shape the worldview, views and beliefs of the minor audience. Also, the lack of critical thinking skills in young people often does not allow them to notice potential dangers. As a result, they constitute the most vulnerable category of users. The intensity of media education among young people is increasing significantly, and cases of Internet addiction are increasing.

According to recent sociological research, almost a third of young people (26%) ignore family, friends or school, do not sleep or eat because of the Internet. The paradox of the situation is that various authoritative guides have been developed and are freely available on the Internet, unfortunately, they have not yet led to significant positive changes. Numerous results of sociological surveys and specific work experience show that young people also have serious difficulties in assessing the reliability of information sources, do not know how to find semantic accents of media messages and critically evaluate media texts. Today's demand emphasizes the need for future primary school teachers to have professional standards, as well as the following ICT and media competencies:

- general user ICT competence;
- general pedagogical ICT competence;
-science and pedagogical media competence.

The ability to work with various media texts, evaluate the quality and reliability of the received information, resist manipulative influence and form constructive media studies plays a key role. It is also very important to develop the skills of critical analysis of information sources. The dynamic change of modern society is finding its place in the scientific field.

In the digital era, there is a natural need for convergence of media literacy and information literacy. Information literacy does not cancel traditional types of literacy (reading, writing, computing), but renews them. At the same time, it is appropriate to consider the context of media education. Thus, we can conclude the following, the rapid development of mass media and ICT has renewed the formation of new competencies, without media and information literacy, it is difficult for elementary school teachers to act in the modern information society, therefore, it is necessary to activate the holding of seminars and webinars.

DISCUSSION AND RESULTS. Recently, certain inconsistencies have been noted in the conceptual apparatus. For this reason, in 2012, UNESCO has supported the ideas of media education for several decades, and in order to further develop knowledge in the field of media and information, media and information literacy includes all the specific concepts described below. z began to be considered as a complex concept that includes:

- media literacy;
- information literacy;
- literacy in the field of freedom of speech;
- library literacy;
- computer literacy;
- internet literacy;
- digital literacy;
- film literacy;
- literacy in using electronic games;
- television literacy;
- literacy in the field of advertising.

In our country, future primary school teachers receive education in the bachelor's and master's specializations of education.

There was a need to study and put into practice the quality changes that have been taking place in the world since the second half of the 20th century. Today, Uzbekistan is conducting a constructive dialogue with Western European countries in the field of education. Great Britain's advanced experience in ensuring the quality of education in Uzbekistan's higher education system is of particular importance. This is primarily explained by the fact that the system of training future primary teachers in Great Britain is the oldest in Europe. It can be recognized that for many years in Great Britain, scientific research has been carried out on the improvement of the higher education system. In addition, the development of theoretical and practical approaches and concepts in this field is provided by active participation in various international projects. By incorporating European and world trends, the British model of training specialists is developing while preserving national interests [3]. In this regard, the study of the experience of England is not only to have a sufficient idea of the general trends in the improvement of the quality of training of future primary school teachers at the world level, but also the existing problems and ways to overcome them. getting acquainted with and comparing the national decisions in this field with the practice of other countries, provides an opportunity to better assess their appropriateness [4]. Media education in pedagogy is generally considered as an integrative quality of a person, which is manifested in the selection, use, critical analysis, evaluation, creation and transmission of media text of various forms, genres, and forms, as well as the readiness to analyze the complex processes of media activity in society. Therefore, the issue of media education development of students in the educational process is one of the urgent issues facing science and practice. In this regard, the creation of technology for the development of media education by improving students' knowledge of media education in accordance with the requirements of modern scientific and technical development is of particular importance among pedagogical research.

In conclusion, it should be mentioned that the development of media education is an important component of social education competence. Development of students' knowledge on the basis of media education, their activity in the field of media and the formation of media culture is of great importance.

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DEVELOPMENT OF METHODOLOGICAL TRAINING OF FUTURE TEACHERS ON THE BASE OF DIGITAL TECHNOLOGIES

Maxmudova Maloxat Axmatovna
Uzbekistan, Navoi State Pedagogical Institute,
Department "Informatics", Doctor of Philology (PhD),
E-mail: maloxat_1977@mail.ru

Husanova Muslima Lutfullayevna
Uzbekistan, Navoi State Pedagogical Institute,
1st year master's student
muslikhusanova95@gmail.com

Annotasiya. Ushbu maqolada raqamli texnologiyalar asosida bo'lajak o'qituvchilarining metodik tayyorgarligini rivojlantirishda o'quv jarayonini zamonaviy o'qitish texnologiyalaridan foydalanib tashkil etish masalalari ko'rib chiqilgan. O'qituvchilar kasbiy faoliyatida metodik tayyorgarligini rivojlantirishda Web 2.0 va Google xizmatlaridan foydalanish imkoniyatlari. Google Classroom dan o'quv jarayonida foydalanish maqsadga muvofiqligini tasdiqlovchi didaktik imkoniyatlarni shakllantirish o'quv jarayonini boshqarish afzalliklarini ko'rsatilgan.

Kalit so'zla: raqamli texnologiya, metodik, o'qitish, o'qituvchi, Google Classroom, didaktik, pedagogik, kompetensiya, talaba, kompyuter.

Аннотация. В данной статье рассматриваются вопросы организации образовательного процесса с использованием современных технологий обучения при разработке методической подготовки будущих учителей на основе цифровых технологий. Возможности использования сервисов Web 2.0 и Google в развитии методической подготовки учителей в их профессиональной деятельности. Формирование дидактических возможностей, подтверждающих целесообразность использования Google Classroom в образовательном процессе, показывает преимущества управления образовательным процессом.

ключевые слова: цифровые технологии, методическое, обучение, учитель, Google Classroom, дидактическое, педагогическое, компетентность, ученик, компьютер.

Abstract: This article discusses the issues of organizing the educational process using modern teaching technologies in the development of methodological training of future teachers based on digital technologies. Possibilities of using Web 2.0 and Google

services in the development of methodological training of teachers in their professional activities. Forming didactic opportunities that confirm the feasibility of using Google Classroom in the educational process shows the advantages of managing the educational process.

keywords: digital technology, methodical, teaching, teacher, Google Classroom, didactic, pedagogical, competence, student, computer.

Introduction. The development trends of society in the field of education, modern development, globalization and integration of world systems in various areas of human life and activity, as well as in the new concept of education until 2030 adopted by international organizations such as UNESCO and UNICEF and developed countries— Education is recognized as the main driving force of development and an important activity that achieves the goals of sustainable development [1], training of qualified personnel in the field of education, development of high-level skills and abilities of students in education is required.

The transition to a market economy in our republic places increasingly high demands on professionals to become mature specialists in their field. It shows the urgency of introducing modern didactic tools of teaching in the digitalized society and increasing their effectiveness. The continuous and rapid development of modern pedagogical and digital technologies requires paying great attention to this process in the training of future teachers, constantly developing and improving the methodical system in educating them as mature specialists.

New projects are being developed for the introduction of digital technologies in the educational process, for pedagogues to gain deep knowledge and experience in this field. In particular, on the basis of the Scientific and Practical Center of Intelligent Software Systems under the National University of Uzbekistan named after Mirzo Ulugbek, under the Ministry of Information Technologies and Communications Development It can be said that the scientific research institute for the development of digital technologies and artificial intelligence was established according to the decree of the President of the Republic of Uzbekistan dated October 5, 2020 No. PF 6079 "On approval of the Digital Uzbekistan 2030 strategy and measures for its implementation". The second part of this decree, the fifth paragraph "Priority directions of education and training in the field of information technologies" fully defines the priority tasks of digitalization of the education system in our Republic[2].

Today, the educational process cannot be organized without the use of modern teaching technologies. The most urgent task of education and upbringing is the development of professional competences of students. Development of competences in the formation of knowledge, skills, and abilities of a person living in the 21st century: personal responsibility, tolerance, ability to communicate, self-development, development of thinking ability, creativity, ability to work in a team, creativity and cognitive ability, analysis, management, integration of information in various forms and methods , the ability to evaluate and create, pose and solve problems is demonstrated.

In order to solve such a problem, it is necessary to use information and communication technologies in the educational process and integrate them with other modern educational technologies. Informatization and computerization of the

educational process is planned to equip educational institutions with modern computer equipment and software. Educational institutions face the problem of providing the educational process with the latest types of computer equipment and software.

Literature review. In the course of continuous education in our republic, the theoretical and practical foundations of distance education, the wide introduction of information and communication technologies in the educational process, and the use of effective and modern didactic tools for teaching in a computer environment: It can be observed in the researches of A. Aripov, A. A. Abduqadirov, U. SH. Begimkulov, R. R. Boqiyev, N. I. Taylakov, F. M. Zakirova, and others. Problems of development of motivation to learn and use computers: P.V. Razbegayev, V.S. Bezrukova, V.P. Bespalko, L.I. Fishman, I. Shumpeterular in research works, The issues of effective thinking and development of creative abilities were considered in the research works of: V.A. Letsko, Ye.A. Loktyushina. Issues of using computer training in training teachers of various specialties: Ye.S. Polat, M.Y. Buharkina, Technologies in the modern pedagogical and informational education system: Vaganova O.I., Dvornikova E.I., Kutepov M.M., Opportunities of cloud technologies in e-learning: Luneva Y.B., Trutanova A.V., Yemelyanova O. A. It is possible to cite active studies on topics such as the use of cloud technologies in education.

V.A. According to Koroleva, cloud technologies are a new paradigm that enables distributed and remote data processing and storage [5]. In this case, the infrastructure of software and information technologies is delivered as a service via the Internet. This network service is called the cloud, and every user can access and use cloud resources through a mobile phone or computer.

Significance/need of the study. Based on the experience of developed foreign countries, the introduction of "cloud computing" into the educational process will help to overcome the problems of digitalization of education. Nowadays, the term "cloud computing", which is widely popular in the educational process, has been used in the IT field since 2008. The use of such technologies in the educational process is a good tool for raising the knowledge of IT students to a higher level and improving the quality of education. Cloud computing also includes free hosting of network services for students and teachers. These include innovative IT applications such as Web 2.0 services and Google services. Web services are network software that support group communication. Among them, it allows students to methodically develop their interest in science, logical and creative thinking in the process of teaching and in their professional activities.

If a few years ago teachers used the Internet mainly to search for information materials necessary for the educational process, now another stable trend in the development of the Internet in the educational process is observed: teachers to develop their own resources, create electronic educational objects, exchange information. and we could clearly see that the possibilities of presenting them to their students for their studies have increased infinitely, and the effectiveness of the quality of education has increased.

With the introduction of new educational standards, tasks will change radically. The focus on individual, independent learning trajectories of students and the

expansion of the learning environment suggest that teachers are lacking group, individual, project-based handouts. This means that teachers must be the authors and developers themselves.

With that in mind, let's look at these issues:

- Teachers do not have enough skills and qualifications in working with Internet network services;
- Inadequate skills of online exchange of electronic resource materials created by teachers;
- There is experience in solving project problems in small groups of teachers, but the problem is that these teachers are often the same, the involvement of new teachers in cooperation is very low;
- Most teachers have little or no experience collaborating on curriculum development.

In today's educational process, it is appropriate to use Google services to develop the methodological training of teachers in their professional activities. In this: It allows simulating educational situations using Internet network services and Google applications in organizing lessons. Also, the skills and competencies of using Google services in the joint work of the members of the training group will increase.

Research methodology. One of the effective means of organizing self-learning space in the educational process is to use the capabilities of LMS - Learning Management System. Among many LMSs, one of the most widely used content is Google Classroom. Google Classroom is a cloud platform for organizing the educational process. The platform provides an opportunity to effectively organize an educational process based on the cooperation of teachers and students.

One of the effective methods of organizing lessons in modern education is the technology of "Reverse education", "Blended education". In the process of digitalization of education, the elements of "Reverse education", "Mixed education" technology, by effectively using the capabilities of Google Classroom, allow to activate the educational process, develop the knowledge, skills and abilities of learners[4].

The use of the Google Classroom platform in the educational process helps to approach the educational content in a new way, to develop pedagogical methods, to introduce a digitalized education system, and to organize distance education. The main capabilities of Google technology help to place learners in the center of the pedagogical process, not as consumers, but as active creative participants. Access to Google applications from any browser connected to the Internet provides access to many application services. Currently, the most widely used Google applications in the field of education are: Google Assistant, Google Translate, Google Groups, Google Calendar, Google Docs, Google Presentation, Google Drawings, Google Sheets, Google Forms, Google Jambord, etc. formed.

Google Classroom offers a wide range of opportunities to organize the learning process: Google Classroom has functions such as creating courses, adding different courses in subjects, inviting students to classes, creating class assignments, evaluating students, and accepting assignments. Google Classroom can be used for a variety of individual and group learning activities. The use of the Google platform helps to update

the classroom educational content, expand educational technologies, introduce differentiated educational technologies, and organize distance education[3].

Educators to the main possibilities of working with the Google Classroom cloud education platform: can create courses, send assignments and comments to students, and receive subject-related feedback. Each user will have a very easy control when working with the Google Classroom platform. All information is stored on Google servers: video lessons on YouTube, e-textbooks on Google Drive, written work on Google Docs [4].

Google applications offer to introduce a new electronic education based on Internet technology. Microsoft's famous software tools such as Word, Excel, Power Point, are competing with Google Apps (Disk), Google Documents, Google Electronic Table, Google Presentation, and their popularity is growing..

Analysis and results. One of the important requirements for the organization of modern education is to achieve high results in a short time without spending too much mental and physical effort. Delivering certain theoretical knowledge to students in a short period of time, forming skills and competencies in certain activities, as well as achieving significantly higher results in the activities of learners, assessing the level of knowledge and skills acquired by them is higher than the teacher. requires pedagogical skills.

Let's take a look at how Google's platform can help design e-learning environments where students can collaborate. The essence of Google technology is that it allows students to be involved in the educational process not only as consumers of educational content, but also as active creators of it, helping to ensure that students are at the center of the educational process.

Google develops and provides a range of applications and services that can be accessed through any browser connected to the Internet: Google Calendar: online calendar; Google Docs: online office; Gmail: free email; Google Maps: a collection of maps; Google sites: free hosting using wiki technology; Google Translate: translator; YouTube: video hosting. These Google apps give educators and students the tools they need to communicate and collaborate effectively. According to the developers, Google services for education include a collection of free and ad-free tools that enable teachers and students to connect, teach and learn better and more effectively[5].

Key benefits of Google services for education:

- Minimum equipment requirements (must be connected to the Internet);
- Google technologies do not require the purchase or maintenance of special software (applications can be accessed through a web browser window);
- Google supports all operating systems and client programs used by students and educational institutions;
- All Google tools are free.

The formation of didactic opportunities that confirm the feasibility of using cloud technologies in the educational process shows the advantages of managing the educational process:

- organization of joint work for a large team of teachers and students;

- Ability to share and edit various types of documents for students and teachers;
- quick introduction of created products into the educational process due to the lack of territorial obligation of the service user in relation to the place of provision;
- organization of interactive lessons and team teaching;
- independent work by students without restrictions on "audience size" and "lesson time", including team projects;
- interaction and joint work with peers, regardless of location;
- creation of web-oriented laboratories in certain scientific fields (mechanisms for adding new resources, interactive access to modeling tools, information resources, user support, etc.);
- organization of various forms of control;
- moving to the cloud of used learning management systems (LMS).;
- new opportunities for researchers to organize, develop and disseminate access to practical models.

You can create training modules using cloud technology tools to design an electronic environment and organize interactive cooperation between all training participants. Therefore, the main didactic advantage of using cloud technologies in the educational process is the organization of joint work of students and teachers. [6].

Conclusion. In conclusion, it can be noted that the comprehensive use of traditional and modern methods of teaching with the help of information and communication technologies allows to effectively use the possibilities of modern didactic tools in directing future teachers to creative and scientific research work, revealing the essence of universal and educational values. By using cloud technology tools in the educational process, the professional activities of future teachers can be emphasized on the basis of digital technologies. On the basis of digital technologies, the skills and competences of teachers are formed in the development of methodological readiness to use Google.com applications, Web-services, and the Internet in professional activities.

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ACTUAL PROBLEMS OF NATURAL SCIENCES

UDC: 911.3 (575)

GEOGRAPHY OF CHEMICAL TEXTILE FIBER PRODUCTION

Ro’zmetov Dilshod Ruzimboyevich
Khorezm Mamun academy, scientific secretary, candidate of geographical sciences, associate professor
ruzmetovd_77@mail.ru

Annotatsiya: Maqolada to‘qimachilik sanoatida qo‘llaniladigan kimyoviy tolalar turlari, jahonda ishlab chiqarish hajmi va tarkibi, shuningdek, ishlab chiqarish va eksport geografiyasi haqida qisqacha ma’lumot berilgan.

Kalit so'zlar: to'qimachilik, ipak, tabiiy tola, kimyoviy tola, tikuvchilik sanoati.

Аннотация: В статье дана краткая характеристика видов химических волокон, используемых в текстильной промышленности, объемов и состава производства в мире, а также географии производства и экспорта.

Ключевые слова: текстиль, шелк, натуральное волокно, химическое волокно, швейная промышленность.

Abstract: The article provides a brief description of the types of chemical fibers used in the textile industry, the volume and composition of production in the world, as well as the geography of production and export.

Key words: textile, silk, natural fiber, chemical fiber, sewing industry.

Introduction. The constant growth of the population requires the creation of new technologies and products to provide it with consumer goods. In particular, this applies to light industry. From the 60s and 70s of the 20th century, the introduction of the production of various chemical fibers and synthetic threads made it possible to solve the problem of raw materials in the industry, and now they make a number of natural textile raw materials unprofitable, which is arid climate, land introduction of this tradition even in our republic with limited resources allows to increase the area of food crops and increase their products.

Literature review. The geography of chemical fiber production in Uzbekistan has been little studied. Due to a number of factors, the increase in the physical size of natural fibers in the world is limited, so they are being replaced by man-made fibers [1, 2, 3]. As technologies for the production of chemical fibers and threads improve [4], their quality is not inferior to their natural analogues, and in many cases even surpasses them.

Sources [5, 6, 7, 8] show that the developing countries of Asia have supplanted the United States and European countries from the top ten in the production of chemical textile raw materials in the world and, naturally, lead the market for textiles and related light industrial products. For this reason, chemical fiber production enterprises are being built in Uzbekistan in subsequent years [9, 10].

Research methodology. The purpose of the study is to analyze the features of changes in the industrial and territorial structure of the raw materials sector of light industry, which is one of the main sectors of the production of non-food consumer goods for the population, and to develop scientific conclusions and recommendations based on them.

The study used the principle of anthropocentrism, balance sheet, statistical, dynamic, comparative territorial analysis, and historical methods.

Analysis and results. Light industry includes textile, tailoring, leather-footwear and fur industries. The textile or textile industry produces various fibers and yarns, fabrics and materials. Textile fibers are divided into natural and chemical types depending on their origin (Fig. 1).

Chemical fibers are divided into artificial and synthetic types. Artificial fibers are obtained by chemical processing of natural polymers of plants and animals, wastes of wood-cellulose industry and food industry - wood, seeds, milk, etc. Viscose, triacetate, and acetate fibers are the most widely used synthetic cellulose fibers in the textile industry [1]. They include: polyamide, polyester, polyurethane fibers, as well as polyacrylonitrile (PAN), polyvinyl chloride (PVC), polyvinyl alcohol (Fig. 1, Table 1).

As mentioned, artificial fibers include cellulose (hydrated cellulose) and fibers made from its derivatives. These are viscose, triacetate, acetate fibers and their modifications (Fig. 1). Viscose fibers have a number of positive properties, such as softness, stretchability, abrasion resistance, good water absorption, light resistance, and are similar to silk and wool fabrics [1].

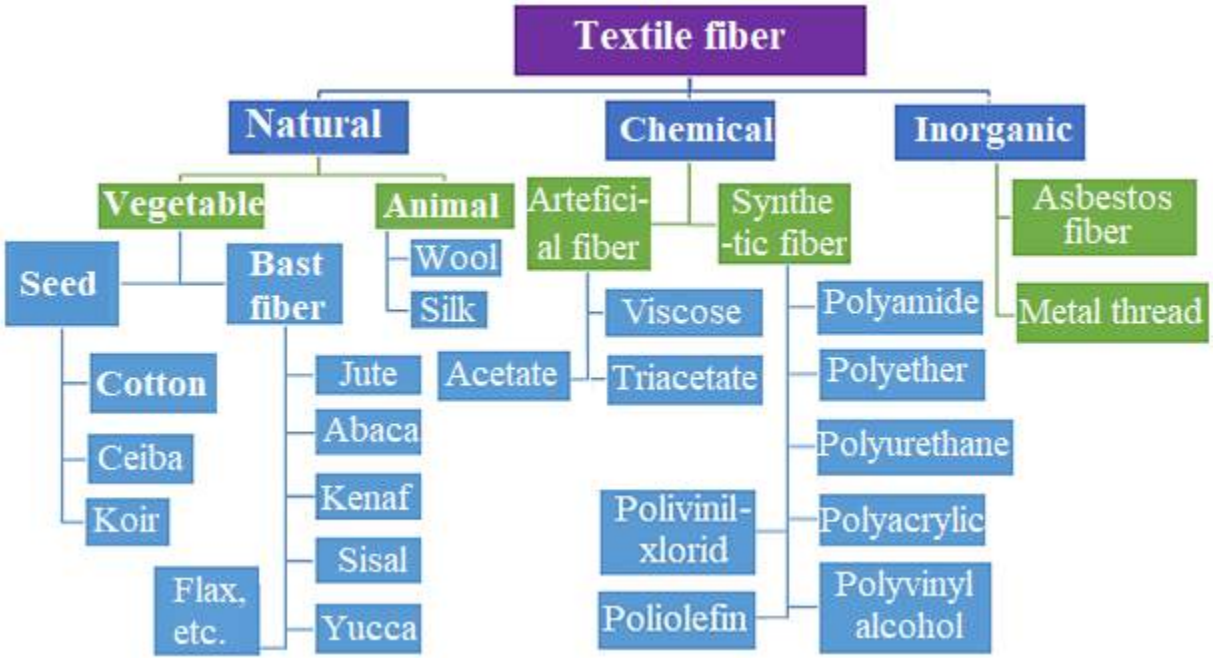


Figure 1. Classification of textile fibers.
Image created by the author.

Triacetate and acetate fibers (acetylcellulose) are made from cotton cellulose [1]. Acetylcellulose fibers are usually finer, softer, lighter and brighter than viscose. Acetylcellulose fibers lag behind hygroscopicity, strength and durability of hygroscopicity, and it is difficult to remove coarse particles from gasses made from it.

In 2021, the share of artificial (mainly viscose) fibers in the volume of chemical fibers was only 7%, but in the following years, the interest in them is increasing again. For example, in 2021, the production of artificial fibers increased by 8% compared to the previous year (Table 1).

The advantage of fabrics made of synthetic fiber is the low cost of production, durability and quick spreading of wrinkles. Water, air permeability and high electrical conductivity are disadvantages. Therefore, they are added more to the fabrics used for making special clothes, and less to ordinary ones.

Polyester fibers take the leading place in the production of synthetic fibers. In 2021, there will be 68.7 million people in the world. t polyester fibers were produced and they accounted for 57.0% of the total synthetic fibers. The demand for network products is increasing year by year (Table 1). Lavsan stands out among polyester fibers. [1].

Table 1.

World production by fiber types (2021).

№	All types of fiber materials	mln. t	percentage of total (%)	Percentage of growth compared to 2020 (%)
1	**All types of fiber incl**	**120,0**	**100,0**	**+3,5**
1.1	**Chemical fibers include:**	**89,7**	**75,0**	**+7,8**
1.1.1	***Synthetic fiber, including:***	***82,0***	***63,0***	***+8,0***
1.1.1.1	Polyester	68,7	57,0	+8,4
1.1.1.2	Polyamide	6,1	5,0	-15,6
1.1.1.3	Polypropylene	3,4	3,0	-0,6
1.1.1.4	Others (PAN, PVC, spandex, carbon, aramid PVC, etc	3,8	3,0	+0,3
1.1.2	***Synthetic fiber (viscose, acetate, etc.)***	***7,7***	***7,0***	***+8,0***
1.2	**Natural fibers include:**	**30,3**	**25,0**	**-6,2**
1.2.1	Cotton	24,4	20,0	-9,3
1.2.2	Lube (linen and others)	3,8	3,0	-2,6
1.2.3	Wool	1,0	1,0	+0,4
1.2.4	Other (natural silk and other)	1,1	1,0	yo0,0

Source: Aizenstein E.M. Prospects for the global market for fibrous materials // Bulletin of the Chemical Industry, No. 3. - M.: NIITEKHIM, 2023. - P. 24-27.

The most widely produced **polyamide fiber** is kapron fiber, which is obtained from coal and oil processing products. The lightness, elasticity, very high strength and durability of polyamide fibers have led to their wide use. silk blouses and dresses are produced from types such as shelon, megalon and trilobal [1]. The world production of polyamide fibers is decreasing (Table 1).

Polyurethane fibers are used to obtain spandex (lycra) or elastane threads. Spandex fibers are light, have high elasticity, and therefore are used in the production of elastic tapes, fabrics and sports knitwear, corsets and medical products [1].

Polyacrylonitrile (PAN) fibers, or nitrone, are produced from coal, oil and gas industry waste. Nitron is the softest, softest and warmest synthetic fiber. It retains heat even better than wool fibers, but its strength and hygroscopicity are lower than those of cotton and kapron. Polyvinyl chloride (PVC) fibers are derived from ethylene and acetylene. They are waterproof, but have high vapor permeability. Polyvinyl alcohol fibers (PVS) are derived from polyvinyl alcohol. One of the fibers of this group is vinyl. Vinol is the cheapest and most hygroscopic synthetic fiber. In terms of hygroscopicity, vinyl is close to cotton, but twice as durable [1]. The volume of production of PAN, PVC, spandex, carbon, aramid PVC fibers is steadily growing (Table 1).

Polyolefin fibers are the lightest synthetic fibers, waterproof, very strong, resistant to abrasion by organisms. They are divided into polyethylene (PE) and polypropylene (PP) fibers. PE fiber is obtained from polyethylene solution. PE fibers; spectrum, dynema, tekmilon are mainly used for technical purposes. PP threads are widely used in the production of household and technical products: waterproof ropes, nets, filter and coating materials, in mixed and pure form. Due to the characteristics of PE and PP fibers, the production volume is almost not increasing (Table 1).

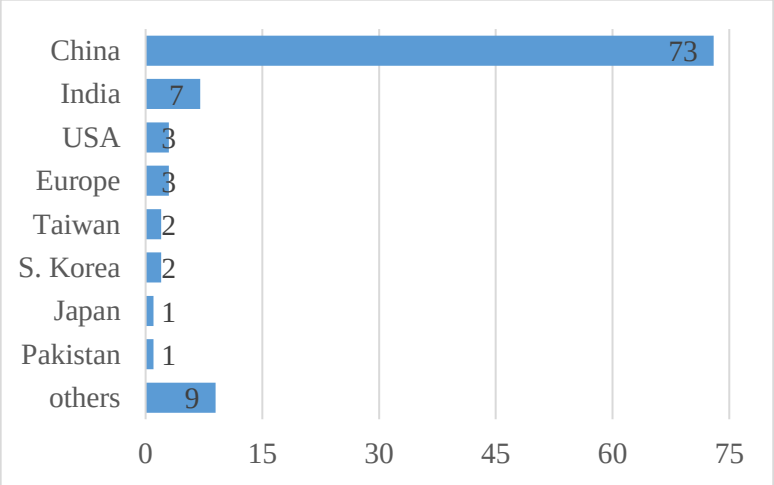


Figure 2. Leading countries in the production of chemical fibers and yarns (%).
Source: https://www.statista.com/statistics/271653/distribution-of-global-chemical-fiber-production-by-region/

In the 70s of the last century, the EU, the USA, and Japan were leaders in the production of chemical fibers and yarns, but now the situation has changed. China and India, the leading countries in the textile industry, account for 80 percent of the production of chemical fiber and yarn (Fig. 2).

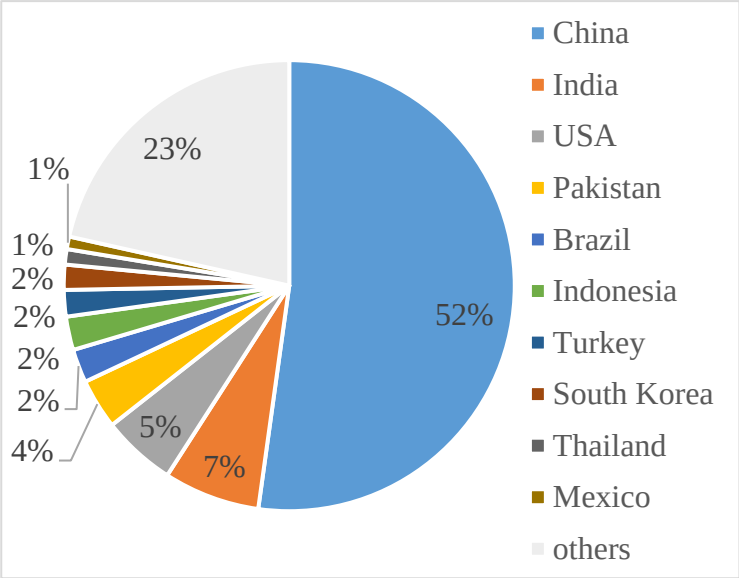
In Uzbekistan, nitrone and acetate are produced by "Navoiazot" and "Fargonazot", acrylic by "Siyovush textile" enterprise, and polyester fibers by several enterprises ("Sam-Negin" LLC, Reprocessing LLC). It is used in carpet weaving. At one time, a large amount of silk gauze was produced from artificial fiber - acetate. However, as a result of the opening of the foreign market in the 90s of the 20th century, under the competition of artificial fabrics made of chemical fibers, the production of artificial fabrics faced a crisis, and now silk fabrics - silk and satin, aimed at a narrow range of consumers, are produced very little.

Therefore, the head of our state Sh. Dedicating the opening of the "Siyovush textile" enterprise opened in the Gijduvan free economic zone in the Bukhara region, Mirziyoev said, "This is a new direction in New Uzbekistan. The textile industry is rapidly developing in our country. If businesses want to create added value and earn more revenue, they should at least partially master acrylic. Products made from it are 5 times more expensive. This means income, stability and jobs. "Therefore, the country

that encourages cotton processing will now fully support the production of artificial fibers," he said.[2]

Since the second half of the 20th century, the world textile industry has been moving to developing countries that produce raw materials. Currently, East and South Asian countries are leading in the textile industry. China alone accounts for more than half of the world's textile industry. India (7%), USA (5%) and Pakistan (4%) together produce 16%. The rest of the top ten countries each account for 1-2 percent of the industry and together account for 78 percent of total textile production (Figure 3).

Figure 3. Production of textile products (2021, in percent).
Source: https://oec.world/en/profile/hs/textiles



Of course, there is a difference between production and consumption. In particular, in 2021, slightly more than 40 percent of the export of textile products and 1/3 of clothing products fell to China, which provides more than half of the world's textile industry. India, which occupies the 2nd place in net production (excluding the EU) and accounts for about 7%, occupies the 3rd place in exports. 0.9 trillion in the world in 2021. Textile and clothing products were exported in the amount of US dollars (Figure 3, Figure 2).

Table 2.

Export and import of textile products (2021, in percent).

№	Total textile products			№	Clothing products		
	Countries	Export, bln. US dollars	Share, %		Countries	Export, bln. US dollars	Share, %
1.	China	145,6	41,1	1.	China	176,1	32,1
2.	EU	73,6	20,8	2.	EU	151	27,5
3.	India	22,2	6,3	3.	Bangladesh	35,8	6,5
4.	Turkey	15,02	4,3	4.	Vietnam	31,2	5,7
5.	USA	13,1	3,7	5.	Turkey	18,7	3,4
6.	Vietnam	11,5	3,2	6.	India	16,2	2,9
7.	Pakiston	9,2	2,6	7.	Malaysia	14,5	2,6
8.	S. Korea	8,7	2,5	8.	Indonesia	9,4	1,7
9.	Taiwan	8,6	2,4	9.	Hon kong	8,6	1,6
10.	Japan	6,2	1,8	10.	Pakistan	8,5	1,5
	tenner	313,7	88,7		tenner	470,0	85,5
	other countries	40,0	11,3		other countries	79,7	14,5

[2] https://uzts.uz/buhoroda-akril-ishlab-chiqarishni-kengaytirish-osish-uchun-imkoniyatlar/

	Total	353,7	100,0		Total	549,7	100,0

Source: World textile and clothing trade in 2021. WTO report: https://shenglufashion.com/2022/12/02/world-textiles-and-clothing-trade-in-2021-a-statistical-review/

In 2022, the share of clothing in the volume of export of textile products was 50-55 percent (Fig. 4). Asian countries with low labor costs, such as Bangladesh, Vietnam, Turkey and Pakistan, have become the "garment factories" of the world. Uzbekistan also has great opportunities to join the ranks of the above countries. However, at the moment, Uzbekistan is not among the top ten in the production of textile products and 3 bln. Exports of textile products are slightly more than USD [2].

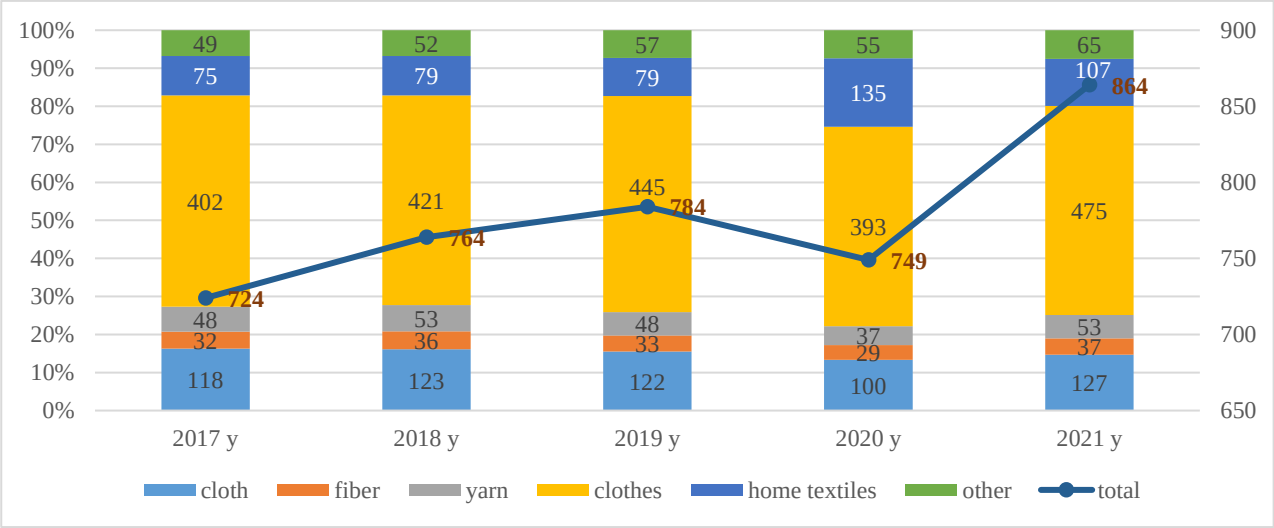


Figure 4. Composition of exported textile products (billion USD).

Source: Information from the Textile Industry Association, https://uzts.uz/jahon-toqimachilik-sohasida-etkazib-beruvchilarining-holati/

Fabrics and home textile products (beds and rugs) are the next in terms of export share (Fig. 3). Textiles and accessories rank third in the export of textile products. In general, developed countries have retained their leadership in the segment of production of valuable textile products (clothing and textile accessories) (Figure 4).

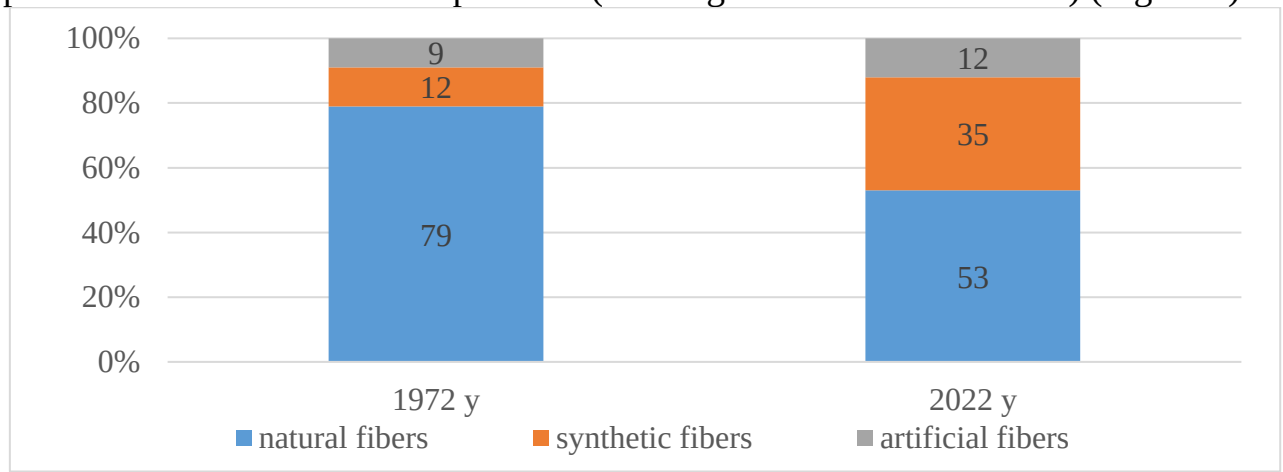


Figure 5. Share of production of natural and chemical fibers in the world (%).

Source: Andreas Engelhard. From red in 2022 to dark red this year. https://www.textiletechnology.net/fibers/trendreports/global-fiber-industry-from-red-in-2022-to-dark-red-this-year-34693

At the same time, the volume of production of natural fibers did not increase with the volume of population consumption. Therefore, the production volume of chemical and synthetic fibers and yarns has been increasing since the middle of the last century (Fig. 5). As we mentioned above, they are not inferior to natural ones in terms of quality indicators and even surpass them in some respects. At the same time, they are mixed with natural fibers and used in the production of complex yarns. They also add beauty to the fabric with its elasticity, durability and colorful appearance.

Conclusion. In conclusion, it should be said that the world textile industry is strongly "chemicalized". Synthetic fibers are superior to natural fibers in some aspects and are displacing natural fibers. At the same time, the demand for food products increases with population growth and the part of the world's (Uzbekistan) land fund that should be used for economic activity has already exceeded ecological standards, so the production of chemical fibers is becoming more urgent. keeps going This situation requires further development of production of chemical, especially polyester fibers in Uzbekistan. Special attention should be paid to fiber preparation based on secondary processing of PET bottles (Reprocessing LLC).

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UDK 911

HIGH-TECH FREE ECONOMIC ZONES OF UZBEKISTAN

Amanov Allabergan Kutlimuratovich, Lecturer, department of "Geography", Faculty of Natural and Agricultural Sciences, Urgench State University.
amanov11181975@gmail.com

Annotatsiya. Ushbu maqolada O‘zbekiston Respublikasidagi yuqori texnologik erkin iqtisodiy zona(keyingi o‘rinlarda EIZ)larning tashkil qilinishi haqida fikr yuritiladi. Keyingi yillarda mamlakatimiz iqtisodiyotida muhim ahamiyat kasb qilayotgan yuqori texnologik EIZlarning shakllanishi va rivojlanishida, ularning iqtisodiy geografik o‘rnidagi o‘ziga xosliklar, qulay tabiiy sharoit, mavjud infratuzilma, arzon ishchi kuchi, hamda muhim iste’mol bozorlari yaqinligining ahamiyati haqida bir qator fikrlar keltirilgan. Mamlakatimizda tashkil qilingan, yuqori texnologik EIZlar haqidagi mavjud ma’lumotlarni taqqoslash, tizimli tahlil va kartografik tadqiqot usullari yordamida chuqur o‘rganildi va ushbu izlanishlarning natijalari asosida yuqori texnologik EIZlar uchun zarur bo‘lgan taklif va tavsiyalar berib o‘tildi.

Kalit so‘zlar: bojxona imtiyozlari, divervikatsiya, eksport, erkin iqtisodiy zonasi(EIZ), import, intermodal xab, investitsiya, maxsus iqtisodiy zona(MIZ), moderinizatsiya, soliq imtiyozlari, transport-logistika markazi.

Аннотация. В данной статье рассматривается создание свободных экономических зон высоких технологий (далее СЭЗ) в Республике Узбекистан. В формировании и развитии высокотехнологичных СЭЗ, приобретающих в последующие годы все большее значение в экономике нашей страны, представлен ряд мнений о значении особенностей их экономико-географического положения, благоприятных природных условий, существующей инфраструктуры. , дешевая рабочая сила и важность близости важных потребительских рынков. Сравнение существующих данных об организованных в нашей стране высокотехнологичных СЭЗ, тщательно изучены системный анализ и картографические методы исследования, и по результатам этих исследований даны предложения и рекомендации, необходимые для высокотехнологичных СЭЗ.

Ключевые слова: таможенные льготы, диверсификация, экспорт, свободная экономическая зона(СЭЗ), импорт, интермодальный хаб, инвестиция, особая экономическая зона(ОЭЗ), модернизация, налоговые льготы, транспортно-логистический центр.

Abstract. This article discusses the establishment of high-tech free economic zones (hereinafter SEZs) in the Republic of Uzbekistan. In the formation and development of high-tech SEZs, which are gaining importance in the economy of our country in the following years, a number of opinions are presented about the importance of the peculiarities of their economic geographical location, favorable natural conditions, existing infrastructure, cheap labor force, and the importance of the

proximity of important consumer markets. Comparison of existing data on high-tech SEZs organized in our country, systematic analysis and cartographic research methods were thoroughly studied, and based on the results of these researches, suggestions and recommendations necessary for high-tech SEZs were given.

Key words: customs privileges, diversification, export, free economic zone(SEZ), import, intermodal hub, investment, special economic zone(SEZ), modernization, tax benefits, transport - logistics center

Introduction. SEZ - to establish a high-tech production with advanced management experience with the aim of ensuring the comprehensive socio-economic development of the regions, in particular, ensuring the employment of the able-bodied population and raising their standard of living. It is a specially designated area with clearly defined administrative boundaries and a separate legal procedure, organized in order to attract foreign and local investments, during the creation of exportable and import-substituting products.

Russian scientists V. Baronov and G. Kostyunina in their book "Free Economic and Offshore Zones" give the following definition of SEZ. Free economic zones are specific areas where preferential tax, financial, and legal conditions are introduced for economic and foreign economic activities in accordance with special laws or according to interstate agreements. Free economic zones are organized for the purpose of attracting local and foreign entrepreneurs, and the necessary production and administrative infrastructure is formed in them [18].The role of SEZs in the rapid development of the world economy is incomparable, although the first free economic zone (SEZ) was established in 1950 at Shannon Airport in Ireland, in the next 70 years, about 6,000 SEZs of 30 types were established, and their share in the current world trade turnover is is almost equal to 35%.

Literature review. During the preparation of this article, a lot of literature, including laws of the Republic of Uzbekistan [1], [2], [13] decrees of the President of the Republic of Uzbekistan on the establishment of SEZs [3], [4], [5], [6]], [7], [8], [9], [10], [11], [12] and the decision of the Cabinet of Ministers No. 357 of July 7, 2022, as well as to the subjects of economy and economic geography related literature, as well as the scientific works of some foreign and local researchers who conducted scientific research in this regard [15], [16], [17], [18], were thoroughly studied. Also, by using electronic literature [19], [20] and statistical data, an attempt was made to achieve the intended goal as a result of their analysis.

During the coverage of the topic, "On Foreign Economic Activities" adopted on June 14, 1991, "On Free Economic Zones" dated April 25, 1996 and "On Special Economic Zones" dated February 12, 2020 on" Laws of the Republic of Uzbekistan, as well as presidential decrees and government decisions on high-tech SEZ, as well as the scientific works of some scientists were quoted.

Research methodology. The main reason for the popularization of SEZs is the favorable conditions created for foreign and local investors, that is, customs and tax benefits. Sufficient economic growth was achieved in the economies of dozens of countries, such as China, the USA, Japan, Brazil, India, and South Korea, which established SEZs with such favorable opportunities, and in turn, the task of establishing them in our country was set. Historical, system-content, geographical comparison,

cartographic and statistical analysis methods were used to explain the formation of high-tech SEZs in Uzbekistan.

Results and discussion. Based on the world experience, the establishment of SEZs was also required in the Republic of Uzbekistan, and the Law of the Republic of Uzbekistan "On Foreign Economic Activities" adopted on June 14, 1991 was the first step in this regard. Article 28 of this Law states:

A separate procedure for foreign economic activity (customs, currency, tax, etc.) can be established for free economic zones in the territory of the Republic of Uzbekistan, which is regulated by the legislation on free economic zones [1].

The main step in this regard was taken 5 years later, but before that, efforts to establish an SEZ in Uzbekistan began in the 90s, due to the problems that arose in the formation of the Samarkand SEZ specialized in tourism, in a word, the legal basis he managed to close his activities in a short period of his absence. In order to eliminate these shortcomings and ensure rapid development of the economy of Uzbekistan, the Law of the Republic of Uzbekistan "On Free Economic Zones" dated April 25, 1996 was adopted. The adoption of this law became the basis for the establishment of SEZs in the country, and a number of projects were developed in this regard.

It should also not be forgotten that not all SEZs produce only positive results. For example, during the first implementation after the adoption of the law on SEZs, some problems were also encountered in Uzbekistan, and these cases were "Jizzakh" (1996), "Samarkand" (1997), "Nukus" (1998). y.) ended with the end of SEZs.

The reason for the occurrence of these problems is the fact that experts have not used the capabilities of the expert institute to foresight, forecast, study the problem and study possible negative situations [16].

Indeed, the establishment of SEZs will not be enough for their development. For this, favorable conditions or the attractiveness of the SEZ should be at a high level. It is for this reason that the first SEZs established in our country quickly completed their activities.

After some time, relying on world standards and on the basis of the legal documents of the Republic of Uzbekistan developed for SEZs, the first president of the Republic of Uzbekistan I.A. According to Karimov's decree PF-4059 of December 2, 2008 "On the establishment of a free economic zone in the Navoi region", the first "Navoi free industrial-economic zone" (EIZ) was established.

This paid off, and now "Navoi" SEZ has become not only the first active SEZ in our country, but also the most developed SEZ with the characteristics of an international intermodal hub.

According to the decree of the first President of the Republic of Uzbekistan Islam Abdug'aniyevich Karimov dated April 13, 2012 PF-4436 "On the establishment of the Angren free economic zone", the "Angren special industrial zone" was established. This MIZ was established in the Olmalik-Angren industrial district of the Tashkent region, rich in natural resources and economically developed, on the "corridor connecting the capital with the valley" with a convenient economic geographical location. A logistics center was also built in the

Angren MIZ, which is located very close to Kazakhstan and Tajikistan, as well as on the corridor connecting Uzbekistan with Kyrgyzstan and China.

At the moment, this logistics center, by fulfilling the above tasks, is focusing on taking an important place not only in the capital region, but also in Ferghana regions, but also in the infrastructure of cargo transport of countries such as Kyrgyzstan and China.

The first President of the Republic of Uzbekistan I.A. According to Karimov's decree PF-4516 of March 18, 2013 "On the establishment of the Jizzakh free economic zone":

- creation of favorable conditions for attracting foreign and local investments for the organization of modern, high-tech productions that ensure the production of competitive products;

- In order to make comprehensive and effective use of the production and resource potential of Jizzakh and Syrdarya regions, in order to create new jobs and increase the income of the population on this basis;

- also in accordance with the memorandum of understanding on the implementation of the project of establishing an Uzbek-Chinese industrial park in Uzbekistan;

-"Jizzakh" free economic zone, which has a branch in Syrdaryo district of Syrdaryo region, was established in Jizzakh region [4].

Figure 1. The first free economic zones of Uzbekistan [15]

In the 1st stage of formation of SEZs, "Navoiy" SEZ, "Angren" SEZ and "Jizzakh" SEZ (with Syrdarya branch) were created (Fig. 1). All three SEZs were established in the cities of Navoi, Angren and Jizzakh, which have more favorable natural conditions and are economically more developed than some cities of the country.

President of the Republic of Uzbekistan Sh.M. In accordance with Mirziyoyev's decree PF-4931 of January 12, 2017 on the establishment of "Urgut", "Gujduvon", "Ko'kan" and "Hazorasp" free economic zones, in Samarkand, Bukhara, Fergana and Khorezm regions high-tech SEZs were created.[6] The purpose of this is the existing economic opportunities in these regions; including convenient infrastructure, cheap labor and full use of consumer markets. To some extent, it paid off and a significant level of economic growth was achieved in the regions where these SEZs were established.

Table 1.

High-tech SEZs established in the Republic of Uzbekistan

T/r	SEZ name	Date of establishment	SEZ is an administrative unit
1	SEZ "Navoi".	December 2, 2008	Navoi region
2	"Angren" SEZ	April 13, 2012	Tashkent region
3	"Jizzakh" SEZ	March 18, 2013	Jizzakh region
4	SEZ "Urgut".	January 12, 2017	Samarkand region
5	"Gijduvan" SEZ	January 12, 2017	Bukhara region
6	"Kokan" SEZ	January 12, 2017	Fergana region
7	SEZ "Hazorasp".	January 12, 2017	Khorezm region
8	SEZ "Syrdaryo".	April 12, 2018	Syrdarya region
9	"Namangan" SEZ	August 20, 2018	Namangan region
10	"Termiz" SEZ	September 18, 2018	Surkhandarya region
11	"Nukus" SEZ*	September 4, 2019	Republic of Karakalpakstan
12	"Chirakchi" SEZ	September 13, 2019	Kashkadarya region
13	SEZ "Karakol".	July 7, 2022	Bukhara region

The table was compiled by the author. *"Nukus" SEZ - initially "Nukus-Farm" SEZ was established on May 3, 2017.

The work in this regard was continued later, and in different years, high-tech SEZs "Namangan", "Syrdarya", "Termiz", "Chirakchi" and "Karakol" were established in Namangan, Syrdarya, Surkhandarya, Kashkadarya and Bukhara regions (1- see table).

In order to achieve economic growth and efficiency in Syrdarya SEZ alone, the following were determined.

The main tasks and directions of the activity of the "Syrdarya" free economic zone should be defined as:

-by effectively using the production and resource potential of the Syrdarya region, in-depth processing of local mineral resources and expansion of the production of competitive, import-substituting products with high added value;

-deep processing, storage and packaging of fruits and vegetables and agricultural products, textiles, footwear and leather goods, environmentally safe chemistry, pharmaceuticals, food, electrical engineering, machinery and automobile industry, production of building materials and active attraction of direct private investments, as well as foreign investments, for the organization of modern productions in other directions [7].

According to this decree, using the possibilities of the Syrdaryo region and the regions close to it, to develop production in the territory of the "Syrdarya" SEZ, to ensure the employment of the available labor resources, as a result of this, the socio-

economic growth of the region and the lifestyle of the region's residents is to achieve the rise.

It is necessary to attract direct investments to the comprehensive development of the production and resource potential of Namangan region, the organization of high-tech and export-oriented production of mineral raw materials and agricultural resources in-depth processing. - to create conditions and, on this basis, to increase the export potential of the region, first of all, with the border regions of the Central Asian countries, to create new jobs and to improve the well-being of the residents of the region [8] "Namangan" SEZ was established. This SEZ is the second such area after the "Kokan" SEZ in the Fergana Valley belonging to the Republic of Uzbekistan.

Development of effective trade and transport-logistics relations with neighboring countries, Afghanistan (former Islamic Republic of Afghanistan), ensuring security of international goods and transit security of the Republic of Uzbekistan, resources of the border areas. comprehensive export and direct use of the base, registration of favorable conditions for attracting investments [9] "SEZ creation". With the establishment of this SEZ, with the help of investors and assistance, Surkhandarya region will be able to export and import finished products to the domestic markets of neighboring countries of Afghanistan, Tajikistan and Turkmenistan. intended to penetrate.

Figure 2. Free Economic Zones of Uzbekistan. The card scheme was prepared by the author.[16]

Ensuring the implementation of the Decree of the President of the Republic of Uzbekistan No. PF-5809 of September 4, 2019 on measures to establish the "Nukus" free economic zone and attracting foreign and domestic investments to the established free economic zones "Nukus" SEZ was established in order to build the necessary transport, engineering-communication and production infrastructure, which will help to implement high-tech and modern investment projects aimed at the development of the republic's industry[10].

Initially, in 2017, the SEZ "Nukus-Farm" was established in the Republic of Karakalpakstan, by 2019, the SEZ "Nukus" was established here.

The purpose of this is the economic development of the Republica of Karakalpakstan, providing employment to the population, producing products that replace imports, and developing new social production.

To develop the production and resource production complex of Kashkadarya region, to create favorable conditions for attracting direct investments for the organization of high-tech and export-oriented production of mineral raw materials and agricultural resources in-depth processing, and to improve the export of the region, new creation of jobs and connection to the well-being of the residents of the region [11] creation of the "Chirakchi" SEZ.

By attracting foreign and domestic investments to the high-tech Chiraqi SEZ established in Kashkadarya region, this region will benefit from favorable economic opportunities: a large amount of natural gas, potash fertilizers, and several existing natural resources such as table and rock salts, cheap labor It will be possible to ensure the development of the region's economy through the production of import-substituting and export-oriented products with the use of the developed infrastructure necessary for industrial production.

PF-5719 of May 15, 2019 of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev "Measures to designate the Navoi region as a free economic zone for innovative, high-tech, export-oriented and import-substituting productions in accordance with the decree on:

- To enterprises implementing investment programs for the organization of innovative, high-tech, export-oriented and import-substituting productions within the territorial boundaries of Navoi region, with the compact placement of productions in existing or easily constructed infrastructures in the region The status of a participant of the Navoiy free economic zone (hereinafter referred to as the Navoiy SEZ) will be granted.[12]

Attracting direct investments to the projects of establishing high-tech production facilities focused on the deep processing of hydrocarbon and mineral resources in the SEZ "Karakol"-Bukhara region, as well as gas intended for the deep processing of natural gas - the construction of a chemical complex was established on the basis of the decision of the Cabinet of Ministers [14] in order to implement the investment project and to establish a large modern gas-chemical technological cluster on its basis.

In the period from 2008 to 2022, a total of 604 projects worth 3.2 billion dollars were implemented in the territories of special economic zones. Out of the total amount, 896.9 million dollars are foreign direct investments. About 55,000 new jobs were created at the expense of the projects. The largest of these projects are Angren SEZ (84 projects worth $1,038.2 million), Navoi SEZ (73 projects worth $495.0 million), Urgut SEZ (77 projects worth $335.9 million), and "Koqon" was implemented in SEZ (84 projects worth 280.2 million dollars) [20].

Such economic indicators can be seen in other SEZs, but their results are not the same as those of the above-mentioned SEZs due to the fact that they were established in recent years and lack of attraction of local and foreign investors.

Conclusions. In particular, during 2023, 983.6 million dollars was allocated for the implementation of 86 new investment projects in the free economic zones of the Republic. As a result, the production of more than 120 new types of industrial products will be launched and more than 10,000 new jobs will be created. This is directly related to the success of investment activities of MIZs, especially high-tech SEZs.

In order to further develop the economic activity of the existing high-tech SEZs in the Republic of Uzbekistan, the following should be implemented:

1). Increasing the attractiveness of these economic zones by further easing the customs and tax incentives for high-tech SEZs and extending the terms of the incentives set for the amount of investment;

2). Creation of new legal norms supporting investors for high-tech SEZs;

3). Establishing the production of certain natural raw materials and products made from them within the framework of the law;

4). Ensuring continuous supply of primary resources such as electricity, water and natural gas necessary for high-tech SEZs;

5). It is desirable to establish new high-tech SEZs.

If the above proposals and recommendations are implemented, the economy of our country and the development of SEZs will definitely increase.

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THE IMPORTANCE OF WATER-SAVING AGROTECHNOLOGIES IN AGRICULTURE IN WATER-SCARCE CONDITIONS

Koriyev Mirzohid Rustamjonovich
Namangan State University,
Senior lecturer of the Department of Ecology and Climatology,
Doctor of Philosophy in Geography.
qoriyevmirzohid@mail.ru

Annotatsiya. Ushbu maqolada tuproq namligini uzoq vaqt saqlab qolishga asoslangan mulchalash agrotexnologiyasi, shuningdek tomchilatib sug'orish, yomg'irlatib sug'orish, tuproq ostidan sug'orish kabi zamonaviy suvtejamkor sug'orish usullarining ahamiyati va foydali jixatlari yoritilgan. O'zbekiston adir hududlarida mulchalashdan foydalanib, sug'ormasdan bog' yaratish bo'yicha olib borilayotgan tajriba natijalari ham ushbu maqolada ko'rsatib o'tilgan. Bundan tashqari, O'zbekistonda suvtejamkor sug'orish usullarini amaliyotga joriy etish bo'yicha olib borilayotgan keng qamrovli ishlar haqida ham ma'lumotlar aks ettirilgan.

Kalit so'zlar: sug'orma dehqonchilik, suvtejamkor agrotexnologiyalar, mulchalash agrotexnologiyasi, suv tejamkor sug'orish usullari, tomchilatib sug'orish.

Аннотация: В данной статье освещены значение и полезные особенности современных водосберегающих способов орошения, таких как мульчирующая агротехнология, а также капельное орошение, дождевание, суборошение, основанных на длительном сохранении влаги в почве. В данной статье также показаны результаты эксперимента, проведенного по созданию сада без орошения с использованием мульчирования в горных районах Узбекистана. Кроме того, отражена информация о широком освещении проводимой в Узбекистане работы по внедрению водосберегающих методов орошения.

Ключевые слова: орошаемое земледелие, водосберегающая агротехника, мульчирующая агротехника, водосберегающие способы орошения, капельное орошение.

Annotation. This article the importance and useful features of modern water-saving irrigation methods, such as mulching agro technology, as well as drip irrigation, sprinkler irrigation, sub-irrigation, based on long-term preservation of soil moisture, are covered. The results of the experiment carried out on the creation of a garden without irrigation using mulching in the hill regions of Uzbekistan are also shown in this article. In addition, information on the wide coverage of the work carried out in Uzbekistan on the implementation of water-saving irrigation methods is also reflected.

Keywords: irrigated agriculture, water-saving agricultural technology, mulching agro-technology, water-saving irrigation methods, drip irrigation.

Introduction. Since water is one of the necessary natural resources for the growth, development of agricultural crops and the formation of high yields, it is considered to be of great value in agriculture. The demand for water is very high, especially in countries with arid climates, since agricultural work is carried out by artificial irrigation. Therefore, irrigation farming requires the use of water sparingly.

Since the Republic of Uzbekistan is also a country with arid climate, almost all of the crops obtained in agriculture are grown through irrigation farming. The total area of agricultural lands in Uzbekistan is 20 million 236.3 thousand hectares. However, due to the shortage of Water Resources, irrigation farming is carried out on just 4,3 million hectares of this area.

It is worth noting that the water shortage observed in recent years as a result of global climate change, the main part of the domestic irrigation networks has become depleted, the main part of the crop areas is sown crops that require a lot of water, irrigation water consumption in them has led to the deterioration of the land reclamation situation (soil salinity, irrigation erosion, etc.) and being out of use for years.

Literature Review. As a result of the rapid growth of the population of the Republic, the size of irrigated land areas per capita in the last 15 years decreased by 24 percent (from 0.23 hectares to 0.16 hectares), and the average annual water supply level decreased from 3 048 cubic meters to 1 589 cubic meters [1].

According to the calculations, the total water shortage in Uzbekistan in 2015 amounted to 3 km^3, by 2030 it could reach 7 km^3, by 2050 it is expected to reach 11-13 km^3. In recent years, there have been an increasing number of years which the amount of water decreases in the Aral Sea. In particular, up to 2000 years, a water shortage is observed every 6-8 years if repeated years, then in recent times it is observed every 3-4 years. In addition, due to the rising air temperature, it is estimated that the norm of irrigation of agricultural crops will increase by 5% by 2030 year, by 2050 by 7-10% [1].

One of the more negative processes occurring due to Global climate change is that the mountain glaciers that water the largest rivers in our region are rapidly melting. According to experts, due to global climate change, more than 8 000 glaciers in Tajikistan have melted 30% of the total area, and in Kyrgyzstan 16% of the total area of glaciers about 10 000. It is predicted that by 2030 year again 15-20% of the glaciers will melt [1]. It can be seen that the reason for the rapid melting of glaciers is not only the fact that at present the water in the rivers is decreasing, but also slightly increasing. However, since the melting part of the glaciers is not restored, in the near future the water of large rivers, saturated with snow and glaciers, can significantly reduce and aggravate the problem of water shortage in Central Asia. For example, in different scenarios, changes in the water resources of Syrdarya and Amudarya are predicted from fluctuations around the norm to a decrease of 28 and 40%, respectively [2]. This position is also attributed to small rivers. According to forecasts based on some scenarios, in 2030-2080 years the water of the Padsha Ata Say can be reduced by 20-30 percent, and the water of the Chadak Say and the Gova Say can be reduced by up to 40-50 percent [3].

All the above-mentioned Scientific, Analytical, Research statistical data warn about serious problems of the region's Water Resources, that may occur in the near future. Therefore, it is necessary to implement water-saving agro technologies and modern low-water-consuming irrigation methods on a large scale in the agricultural sector, which quickly owns 90% of the total water resources consumed in Uzbekistan.

Research Methodology. Analysis of scientific literature, statistical analysis, geographical comparison, field experiment and observation methods were used in this research work.

Analysis and Results. Currently, many countries come up with a variety of water-saving irrigation methods for the purpose of saving water in agriculture, including drip irrigation, sprinkler irrigation, fog irrigation, sub-irrigation using as modern water-saving irrigation methods. The most common method among them is drip irrigation**.**

The method of drip irrigation, which was further improved in later times, effective, harmless to nature, as well as economical in large quantities of water, many countries began to use it on a large scale in their agricultural lands. According to statistics, drip irrigation is being organized in more than 1.2 million hectares of arable land in the countries of the world. The most advanced countries in this regard are the USA (888 thousand/ha), Israel (more than 100 thousand/ha), Australia (50 thousand/ha), Spain (34 thousand/ha), Italy (nearly 32 thousand/ha) and France (20 thousand/ha) [4].

There are a number of positive qualities of drip irrigation. Including:

-the root system of plants is moistened with a layer of dispersed soil (for an area of 50-70% of the field where irrigation is not required, excess water is not wasted), and as a result, several times less water is spent than surface irrigation which is traditional;

-a very small part of the water is absorbed into the ground and is spent on evaporation;

-in the arable fields, water does not flow and the flowing water does not flow out. As a result, irrational erosion and freshwater pollution are avoided;

-it is ensured that arable fields do not face condensation at the water effect and are always in a soft state;

-by drip irrigation, mineral fertilizers is also able to melt and add locally to the soil with water, as well as mineral fertilizers due to the availability of the possibility of direct delivery of water directly to the root of the plant, most of the mineral fertilizers are saved;

-since it can also be used in areas with complex relief, it provides the opportunity to farm even in some unfavorable areas;

-irrigation water is delivered evenly across the field in accordance with the need for agricultural crops over periods of development.

Since the drip irrigation method has a number of advantages listed above, a wide range of measures are being taken to implement this system actively in the irrigation farming of our country, as well as a number of tasks for further expansion of them are being included in the agenda. In this regard, important documents adopted in recent years to encourage the introduction of water-saving irrigation methods into practice are evidence of our opinion. In particular, the decree of the president of the Republic of Uzbekistan Sh.N.Mirziyoyev “On measures for effective use of land and water resources in agriculture” Presidential Decree No.5742 was adopted on June 17, 2019 [5]. According to him, the wide application of drip irrigation, sprinkler irrigation and other water-saving technologies in irrigation of agricultural crops; the development of new lands also carry out on account of the application of water-saving technologies,

such as drip irrigation, sprinkler; the expansion of landowners and water consumers incentives for the introduction of a wide range of water-saving irrigation methods; the introduction; It was entrusted to the relevant ministries and organizations to carry out in strict order such important tasks as effective use of water in irrigation and salt washing, as well as to increase their skills and knowledge in the application of water-saving technologies, employees of the district irrigation departments and heads of farmer farms.

Another important document on the effective use of Water Resources is the Presidential Decree No. 4486 “on measures for further improvement of the water resource management system”, which was adopted on October 9, 2019 [6]. In this decision, too, by actively contributing to the producers of agricultural products in the implementation of water-saving irrigation technologies, expanding the production capacities of modern irrigation systems to the expense of attracting private investment, the share of irrigated lands using water-saving technologies to reach at least 10 percent of the total area of irrigated lands; ensuring the rapid development of scientific and scientific and technical activities in the field of water management, training, retraining of specialists in the field of Water Resources Management and introduction into practice of at least 10 scientific and innovative works on the Current Directions in the field of Water Management in the field of improving their qualification system; the responsible owners of such tasks as the innovative development of the water economy, the results of scientific developments, the active introduction into practice of advanced methods of water management and the use of water management objects were entrusted with such tasks.

In addition, the Cabinet of Ministers also announced on August 12, 2019 the Resolution No. 664 of the “On approval of the regulation on the procedure for reimbursement of expenses incurred by manufacturers of fruit products to the implementation of water-saving technologies on the basis of drip and sprinkler irrigation” with the aim of financial support by the state of the initiatives of farmers and farmers in the field of horticulture to introduce water-saving irrigation technologies into practice on a large scale [7]. In accordance with this decision, the regulation on the procedure for reimbursement of expenses incurred by manufacturers of fruit products for the introduction of water-saving technologies on the basis of drip and sprinkler irrigation was approved. In this regulation, however, the manufacturers of fruit products introduced in 2019 year and in the following years, drip and rain irrigation technology to cover the costs of water-intensive irrigation technology is introduced in an amount not exceeding one-time 6 million sums (“sum” is the currency of the Republic of Uzbekistan) per hectare of land; the allocation of subsidies in the amount of not more than 120 million sums for the construction of a well drilled for the extraction of water in gardens with an area of more than 35 hectares, as well as a pump for the extraction of water from rivers, canals and other reservoirs was determined.

Since the adoption of a number of important documents aimed at effective use of Water Resources on the basis of saving in 2019 year and the gradual provision of their implementation means that rapid actions have already begun, having a deep understanding of the dangerous predictions about the possibility of a decrease in water resources in the future.

In water conservation, not only water-saving irrigation methods are widely used, but also agro technologies based on maintaining soil moisture for a long time around crops. One of such agro technologies is "mulching". Mulching is also one of the most used activities in agriculture of the countries of the world. Mulch, this is a protective coating consisting of organic substances such as straw, leaf litter or peat, which are deposited around agricultural crops to prevent the evaporation of soil moisture and the multiplication of weeds. The word of “mulch” is derived from the German word “molsch”, which means the use of straw and leaf litter, which have a soft decay property, as mulch to the Earth [8].

Mulching reduces soil deterioration and protects soils from erosion, controls the growth of weeds and the evaporation of water. Thus, it helps to keep the soil moisture more stable and helps to control the changes in temperature. It improves the physical, chemical and biological properties of the soil because it adds nutrients to the soil. As a result, it increases the growth and yield of crops. In addition, under conditions provided with rain, the yield of mulched crops increases by 50-60 percent compared to the yield of mulched crops [9].

According to the results of experiments by Kamalov B.A., Koriyev M.R. [10] on the creation of an irrigated garden in the foothills of the mountainous area using mulching, the fact that most of the fruit seedlings have grown without drying, all the vegetation processes are passing, as well as the fact that the fruit yields, showed that with the help of mulching agro technology, horticulture can also be developed in the areas of hill lands, where there is a shortage of water.

Conclusion. Based on the results of the monitoring and experience carried out, a number of conclusion and proposals have been developed to achieve efficiency in irrigation farming of Uzbekistan on the territorial placement of water supply networks and the implementation of water supply agro technologies:

1. The drip irrigation system, which is a modern water-efficient irrigation method (as well as drip from under the soil), should be introduced quickly to the regions of the mountain and foothills of adir where irrigation is carried out in the first place. This is due to the fact that irrigation farming requires a lot of expenses (for example: installation of pumps, repair of old ones, laying of water pipes, electricity consumption for pumps, etc.), the supply of water to the mountainous and mountainous foothill regions;

2. Subsequently, the drip irrigation system (as well as sub-irrigation) is inadequate to drain the irrigation system, while the growing season it is necessary to introduce temperature and water into the plain areas where the absorption under the ground will be very high. This is due to the fact that most of the water spent on irrigation in the field of field crops, where the ability to drain is sluggish, is pumped out, raising the level of groundwater. Under the influence of high temperatures, it leads to the fact that the groundwater of the Earth rise to the surface of the soil through the soil capillaries and actively evaporate them. As a result, various salts of water content accumulate on the surface of the soil, causing the problem of soil salinity, which is most dangerous.

3. It is necessary to apply to irrigated agriculture areas not only water-efficient irrigation methods, but also water-saving agro technologies based on long-term

preservation of soil moisture. Here the most effective of such activities is the agro technology "mulching". In Uzbekistan, in subsequent years, experiments on mulching have shown that it is effective in maintaining soil moisture. These agro technologies should also be applied to the irrigation fields, which, like drip irrigation, are mountainous areas and the drainage capacity is sluggish.

4. Serious attention should be paid to the issue of territorial placement of agricultural crops in Uzbekistan. It is necessary to stop the cultivation of crops (e.g. cotton, carrot, potato, etc.) that require a lot of water on irrigation peasant fields in the mountainous foothill regions with a high slope. Because this situation leads to the fact that a large amount of electricity is spent on the supply of water to the foothills, the waste of a large amount of Water Resources, the intensity of irrational erosion, as well as the salinity of the soil. To reduce the degree of danger of this situation, it is necessary to place agricultural sectors that require less water in the areas of foothills, including horticulture and viticulture, rainwater harvesting, cereals (all low-water grain crops except rice: peas, corn, soybeans, beans, etc.).

5. Another of the necessary measures that should be taken in the economy of Water Resources, in order to prevent them from being spent on landfill, is to strengthen the water supply waterways to these field crops, that is, Channels and ditches with waterproof hard concrete coatings. According to the analysis, although billions of cubic meters of water is directed to crop areas in Uzbekistan, only 60% of it will reach the crops, the remaining 40% will be lost in irrigation systems and in the process of irrigation. In the process, the most abundant water resources are lost by the fact that the channel and the ditches absorb from it under the Earth. Therefore, it is necessary to strengthen the channel and ditches themselves with hard concrete coatings. This issue requires special attention, especially when transporting water from sandy, shag-bearing areas, where soil rocks are watertight, and when carrying out irrigation farming work.

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SYNTHESIS OF SODIUM 1,2-PHENYLENEDI (CARBOXYMETHYLENE) CITRATE

Abdushukurov Anvar Kabirovich,
Doctor of Chemical sciences, professor,
National University of Uzbekistan,
abdushukurov-ximik@mail.ru
Choriev Azimjon Uralovich,
Doctor of Philosophy in Chemical Sciences,
Karshi State University,
azimjon-organik@mail.ru
Sadikova Sabokhat Babaevna,
Doctor of Philosophy in Chemical Sciences,
Urgench State University
sadikova-ximik@mail.ru
Sherova Sayoxat Khudaybergan qizi
master of Urganch State University
Kutlimuratov Odilbek Shadibek o'g'li,
Shonazarov Amirxon Rustamxon og'li
bachelor students of Urganch State University

Annotasiya: Maqoladan ko'zlangan asosiy maqsad - pirokatexinni xlorasetillash reaksiyalari va u asosida sintezlar olib borishdan iborat. Shuningdek, olingan moddalarning tuzilishlari spektroskopik usullar (IQ-, UB-, mass-), yupqa qatlamli xromatografiya (YuQX) kabi zamonaviy fizik-kimyoviy eksperimental tadqiqot usullari qo'llanilgan.

Kalit so'zlar: pirokatexin, xlorasetilxlorid, xlorasetillash, natriy sitrat, nukleofil' almashinish, spektroskopiya.

Аннотация: Основная цель статьи – проведение реакций хлорацетилирования пирокатехина и синтезов на его основе. Также для определения структуры полученных веществ были использованы

современные физико-химические экспериментальные методы исследования, такие как спектроскопические методы (ИК-, УФ-, масс-), тонкослойная хроматография (ТСХ).

Ключевые слова: пирокатехин, хлорацетилхлорид, хлорацетилирование, цитрат натрия, нуклеофильное замещение, спектроскопия

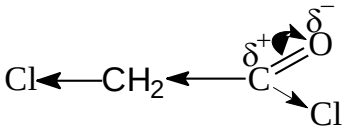
Abstract: The main goal of the article is to carry out pyrocatechin chloracetylation reactions and syntheses based on it. Also, modern physico-chemical experimental research methods such as spectroscopic methods (IR-, UV-, mass-), thin-layer chromatography (TLC) were used for the structures of the obtained substances.

Key words: pyrocatechol, chloroacetyl chloride, chloroacetylation, sodium citrate, nucleophilic substitution, spectroscopy

Introduction. Today, the products of chloroacetylation reactions of phenols, an organic compound with high reactivity in the world, are widely used in the chemical industry, medicine and agriculture. Among such compounds, we can include analogues and derivatives of pyrocatechin, resorcinol and hydroquinone compounds. An analysis of the result of research carried out in recent years in the field of organic chemistry around the world shows that among the aromatic compounds stored by the chloracetyl group in the molecule, highly biologically active preparations are increasing. This plays an important role in the further development of the pharmaceutical and agricultural sector [1-3].

The main purpose of the article is to study chloroacetylation reactions of pyrocatechin and conduct syntheses based on them.

In the study of the chloracetillation reaction, chloranhydride of monochloroacetic acid was used as a noble agent. Because, on the one hand, most of the compounds occupied by the chloroacetyl group have high biological activity, and on the other hand, it is a powerful acylating agent. The reason is, due to the negative induction effect of two halogen atoms in chloroacethyl chloride, the carbon atom acquires an additional positive charge as a result of the distribution of the density of the cloud of electrons in the carbonyl group:



Therefore, the reactivity of carbon in the acyl state is extremely high and facilitates the exchange reactions [4-6].

Methodology of the study. Conditions for obtaining IR spectra. The structure of substances synthesized on the basis of isomer dichloroacetyldioxy-benzols was confirmed using IR - and UV - Spectra. IQ-spectra were obtained in tablets with Vaseline oil and crystalline substances KBr in equipment marked IR-20 or PYE Unicam SP from Philips [7]. The thin-layer chromatography of the reaction products was carried out on the Silufol GV 20 cm×20 cm (Macherey-Nagel, Germany) plate.

Part of the experience. Taking dichloroacetylpyrocatechine (I). 11 g (0.1 mole) of pyrocatechin was placed in a tube with a round bottom equipped with a tube and a return refrigerant adapted to the hydrogen chloride outlet and dissolved it in 30 ml of chloroform. After complete dissolution of pyrocatechin, 22.6 g (0.2 mole) of drip

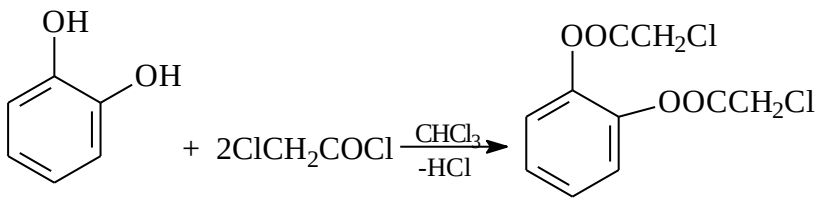
chloracetyl chloride are poured into the solution, and the reaction mixture is heated for 25 hours. The completion of the reaction was determined by the cessation of the release of hydrogen chloride gas, and the course of the reaction was controlled by the so-called TLC method. The solvent was driven in a water pump and the reaction product was isolated and purified by recrystallization. The reaction flour is 23.6 g (90%). T_{liquid} =120-122°C

Synthesis of sodium 1.2-phenylenide(carboxymethylene)citrate (II) from the reaction of the trinatrial salt of dichloroacetylpyrocatechin and citric acid. 2.58 g (0.01 mol) of the trisodium salt of citric acid was placed in a flat-bottom flask placed on a magnetic stirrer, and 2.63 g (0.01 mol) of dichloroacetylpyrocatechin was added to it. Then, 15 ml of DMFA was added and the reaction was carried out at 60°C for 5 hours. The completion of the reaction was monitored by TLC. After completion of the reaction, the reaction mixture was cooled to room temperature. The residue was washed with water and extracted three times with ethyl acetate, and the ethereal portion was dried with $CaCl_2$. Ethyl acetate was removed in a water pump, and the residue was recrystallized from ethanol. Liquefaction temperature is 46°C (ethanol). Product yield 2.7 g (67%), R_f = 0.36 (eluent benzene-ethanol 3:1).

Research results and their discussion. Due to the uncoordinated diversion in pyrocatechin, due to the strong electronic m effect of both hydroxyl groups, the electron density is higher in ortho - and para-cases compared to the hydroxyl group in the benzene ring, and the chloracethyl group goes to Ortho - and para - cases where the density is higher.

Dicotyledonous phenols are solid crystalline substances that are well soluble in water, with a much stronger acidic property than unicotyledonous phenols. For example, pyrocatechine is easy to enter into an O-chloracethylation reaction with respect to Phenol due to its pKa value of 9.45.

The chloroacetylation reaction of pyrocatechin was carried out in the presence of organic solvents without a catalyst [8]. Favorable conditions for conducting the reaction were found, and under these conditions the yield of the reaction reached 90%. When the product of pyrocatechin chloroacetylation reaction without a catalyst was analyzed by the TLC method, it was found that its composition consisted of a single substance dichloroacetylpyrocatechin (I) (R_f=0.79):



I

Table 1

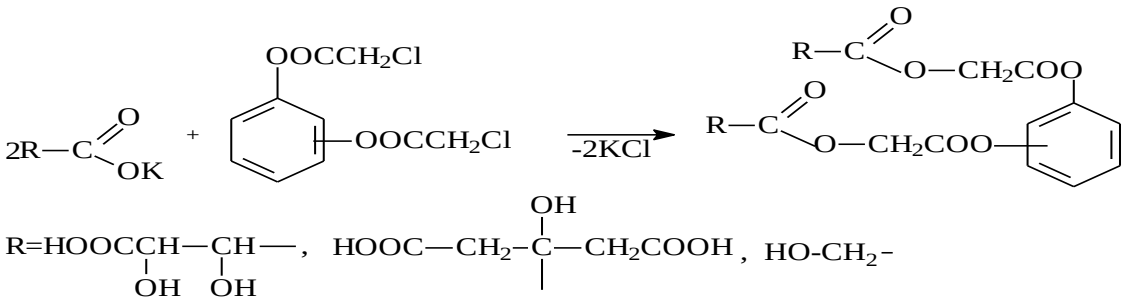
Chloroacetylation of pyrocatechin in the presence of organic solvents without catalysts

№	The molar ratio of reagents is pyrocatechin:XAX	Duration of reaction, hours	Reaction temperature, C	Reaction productivity, %	Solvent

1	1:1 1:2 1:3	25	61-62	56 90 92	chloroform
2	1:1 1:2 1:3	26	83-85	51 77 81	dichloroethane
3	1:1 1:2 1:3	28	80-82	46 61 64	benzol
4	1:1 1:2 1:3	30	64-65	40 53 55	hexane

One of the most important and common types of reaction of organic reactions is the nucleophilic exchange reaction that goes on a saturated carbon atom. It should be said that the nucleophilic exchange reaction is widely used in the synthesis of organic substances. An important role in the emergence and development of fundamental concepts about the reaction mechanism in organic chemistry is played by nucleophilic exchange reactions that go in a saturated carbon atom [9].

Because the carboxylate ion is a very weak nucleophile, its reaction with haloalkanes does not take place in protonated solvents and complex ethers are not formed. If the reaction of the acid salt (RCOOMe) with the haloalkane is carried out in DMFA solution, the complex ester is formed in high yield:



Analysis of the obtained results. IR spectrum analysis. IR-spectra of chloroacetylation products of isomeric dioxybenzenes and substances synthesized on the basis of chloroacetyl products confirm their structure.

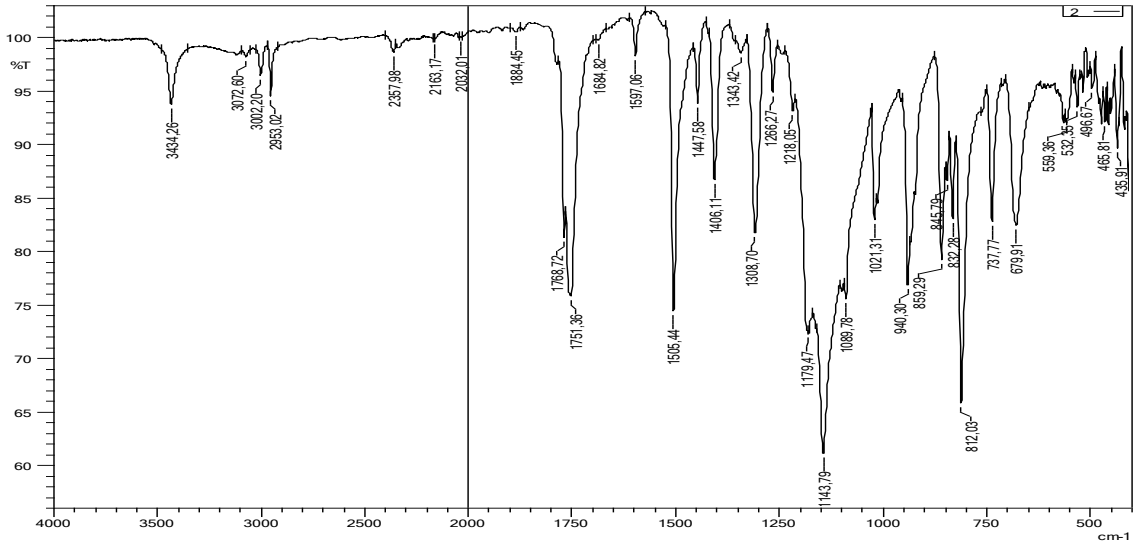


Figure 1. IR spectrum of dichloroacetylpyrocatechin

The IR spectrum of dichloroacetylpyrocatechin presented in Figure 1 shows vibrational regions indicating the types of substitution of aromatic ring, carbonyl group, C-Cl, =C-O-C, -CH_2CO- bonds in the ring. In the region of 1218-1089 cm^{-1}, the valence vibration of the C-O-C acetoxy group was observed, and in the region of 3002-2963 cm^{-1}, the valence vibration of the CH group in the aromatic compound was observed. 1505-1406 cm^{-1} band C=C bond vibration of the aromatic ring, 1308 cm^{-1} symmetric deformation vibration of the methylene group, 1021 cm^{-1} complex ether bond asymmetric vibration vibration, 737 cm^{-1} plane of the ortho-substituted benzene ring deformation vibration was shown. At 1768 cm^{-1}, the valence vibration of the C=O bond in the carbonyl group appeared, and in the transition region of 1505-1597 cm^{-1}, absorption lines appeared in the vibration of the aromatic ring skeleton. The deformation vibration of the C-H bond in the methylene group (δ_{C-H}) is observed at 1447 cm^{-1}. In monochlorinated alkyl- and aryl halides, valence vibrations of the C-Cl bond produced moderate vibrations of intensity in the region of 812-559 cm^{-1}.

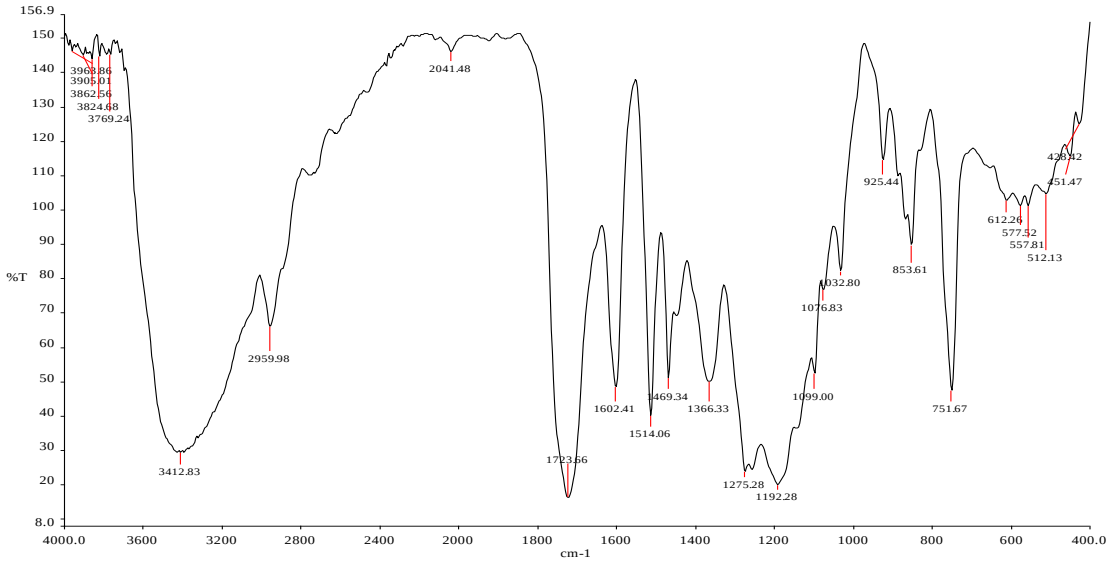


Figure 2. IR spectrum of sodium 1,2-phenylene (carboxymethylene) citrate

It can be seen from the IR spectrum of sodium 1,2-phenylenedi (carboxymethylene) citrate in Figure 2 that due to the presence of a benzene ring in the molecule, the valence vibration of the C-H bond in the aromatic ring ($\nu_{c\text{-}н\ arom.}$) is in the region of 2959 cm^{-1}, C=C bond valence vibration 1514-1602 cm^{-1} in the middle region and deformational vibration of the C-H bond ($\delta_{c\text{-}н\ arom.}$) in the weak region 751 cm^{-1} (1,2-exchange) are observed. The valence vibration of the carbonyl group of substances ($\nu_{C=O}$) can be seen at 1723 cm^{-1}. Valence vibrations of the ether bond ($\nu_{C\text{-}O\text{-}C}$) 1275-1192 cm^{-1} are observed. The asymmetric valence vibration of the complex ether group gives a vibrational line in the weak field at 1099 cm^{-1}. The valence vibration of the C=C bond in the aromatic ring is observed in the intense region of 1469 cm^{-1}. In the 1366 cm^{-1} region, the deformation vibrations of the C-H bond in the methylene group are revealed. In the region of 3412 cm^{-1}, the valence vibration of the hydroxyl group formed by an intermolecular hydrogen bond is shown.

Conclusion. When pyrocatechin was in a ratio of 1:2.2 mol with chloracethyl chloride, the reaction yield was high; and in a ratio of 1:2, a decrease in the reaction yield was justified by an increase in the amount of pyrocatechin. Oxycislota-citric acid has been shown to be formed as a result of nucleophilic exchange reactions with the corresponding compound ether 67% productivity.

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UDC: 681.5

DEVELOPMENT OF AN AUTOMATED SYSTEM FOR MANAGING THE ACTIVITIES OF THE UNIVERSITY DEPARTMENT

Abdullayeva Ozoda Safibullayevna
Phd, Professor, Namangan
Engineering-Construction institute,
aspirantka.030@gmail.com

Annotatsiya: Ushbu maqola OTM kafedra faoliyatini boshqarish uchun mo'ljallangan avtomatlashtirilgan tizim bo'yicha ma'lumotlar taqdim etildi. Tizim turli ma'muriy vazifalarni, jumladan, rejalashtirish, resurslarni taqsimlash va aloqani tartibga solish va optimallashtirishga qaratilgan. Tizim samaradorlikni oshirish uchun sun'iy intellekt va ma'lumotlar tahlili kabi ilg'or texnologiyalardan foydalanadi. Maqolada tizimning asosiy xususiyatlari, afzalliklari va amalga oshirish jarayoni haqida umumiy ma'lumot berilgan. Umuman olganda, maqolada oliy ta'lim muassasalaridagi avtomatlashtirilgan tizimlarning transformatsion salohiyati ta'kidlangan.

Kalit so'zlar — axborot tizimi, dizayn, algoritmlar, modellar, boshqaruv tizimi.

Аннотация: В данной статье представлена автоматизированная система, предназначенная для управления деятельностью кафедры университета. Целью системы является упрощение и оптимизация различных административных задач, включая планирование, распределение ресурсов и связь. Система использует передовые технологии, такие как искусственный интеллект и анализ данных, для повышения эффективности и результативности. В статье представлен обзор ключевых особенностей, преимуществ и процесс внедрения системы. Кроме того, в нем обсуждается потенциальное влияние системы на общую производительность кафедры. В целом в статье подчеркивается преобразующий потенциал автоматизированных систем в высших учебных заведениях.

Ключевые слова: информационная система, проектирование, алгоритмы, модели, система управления.

Abstract: This article presents an automated system designed to manage the activities of a university department. The system aims to streamline and optimize various administrative tasks, including scheduling, resource allocation, and communication. The system leverages cutting-edge technology, such as artificial intelligence and data analytics, to enhance efficiency and effectiveness. The article provides an overview of the system's key features, benefits, and implementation process. Additionally, it discusses the potential impact of the system on the department's overall productivity and performance. Overall, the article emphasizes the transformative potential of automated systems in higher education institutions.

Keywords— information system, design, algorithms, models, management system.

Introduction. An automated system for managing the activities of a university department is a software-based solution designed to streamline and optimize various

processes and tasks within the department. This system can encompass a wide range of functions, including student enrollment and registration, course scheduling, faculty and staff management, academic advising and support, budgeting and financial management, and reporting and analytics.

Literature review. Scientific research aimed at solving the problems of digitalization of the educational system and improving educational processes in higher educational institutions is carried out in the following leading scientific centers and higher educational institutions in the world: American Management Association, the University of Chicago (USA); University of Sheffield (UK); University of Hildesheim (Germany), the University of Deusto (Spain); University of Tours, the Employers' Association (France); University of Edinburgh (Scotland); University of Groningen (Netherlands); University of Tokyo (Japan), Seoul National University (South Korea); at the Research Center for Problems of Quality of Training of Specialists at M. Lomonosov Moscow State University (Russia), St. Petersburg State Electrotechnical University "LETI" (Russia) [1,6,7,11,12,14].

Research Methodology. Such a system can offer several advantages, including improved efficiency, reduced administrative workload, enhanced accuracy in data management, better coordination and communication within the department, and the ability to make data-driven decisions. It can also provide a more seamless experience for students, faculty, and staff, as well as enable greater transparency and access to information.

In addition, an automated system can help to minimize errors, reduce paperwork, and ensure compliance with regulatory requirements. It can also facilitate effective resource allocation, planning, and forecasting, ultimately contributing to the overall effectiveness and success of the department.

Overall, an automated system for managing the activities of a university department can greatly enhance operational processes and contribute to the department's overall productivity and success.

Developing an automated system for managing the activities of a department involves several key steps. The goal is to streamline processes, improve efficiency, and enhance overall productivity. Here is a general guide to help you with the development of such a system [2,3]:

1. Define Objectives and Requirements:

– Identify the specific activities and processes within the department that need automation.

– Define the objectives of the automated system, such as reducing manual errors, improving workflow efficiency, and providing real-time information.

2. Conduct a Needs Analysis:

– Assess the current workflows and identify pain points that can be addressed through automation.

– Gather input from department members to understand their requirements and challenges.

3. Select Technology Stack:

Choose the appropriate technology stack for your automated system, including the development platform, programming languages, and database systems.

4. System Design:

– Design the architecture of the automated system. Consider how data will flow through the system, the user interface design, and integration points with existing systems.

– Plan for scalability and future expansion.

5. User Interface (UI) Design:

Develop an intuitive and user-friendly interface. Consider the needs and preferences of the end-users to ensure high adoption rates.

6. Database Design:

Design a robust database schema to store and manage data efficiently. Consider data normalization and implement appropriate security measures.

7. Development:

– Start building the system based on the design and specifications.

– Use an iterative development approach, allowing for regular feedback and adjustments.

– Integration with Existing Systems:

– If applicable, integrate the automated system with existing tools or software to ensure seamless data flow and compatibility.

8. Testing:

– Conduct thorough testing of the system to identify and address any bugs or issues.

– Perform user acceptance testing (UAT) with department members to ensure the system meets their needs.

9. Deployment:

– Roll out the automated system in a controlled manner. Provide training to department members on how to use the new system effectively.

– Monitoring and Maintenance:

– Implement monitoring tools to track system performance.

– Establish a maintenance plan for regular updates, bug fixes, and improvements.

10. User Support and Training:

– Provide ongoing support to users and address any issues that may arise.

– Conduct regular training sessions for new features or updates.

11. Feedback and Continuous Improvement:

– Collect feedback from users and stakeholders to identify areas for improvement.

– Iteratively enhance the system based on feedback and evolving departmental needs.

– Remember, the development of an automated system is a dynamic process that requires collaboration and communication with all stakeholders throughout the entire lifecycle of the project.

Analysis and results. There are various informational models that can be used for an automated system to manage the activities of a university department. Some of these models include[4,5]:

– Data-driven model: This model focuses on using data analytics to gather and analyze information related to the activities of the department. It leverages data to make decisions, predict future trends, and optimize resources.

– Process-oriented model: This model emphasizes streamlining and automating the various processes within the department, such as scheduling, resource allocation, and communication. It aims to improve efficiency and reduce manual intervention in day-to-day activities.

– Communication-based model: This model prioritizes enhancing communication within the department through automated notifications, reminders, and collaboration tools. It aims to improve transparency and coordination among faculty, staff, and students.

– Resource management model: This model focuses on optimizing the allocation and utilization of resources, such as classrooms, equipment, and personnel, through automated scheduling and tracking systems.

– Decision support model: This model provides automated tools for decision-making processes within the department, using algorithms, machine learning, and artificial intelligence to assist in strategic planning and policy implementation.

– Each of these informational models can be tailored to the specific needs and objectives of the university department, providing a framework for the design and implementation of an automated system to effectively manage its activities.

– The data-driven model for an automated system managing activities is a system that uses large amounts of data to make decisions and manage various activities. This model relies on algorithms and data analysis to identify patterns, trends, and insights that can inform the system's decision-making processes.

– The data-driven model uses real-time data collected from various sources to optimize and improve the efficiency of the automated system. It can also adapt to changes in the environment or user behavior, allowing for more dynamic and responsive management of activities.

– This model is often used in fields such as logistics, manufacturing, and transportation, where the management of complex activities requires constant monitoring and adjustment. By leveraging data-driven insights, the automated system can improve its performance, reduce errors, and adapt to changing conditions more effectively.

– Overall, a data-driven model for automated activity management leverages data and advanced analytics to make intelligent, informed decisions and optimize the performance of the system.

To create a data-driven model for an automated system managing activities, you can follow these steps:

– Identify Objectives: Define the activities you want to manage and the goals of the automated system.

– Data Collection: Gather relevant data that will be utilized by the system. This could include past activity logs, user input, environmental data, etc.

– Data Preprocessing: Clean the data, handle missing values, and prepare it for analysis. This may involve data normalization, transformation, and feature selection.

– Model Selection: Choose an appropriate data-driven model for managing activities. This could include decision trees, neural networks, or other machine learning algorithms based on the specific requirements of the system.

– Training the Model: Use historical data to train the chosen model. This involves splitting the data into training and validation sets and then training the model on the training set.

– Model Evaluation: Evaluate the model's performance using the validation set. This step helps to ensure that the model is effectively capturing the patterns in the data.

– Integration: Integrate the model into the automated system, ensuring its ability to handle and respond to real-time data.

– Testing and Validation: Conduct tests to ensure that the system works as expected and validate its performance before deploying it into production.

– Monitoring and Maintenance: Once deployed, continuously monitor the system's performance and update the model as needed to ensure continued effectiveness.

– The process-oriented model of an automated system managing activities focuses on the automation and optimization of various business processes. This model typically involves identifying, analyzing, and improving the various processes within an organization to make them more efficient and streamlined.

In this model, the automated system manages activities by following predefined sequences of tasks, ensuring that each step is completed accurately and on time. It may also include the use of workflow management tools and technologies to streamline and coordinate the flow of work within the organization [8,9,10,14,15].

The process-oriented model emphasizes the importance of defining clear and standardized processes, as well as setting specific goals and performance metrics to measure the success of the automated system. This approach can lead to increased productivity, reduced errors, and improved overall performance within the organization.

Overall, the process-oriented model of an automated system managing activities is designed to bring structure and efficiency to the various processes within an organization, ultimately leading to improved productivity and overall performance.

The communication-based model of an automated system managing activities is a model that focuses on the interaction and communication between different components of the system. In this model, the automated system is designed to facilitate communication and coordination between the various activities it manages. This can include communication between the system and external stakeholders, as well as communication and coordination between different modules or components within the system itself.

The key features of the communication-based model include using standardized communication protocols, enabling real-time data exchange, and facilitating seamless integration with other systems and processes. By prioritizing communication and collaboration, the automated system can effectively manage and optimize a wide range of activities, from production scheduling to inventory management and customer relationship management.

Overall, the communication-based model emphasizes the importance of effective communication and coordination in the management of automated activities, ultimately leading to improved efficiency, accuracy, and responsiveness in the system's operations.

Conclusion/Recommendations. Resource management in an automated system involves the allocation, utilization, and optimization of various resources to ensure the smooth operation of activities. This model includes several key components:

– Resource allocation: The system assigns resources including people, equipment, and materials to specific tasks or projects based on availability, skills, and requirements.

– Resource utilization: The system monitors the usage of resources to ensure they are being efficiently utilized without any waste or overutilization.

– Resource optimization: The system continuously analyzes and adjusts resource allocation and utilization to optimize performance and minimize bottlenecks.

– Automated decision-making: The system uses algorithms and rules to make decisions related to resource allocation and management, reducing the need for manual intervention.

– Real-time tracking and reporting: The system provides real-time updates on resource utilization, allowing managers to make informed decisions and adjustments as needed.

Decision support model in an automated system managing activities is a tool that provides information and analysis to help the system make decisions. This model uses data and algorithms to evaluate different options and outcomes, and then provides recommendations to the system for making the best decision. This can help the system to optimize its activities, improve efficiency, and achieve its goals more effectively. Decision support models can be used in a variety of automated systems, such as supply chain management, resource allocation, and scheduling.

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THE MAIN AREAS OF TRAFFIC SAFETY

Xudayberganov Sakijan Kabildjanovich
Candidate of Technical Sciences, Professor,
head of the Department of
Railway Operations Management,
Tashkent State Transport University,
s.xudayberganov61@mail.ru
Maxkamov Olimjon Xamdamovich
PhD, docent, head of the center of training
and retraining of personnel at the
Toshket Railway Technical College,
DCPK2OO5@mail.ru
Ibragimova Gulshan Ruslanovna
PhD, docent of the Department of
Railway Operations Management
Tashkent State Transport University,
ibragimova.gulshana@mail.ru

Annotatsiya: Ushbu maqolada tashish jarayonida xavfsizlikni ta’minlash bo‘yicha temir yo‘l transporti xodimlarining asosiy vazifalari boshqarmalar bo‘yicha keng yoritib berilgan. Maqolada 2020 - 2022 yillarda “O‘zbekiston temir yo‘llari” AJ sodir etilgan harakat xavfsizligi holatlari keng ochib berilgan. Poyezdlar harakati xavfsizligi holati tahlili o‘tkazilib, so‘nggi yillarda umumiy qoidabuzarliklar kamayganini ko‘rsatgan.

Kalit so‘zlar: transport, temir yo'l, texnologik jarayon, poezdlar harakati xavfsizligi, xavfsizlik qoidalarini buzish, nazorat qilish, holatni tahlil qilish, oldini olish.

Abstract: This article describes in detail the main tasks of railway transport workers to ensure safety during transportation by department. The article widely discloses cases of traffic safety violations committed by Uzbek Railways JSC in 2020-2022. An analysis of the state of train safety has been carried out, which shows that the total number of violations has decreased in recent years.

Keywords: transport, railway, technological process, train traffic safety, security violations, control, condition analysis, prevention.

Аннотация: В данной статье подробно описаны основные задачи работников железнодорожного транспорта по обеспечению безопасности в процессе перевозок по подразделениям. В статье широко раскрыты случаи нарушения безопасности движения, совершенные АО «Узбекские железные дороги» в 2020-2022 годах. Проделан анализ состояния безопасности движения поездов по которому видно, что общее количество нарушений за последние годы снизилось.

Ключевые слова: транспорт, железная дорога, технологический процесс, безопасность движения поездов, нарушения безопасности, контроль, анализ состояния, профилактика.

Introduction. The safety of train movement is one of the main indicators in evaluating the activity of railway transport [1].

The level of ensuring the safety of train traffic is an important indicator and the main factor for improving the stable operation of railway transport, the organization of passenger and cargo transportation. As a result of its violation, people's life and health are at risk, the state is caused a large amount of material damage, the cargo becomes unusable, and expensive technical means fail [2].

Material and research methods

In table 1 presents statistical comparative information on the amount of damage resulting from traffic violations for the period 2020-2022.

table 1.

State of train traffic safety 2020-2022.

Violation of train traffic safety	Name of farms								Amount of damage
	D	P	Sh	E	T	V	PDP	Total	
2020	7	3			5	1	14	30	111 201 590
2021	8	3	1		6	1	11	30	142 786 893
2022	4		2	1	8	2	12	29	41 128 424
Total	**19**	**6**	**3**	**1**	**19**	**4**	**37**	**89**	**295 116 907**

PDP – Enterprises subordinate to the road (road enterprises)

Road enterprises

Name of farms	**for a period of 3 years**			
	2020	2021	2022	Total
L	2		3	5
WC Uzbekistan	10	8	6	24
TVSRZ			2	2
Vr		1	1	2
TRZ	1	1		2
Shargunkumir		1		1
Subway	1			1
Total	**14**	**11**	**12**	**37**

The main areas of emergency prevention systems on railways

The safety of train movement is ensured by keeping all railway facilities, track, traffic structure, signaling and communication equipment, mechanisms, and devices in constant condition [3].

Ensuring traffic safety depends not only on the correct implementation of the transportation process, but also on the safety and stability of the process [4].

The cases of traffic safety violations testify to non-observance of technological process regulations, insufficient level of professional training of the direct participants in the transportation process, and the insufficient level of the system of requirements for the implementation of technological process and planned-precautionary works [5,6].

It is necessary to establish measures to improve the level of knowledge of the direct participants of the transportation process, the technology of repair and use of technical equipment, to teach all employees of the society the requirements of traffic

safety, and to improve the control of official tasks related to the search for new forms of labor stimulation [7].

The analysis of the state of train traffic safety shows that the total number of violations has decreased in recent years, but violations of the basic traffic safety rules are still observed as a result of the human factor, and insufficient measures have been taken on the ground to organize preventive work to prevent incidents [8].

Implementation of the society's development strategy requires changing approaches to the organization of train traffic safety, introducing a set of measures that ensure flawless operation and mutual cooperation of all management bodies and structural units of society.

The following should be defined as the main tasks for ensuring safety during transportation:

in the units of the transport organization

to improve the program of equipping stations with modern devices in order to prevent the occurrence of non-standard situations by all employees related to the quality of monthly commission inspections, violations of traffic safety and the movement of trains, implementation of the work performed in compliance with the rules of technical safety;

in the units of the locomotive industry

ensuring the safety of train traffic and strengthening production discipline, strengthening control over the quality of locomotive repair and technical service, as well as organizing individual work with drivers and their assistants to control the train brake system, control over the implementation of labor protection and technical safety rules by train crews moving on the route, at the turning points of depot locomotives strengthening;

in wagon economy units

improving the work of wagon maintenance stations, improving the quality of technical training of trains, carrying out planned types of wagon repairs with the effective use of inspection and testing tools, modern information strengthening control over moving trains based on the use of technologies and technical means;

in road units

strengthening control over the repair of the road surface, using mechanized road vehicles and the help of specialized large brigades in the course of current operation, full compliance with the repair technological process, rail breakage, etc. effective use of rail inspection devices in order to identify cases in advance, pay attention to labor protection in the course of repair work;

in automation, telemechanics and communication departments

Ensuring flawless operation of technical equipment at centralization posts of autoblocking, electric centering and sorting hills, timely repair of signaling devices, increasing the reliability of all SCB (signalization, centralization and blocking) equipment, checking the reliability of rolling stock check devices, modernizing railway SCB devices;

in power supply units

ensuring the reliability of power supply devices that ensure flawless movement of high-speed electric trains and freight trains, strict adherence to technological processes and rules.

in logistics, cargo and commercial work units

prevention of overloading of wagons beyond their carrying capacity, acceptance of goods for transport with commercial failures and violation of loading schemes;

in passenger transport units

improving the quality of passenger train preparation, compliance with the rules for the repair of components of passenger cars, unconditional guarantee of the safety of life and health of passengers organization of uniform technical inspections for, as well as increasing the comfort of passenger trains.

In places, the role of the first head of the enterprise, who organizes the system and becomes the organizer and leader, respectively, is important in this matter.

Leaders should work with personnel in a specific goal-oriented way, prepare them for work (rest) before the shift, and pay special attention to their work skills during the work process.

Preventive work aimed at preventing unpleasant situations should be based only on in-depth study of the technological process of the industry, guidelines, rules, regulatory documents.

Results and discussion

Traffic safety in railway transport is ensured by the following set of preventive measures:

1. Staffing and placement of personnel in accordance with established standards for the number of employees and professional requirements.
2. Vocational selection of candidates for positions related to the movement of trains.
3. Scientifically based labor organization and production management.
4. Strengthening labor and technological discipline, solving social problems.
5. Conduct periodic medical examinations of workers related to the movement of trains, as well as ensure that locomotive crews undergo pre-flight medical examinations for the purpose of maintaining health.
6. Organization of technical training of employees and improvement of their qualifications, development of practical skills in non-standard situations.
7. Carrying out periodic knowledge tests of employees related to the movement of trains on the knowledge of (rules of technical use), other regulatory documents and job instructions.
8. Analysis of the traffic safety situation, identification of "problems", development and implementation of measures to eliminate them.
9. Regularly conduct unannounced inspections (including night inspection) of the performance of employees related to train movement and shunting operations.
10. Conduct weekly traffic safety days.
11. 11. Wide use of forms of financial and moral incentives to ensure traffic safety, as well as application of financial responsibility for damage caused by a defect, accident or accident.
12. Conducting inquiries on each case of violation of traffic safety with

analysis of the results in the prescribed manner.

1. By qualitatively analyzing the operational work on a daily basis, conducting an inquiry in case of malfunctions in the operation of technical equipment and taking prompt measures to eliminate train delays and their causes.
2. Carrying out continuous work on the improvement of the quality of maintenance and repair of railway tracks, artificial structures, locomotives, wagons, signaling and communication devices, power supply, railway crossings and other technical means.
3. Quality maintenance of defectoscopy equipment, effective use of defect detection and diagnostic systems.
4. Carrying out in accordance with the approved schedule of checking the condition of signaling devices and safety devices (ALSN, KTSM, DISK, radio communication and others) taking measures to eliminate the identified deficiencies.
5. Continuous work on the creation and implementation of new devices, safety devices and diagnostic systems implemented in the state program and existing practice in the field.
6. Certification of technical means of railway transport and licensing of production activities of enterprises for their repair.
7. Conducting audits of farms and enterprises and inspections of regional railway junctions within the specified periods.
8. Results of inspection of spring and autumn technical equipment, studying the level of preparation of farm employees for transportation in winter and summer periods.

Implementation of complex organizational and technical measures for the prevention of particularly dangerous violations, and first of all:

a) crossing prohibitory signals;
b) to protect the vehicles locked in the stations from their spontaneous escape and not complying with the procedure for receiving and sending trains, especially passengers and wagons loaded with dangerous goods;
c) dispatch of trains with the last closed valves of the braking system, as well as acceptance for transportation of wagons loaded more than the specified norm;
d) non-observance of the rules of maintaining clear roads and blocking dangerous places for train traffic during work with signals;
e) not to limit the speed of trains in sections that do not guarantee their safe passage at the specified speed according to the road condition;
f) collision with vehicles at intersections.

9. Search and implementation of new forms of organization of traffic safety.
10. Generalization and dissemination of accident-free experience.

Conclusion

The system of ensuring the safety of train traffic, which has been empirically established as a result of the use of railways for many years, affects the aspects of management along with the maintenance of technical components - infrastructure, traffic structure. Management aspects include control of activities, investigation of violations of traffic safety, distribution of responsibility, material supply, etc. enters.

As in any system, the human factor is important in the traffic safety system. In order to reduce the number of personnel errors, it is necessary to improve their training methods and produce new technical tools that prevent human errors, as well as complete and high-quality implementation of the above-mentioned preventive works.

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ANALYSIS OF THE TRANSPORT LOGISTICS SYSTEM IN UZBEKISTAN ACROSS REGIONS

Rajabov Fayzullakhon Odiljon ugli
Independent researcher of the Public Safety of the Republic of Uzbekistan University
Rajabov_F@mail.tu

Annotatsiya: Maqolada transport logistika tizimining rivojlanish tarixi, holati ko‘rib chiqiladi. Mamlakatimizda hududlar kesimida transport-logistika tizimi tahlil qilingan. Milliy transport tizimini takomillashtirish borasida transport-geografik muhitining omillari atroflicha yoritilgan.

Kalit so‘zlar: Logistika, transport-logistika tizimi, avtomobil transporti, temiryo‘l transporti, transport infratuzilmasi, integral ko‘rsatgich.

Аннотация: В статье рассматривается история и состояние развития системы транспортной логистики. В нашей стране транспортно-логистическая система проанализирована в разрезе регионов. Подробно освещены факторы транспортно-географической среды, влияющие на совершенствование национальной транспортной системы.

Ключевые слова: Логистика, транспортно-логистическая система, автомобильный транспорт, железнодорожный транспорт, транспортная инфраструктура, интегральный показатель.

Abstract: The article examines the history and state of the development of the transport logistics system. In our country, the transport logistics system has been analyzed in terms of regions. The factors of the transport-geographical environment regarding the improvement of the national transport system are covered in detail.

Keywords: Logistics, transport-logistics system, road transport, railway transport, transport infrastructure, integrated indicator.

Introduction. In the current era of globalization, the life of society cannot be imagined without the movement of vehicles. Modern science and technology have connected all continents through road, rail, and air transport. It is known from the experience of developed countries that have a place in the world economy that achieving global competitiveness and entering world markets, first of all, consistent economic reform and structural changes are all related to the development of transport infrastructure [1;2].

In the world is prestigious scientific and research institutions, including the “Institute of Historical Research” in England, the “Institute of Road and Bridge Construction in Paris” in the capital of France, and the “Institute of Transport and Political Development” in the USA several research works are being carried out regarding its place in the processes and its prospects [2;3;4].

In recent years, great attention has been paid to the development of transport infrastructure in all regions of our country, the provision of quality services to the population, and the implementation of international transport routes.

Literature review. President of the Republic of Uzbekistan

Sh.M. Mirziyoyev in 2023 paragraph 53 of the "Uzbekistan – 2030" strategy, approved by Decree No. PD -158 dated September 11, defined the specific program "To deepen the integration of the Republic of Uzbekistan into global transport and logistics networks and increase the potential of the national transport system"[3]. According to the strategy:

- To increase the volume of transportation of transit goods through the territory of the Republic to 16 million tons;
- 40% reduction of freight transportation times by railway in the northern direction;
- 3 times the volume of passenger and cargo transportation services;
- Increase the share of electrified railways to 65%;
- Increase the number of flights by 4 times;
- Construction and repair of 56,000 kilometers of roads;
- Transition to market principles in the formation of tariffs for passenger and cargo transportation services in railway and air transport and attracting private and foreign operators to the sector;
- Construction of a total of 5,500 kilometers of cement-concrete paved roads from district centers to rural settlements;
- Construction of new high-speed railways on the Tashkent-Samarkand, Samarkand-Navoi-Bukhara routes, increasing the number of passengers on high-speed trains by 2.5 times;
- Modernization and trust management of inefficient regional airports on the basis of public-private partnerships;
- Modernization of 6 major airports of the republic, including on the basis of public-private partnership, and increasing the number of private airlines to 10;
- Introducing the "Open Skies" mode with strategic partners at all airports, increasing the republic's air fleet to 100.

In our country, ensuring the mutual integration of regions according to the geographical location of the transport system is considered as an important issue. For this reason, attention is being paid to the further development of scientific approaches to economic geographical research, modeling, and forecasting of the regional organization of transport systems [4;5;6].

Research methodology. In the years of independence, the volume of road transport has been gradually increasing since 1996 [7;8;9]. This had a positive effect on the increase of the share of vehicles in total cargo transportation. In fact, during the period 1991-2017, the share of road transport in the total cargo transportation reached 88.4% from 67.8%[4].

The implementation of many projects aimed at the development of road transport infrastructure in our country required the development of a methodology of integral indicators for assessing the provision of road transport infrastructure:

[3] O'zbekiston Respublikasi Prezidentining 2023-yil 11-sentabr kunidagi PF-158 son Farmoyishi.
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The highest indicator	Average indicator	Low indicator
Syrdarya 97.37% Jizzakh 46.19% Namangan 44.75 %	Ferghana 39.86% Khorezm 36.78 % Samarkand 35.13% Bukhara 34.92% Andijan 34.69% Karakalpakstan 35.20%	Kashkadarya 30.07% Tashkent 27.40% Navoi 18.91 % Surkhandarya 17.81%

Table 1. Integrated indicators of the assessment of the provision of automobile transport infrastructure in Uzbekistan.

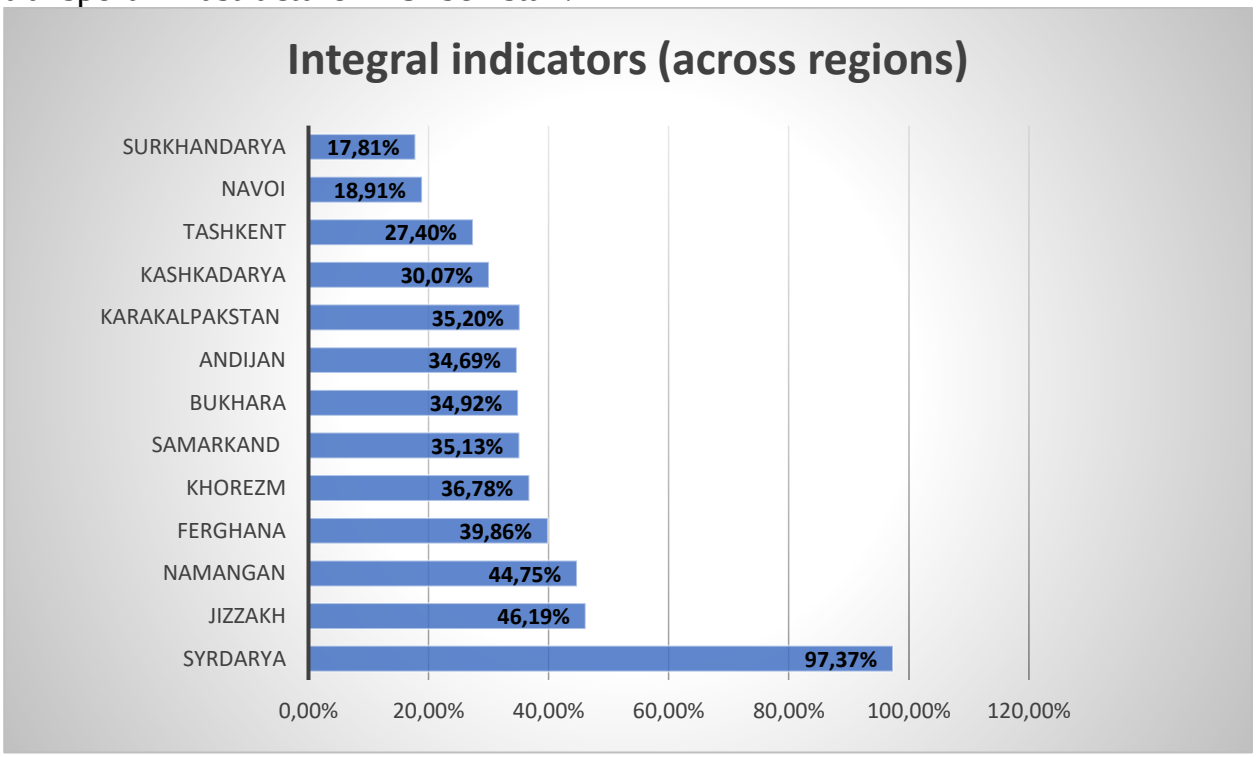

Figure 1. Integrated indicators of the assessment of the provision of automobile transport infrastructure in Uzbekistan.

These indicators make it possible to identify regions with good, average and poor access to roads. These regions are characterized by relatively small area and high indicators of population density, GNP (Gross Territorial Product), density of highways [9;10].

Analysis and results. Compared to other types of transport, railway transport in our republic is characterized by the low cost of transportation, its operation at any time of the year, and the ability to transport large volumes of cargo. In addition, when rail transport is electrified, it becomes the cleanest form of ecological transport compared to other forms of transport. These factors prove that railway transport will remain the main means of transport in our country in the coming years.

In terms of the volume of cargo transportation, railway transport takes second place after road transport. We can observe that the volume of cargo transportation in railway transport in our republic has decreased by almost 1.7 times over the last 25 years [10;11].

The geopolitical situation of our republic, the diversity of natural resources and production conditions, and the need to ensure a balance between them and the regions require the formation of a transport-logistics system that ensures the flow of products at the level of our country and regions [11;12]. In particular, the level of development of production forces, the country's specialization in domestic and foreign markets, and the methods and mechanisms of the formation of the transport and logistics system in the country have an impact on them. In foreign countries, the transport-logistics system is developing mainly on the basis of the transport system of large and medium-sized cities, i.e. growth poles, as well as cities.

The development of transport and logistics systems in Uzbekistan is directly influenced by the level of economic development and geographical location of some regions. In recent years, we can show only Tashkent city, Navoi, and Tashkent regions as indicators of high level of economic development. Due to the convenient transport and geographic location, high demographic potential, and the development of industry, these regions became the owners of high incomes and the rapid development of the transport and logistics system.

Also, in the development of the regional structure of the transport system, it is important to take into account the density of road and railway transport by region. The existence of differences in the density of hard-surfaced cars and railways connecting the regions can be attributed primarily to natural and geographical factors. If the territory of the Republic of Karakalpakstan, Navoi and Bukhara regions is explained by the size, the territory of Andijan, Fergana, Namangan and Syrdarya regions is explained by the smallness. In regions with a large area and low density of roads and railways, the transport capacity of GNP (Gross Territorial Product) is much higher, and this, in turn, contributes to their stable socio-economic development, and regional distribution of productive forces. There is a negative effect on the improvement of content and effective deployment.

Conclusion. The role of road transport is constantly increasing. The fact that the indicators of the road transport type have increased by 11 times in the cargo turnover shows the position of this type of transport. The greater the share of the regions in the GDP (Gross Domestic Product), the greater the impact on indicators such as the volume of goods transported in road transport and freight turnover. Based on this, in the development of the infrastructure and activities of road transport, the main attention should be paid to the regions with a high share of the GDP.

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CHANGE THE CONTRAST OF AN IMAGE BY PROCESSING INFORMATION

Eshonqulov Sherzod Ummatovich
associate professor at
Jizzakh Polytechnic Institute
eshonqulov@mail.ru

Annotatsiya: Kontrastni sozlash - bu fotografiya, kompyuter ko'rish, tibbiy tasvirlash va masofadan zondlash kabi turli sohalarda keng qo'llaniladigan tasvirni yaxshilashning asosiy usuli. Tasvirning kontrastini o'zgartirish qobiliyati uning vizual sifatiga va mazmunli ma'lumotlarni olish qobiliyatiga sezilarli ta'sir ko'rsatishi mumkin. Ushbu ilmiy maqolada biz ma'lumotlarni qayta ishlash orqali tasvirning kontrastini o'zgartirish usullari va tamoyillarini o'rganamiz.

Kalit so‘zlar: Chegara, tasrvir sohasi, fotografik va televizion tasvirlar, mediana usul, ketma-ketlik tasvirlarga ishlov berish, grafik ko‘rinishi, Tasvirlarga sonli ishlov berish va tahlil etish.

Аннотация: Настройка контрастности — это фундаментальный метод улучшения изображения, широко используемый в различных областях, включая фотографию, компьютерное зрение, медицинскую визуализацию и дистанционное зондирование. Возможность изменять контрастность изображения может существенно повлиять на его визуальное качество и способность извлекать значимую информацию. В этой научной статье мы

исследуем методы и принципы изменения контрастности изображения путем обработки информации.

Ключевые слова: Граница, поле изображения, фото- и телевизионные изображения, медианный метод, последовательная обработка изображений, графическое отображение, численная обработка и анализ изображений.

Abstract: Contrast adjustment is a fundamental image enhancement technique widely used in various fields, including photography, computer vision, medical imaging, and remote sensing. The ability to alter the contrast of an image can significantly impact its visual quality and the ability to extract meaningful information. In this scientific article, we explore the methods and principles behind changing the contrast of an image by processing information.

Key words: Boundary, image field, photographic and television images, median method, sequential image processing, graphic display, numerical processing and analysis of images.

Introduction. The realm of digital image processing has continually evolved, reflecting advancements in technology and an increasing demand for enhanced visual information. Among the various processes within this field, the alteration of image contrast stands out as a fundamental and impactful operation. Image contrast, fundamentally, refers to the difference in luminance or color that enables the distinction of objects within an image. In numerous instances, digital images inherently suffer from suboptimal contrast due to a range of factors such as inadequate lighting conditions during capture, limitations inherent to imaging sensors, or issues arising during the transmission of digital information. Such limitations often result in images that are either too bright or too dark, lacking in detail, or exhibiting poor visibility in certain areas. As a result, contrast enhancement becomes a critical step in not only improving the aesthetic appeal of an image but also in augmenting its utility for further processing and analysis.

The necessity for effective contrast enhancement is evident across a diverse array of applications. In medical imaging, for instance, the ability to discern subtle differences in tissue structures can be a crucial factor in accurate diagnosis and treatment planning. Similarly, in satellite imagery and remote sensing, enhanced contrast is key to accurately identifying geographical features and assessing environmental changes. Even in the realm of consumer photography, contrast enhancement plays a pivotal role in ensuring that captured memories are visually pleasing and clear.

Literature Review

The field of image contrast enhancement has been a subject of extensive research, with numerous methodologies being developed and refined over the years. This section reviews the significant contributions in the literature, focusing on the theoretical advancements and practical implementations of various contrast enhancement techniques.

Early works in the field of digital image processing laid the groundwork for contrast enhancement. Gonzalez and Woods (2002) provided a comprehensive introduction to the basic concepts of image processing, including contrast

manipulation. Pratt (2001) further elaborated on the importance of contrast in visual perception and its role in image processing.

HE has been a focal point in contrast enhancement literature due to its simplicity and effectiveness. Pizer et al. (1987) introduced Adaptive Histogram Equalization (AHE), highlighting its advantages in medical imaging. Stark (2000) proposed the concept of Adaptive Contrast Enhancement (ACE), an extension of AHE, which dynamically adjusts the contrast based on local content.

The use of logarithmic transformations for contrast enhancement was explored by Jobson et al. (1997), who developed the Retinex theory-based methods for improving image contrast while preserving naturalness. Subsequent research by Rahman et al. (2004) introduced Multi-Scale Retinex (MSR) for color image enhancement, offering improvements in dynamic range compression and color consistency.

The work by Hall (1977) on contrast stretching provided a foundational approach for linear and non-linear stretching methods. Recent studies have focused on optimizing these techniques for specific applications, such as satellite imagery and underwater imaging.

Research methodology. Experiments have shown that photographic and television images with distinct boundaries are better perceived by people than natural scenes where colors blend seamlessly. This feature and the problems of removing interference in the form of border spreading in the image put the problem of border enhancement, that is, increasing the difference between the background and object lights, in front of automated image processing.

Methods for solving this problem are widely used in image processing [4].

Usually, the threshold is increased using high-pass filters:

$$A_1(m,n)q\begin{vmatrix} 0 & -1 & 0 \\ -1 & 4 & -1 \\ 0 & -1 & 0 \end{vmatrix};\quad A_2(m,n)q\begin{vmatrix} -1 & -1 & -1 \\ -1 & 8 & -1 \\ -1 & -1 & -1 \end{vmatrix};\quad A_3(m,n)q\begin{vmatrix} 1 & -2 & 1 \\ -2 & 4 & -2 \\ 1 & -2 & 1 \end{vmatrix};$$

it can be seen that the working masks of these filters have an average value of zero, that is, the sum of the negative and positive values in the mask is equal to (or close to) zero. This is because masking should produce a zero result for a homogeneous field and a non-zero result for a boundary field (property of the 2nd-order derivative).

Another way to increase the boundary area is statistical subtraction. In it, the value of each element is divided by the statistical estimate of the mean square deviation: $g_{ij}q\, f_{ij}/\sigma(i,j)$.

The mean square deviation $(i,j)q\sum_i\sum_j[f_{ij}-\overline{f}_{ij}]^2, i, j \in N(i, j)$ is calculated around a coordinate point N(i,j). f ij- is the average light value estimated by low-pass filtering of the source image at point (i,j). The enhanced image G(i,j) differs from the source image in that the values in the boundary areas are large and in other areas are small. There are many other methods of border strengthening that take into account different conditions [5].

In recent years, filtering with the median method, which is a non-linear method, has been widely used in image processing.

This method is included in the classic process of smoothing (linear filtering) and has the following advantages:

1) a sharp difference in field illumination is preserved in border areas;

2) scattered point solutions are effectively smoothed [6].

Results and analysis. The essence of this method is to move through the image with a window, and the value of the center point is replaced by the value that appears when the values in the window are sorted by size. That is, if 3x3 in the center of the window 5, next to two 35,40 values 1,41,52 above them and 23,17,89 below, we will sort them: 1,5,17,23,35,40,41,52,89. The Center value(median) is 35, instead of 5 it is written 35: g(m,n)qmed(f(x,y)), where W(m,n)q(x,y) is the value of the dacha in the Center W (m,n), f (x, y) is the value of the points in the same dacha. The result is a long flattened Window [7].

The result of this method largely depends on the surface (or, more precisely, the number of points in it) and the value of the cinnamon, for a two-dimensional cinnamon The Shape of the cinnamon (rectangle, triangle, ring, cruciform, circle, square, etc.) is also of great importance. It is often worked with square windows of size (kQ1)x(k-1), k is even and a positive number. Median method is more effective in eliminating local (spurious) disturbances. Objects whose size matches the filter size are completely lost. For example, an array consisting of three consecutive points in a line is lost using a 1x7 window filter, that is, using a window of size 1x(2kQ1), it is possible to completely remove (1<k) arrays of size 1x1, if 1>k the interference does not change. In addition, the median method does not change the background points [8].

From a note, if the light of the interfering point being seen at the center of the window is a1 (suppose background a<A1 for clarity), the sequence of the window points ordered according to the value increase is a0, a1,.....,A1, and from there a number of lights t1, A1 the number of lights T2, then if $t_2 \leq 1 \leq k$, the vanishing points are completely lost, if t2>k and the vanishing points all lie on the same side from the center of the window, they remain unchanged.

Now we can see that the background points will not change. Let the background point be in the center of the window. If we say that the resolution points are scattered over the image, each window does not contain more than one resolution area (consisting of one or more points), so the center and either the right or the left half of the window consist of background points ($t_2 \geq kQ1$), and as a result, they remain unchanged [9].

For a two-dimensional window, the situation is slightly different. The fact is that the median method can miss a part of the object that is much larger than the window size k. But the "background" points consist of a portion of elements near the boundary of the object, usually corner points.

At the same time, if the number of distortion points is $i \leq 1/2\ (2kQ1)^2$ and the distortion area is not larger than half of the window area, this distortion is lost.

Median filtering removes $i \leq 2(k^2Qk)$ dots (or objects) and no more than k rows or columns. The number of object (destruction) elements in the window is not less than $2k^2Q2kQ1$ will remain unchanged. The reason we say this is that a window can always have either only background points, or background and single object destruction points.

If the grid consists of $i \leq 2(k^2Qk)$ points, the window cannot intersect with these points more than $2(k^2Qk)$. $2(k^2Qk)$ is less than half of the window area. If the domain intersects $t \leq k$ lines, then each window contains (kQ1) different line segments that do not intersect the domain.

Although these discussions are given for the case where the background and the object are homogeneous, they are also relevant for natural phenomena of random events [10].

Conclusion. In threshold selection methods, various errors may occur when creating an image in the memory of an electronic calculator. This can be caused by the movement of the camera, the lens, the shortcomings of the photographic equipment, the movement and changes in the atmosphere, and the shortcomings of the tools during the transfer of the image to memory.

As a result, interferences are formed in the form of spread of borders on the images, a decrease in the level of mutual differentiation of areas, information distortion in some parts, or the appearance of scattered spots on the images. Of course, this situation complicates image analysis and sometimes leads to big errors. So, when processing images, first of all, it is necessary to make them free of impurities or to reduce their influence on the result of the next steps. This process is called image enhancement.

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FEATURES OF THE FORMATION OF SUFI IDENTITY IN THE WEST

Muminov Nozim Naimovich
Senior Lecturer at the Department of Humanities and Information Technologies of Samarkand State Institute of Foreign Languages (Uzbekistan)
azamatazim@gmail.com

Annotasiya: Maqolada G‘arbda so‘fiylik o‘ziga xosligi shakllanishining turli jihatlari ko‘rib chiqiladi. Maqola 2002 va 2010 yillarda AQShda olib borilgan tadqiqotlarga asoslangan. Tadqiqot JFDP va RSEP dasturlari doirasida o‘tkazildi va so‘fiylikni G‘arb kontekstida o‘rganishga qaratilgan**.**

Asosiy tushunchalar:
O'ziga xoslik, ruhiy amaliyotlar, tashabbuslar, madaniy o'zgarishlar, madaniyatlararo muloqot, o'z-o'zini identifikatsiya qilish.

Аннотация: В статье рассматриваются различные аспекты формирования идентичности суфиев на Западе. Материалы статьи основаны на исследованиях в США в 2002 и 2010 годах. Исследование было сосредоточено на изучении суфизма в западном контексте в рамках RSEP и JFDP программ.

Ключевые понятия: идентичность, духовные практики, инициация, культурная трансформация, межкультурная коммуникация.

Annotation: The article examines various aspects of the formation of Sufi identity in the West. The article is based on research in the USA in 2002 and 2010. The study was conducted as part of JFDP and RSEP programs and focused on the study of Sufism in a Western context.

Key concepts: identity, spiritual practices, initiation, cultural transformation, intercultural communication.

Introduction. The question of continuity between Eastern and Western Sufism is an important and complex aspect of the study of this spiritual tradition. Eastern Sufism, which comes from the historical and cultural context of the Middle East and Central Asia, has a long and rich history, replete with many wise and famous teachers such as Mevlana Rumi, Ibn Arabi, Jelalettin Lawrence and others. This Eastern Sufism, with its special rites, practices and teachings, represents a complex system of spiritual development and the search for union with the Divine.

The encounter between Eastern and Western cultures has influenced the development of Sufism in the West, giving rise to a unique form of Western Sufism. This Western Sufism incorporates elements of traditional Eastern Sufism and merges them with Western ideas, practices, and cultural influences. It adapts to the modern context and addresses the specific needs and perspectives of Western students and practitioners.

However, each Sufi student's life path is individual, and each master and student have their own unique relationship and mentorship. Continuity in Sufism is based on the transmission of spiritual knowledge and experience through oral teaching, personal mentoring and the example of a master.

Eastern and Western Sufism can coexist and interact with each other, transcending cultural and traditional differences. Continuity in Sufism occurs through personal connections, the oral transmission of knowledge, and profound spiritual practice. This transmission allows Sufism to transcend boundaries and cultural differences, bringing together students and masters from different parts of the world in their shared search for spirituality and truth.

Analysis of literature on the topic. These concepts and teachings are the basis of Sufi philosophy and permeate the mystical tradition of the East, including Uzbekistan. These concepts and teachings form the foundation of Sufi philosophy and are deeply ingrained in the mystical tradition of the East, including Uzbekistan. Sufism in Uzbekistan has been deeply influenced by these mystical concepts and teachings, shaping its unique expression within the cultural and religious landscape of the country. The understanding of the "perfect man," the unity of being, the self-manifestation of the Absolute, and the belief in emanations inform the practices and beliefs of Sufis in Uzbekistan, guiding them in their pursuit of spiritual enlightenment and union with the Divine. The rich Sufi heritage in Uzbekistan serves as a testament to the enduring significance of these teachings in the cultural and spiritual fabric of the country.

Orientalist scholars at times attempted to detach Sufism from its Islamic roots and ascribe Greek or Buddhist origins to it, leading to misinterpretations of this mystical phenomenon among Western readers [4:2]. Consequently, Sufism has been subject to mixed and sometimes incorrect interpretations within Western academic circles. However, in recent years, new research and a more objective approach have led to a more meaningful and accurate study of Sufism in the context of the Islamic tradition. Scholars are now engaging in a more nuanced and comprehensive examination of Sufism, recognizing its integral connection to Islam and its significant place within the broader Islamic spiritual tradition. This has helped to dispel misunderstandings and foster a deeper appreciation of Sufism as a fundamental aspect of Islamic spirituality.

At the end of the 19th and throughout the 20th centuries, Sufism began to spread from East to West, to the countries of Europe and North America. One of the pioneers of introducing the Eastern mystical tradition in the West is Helena Blavatsky (founder of the Theosophical Society in Europe and the USA in 1875). Her work explored and disseminated knowledge of Eastern religious and philosophical traditions, including Sufism, which greatly contributed to the interest and penetration of Sufi thought into Western culture and spirituality [7].

The West has faced a profound crisis characterized by psychological and spiritual imbalance, a topic acknowledged by many Western authors. In search of a resolution, some individuals have turned to practices involving trance states, with Sufi practice being one of them. The renowned Islamic scholar, William Chittick, has observed that Western society's interest in Eastern traditions stems from the hope of rediscovering lost spiritual resources. At first glance, it may seem that European and

American adherents are simply learning prayer techniques or engaging in ordinary dialogue during suhbat. However, in the post-industrial Western society, which is saturated with information and offers a vast array of consumeristic options, individuals seek something deeper and more meaningful [5:73]. They are looking for an inner transformative experience and a connection with their spiritual selves, which they believe can be found within Sufi practice. Sufi practices like dhikr (prayer) and suhbat (spiritual discourse) offer a path toward this transformation and provide a sense of solace and fulfillment in a world that can often feel lacking in spiritual depth.

Hazrat Inayat Khan, a prominent mystic and musician of the 20th century, explored the relationship between music and mystical doctrines. He highlighted the unique power of music to aid in concentration and meditation, surpassing the limitations of intellectual thought. According to Inayat Khan, music acts as a bridge between the tangible world of form and the realm of formlessness. Unlike poetry or visual arts, which create form, music itself does not possess a tangible form. Instead, it creates resonance through the vibrational touch of every atom in existence. Inayat Khan emphasized the transformative and transcendental potential of music in accessing deeper states of consciousness. [6:15]

Associate Professor of the Samarkand Institute of Foreign Languages M. Bozorov, analyzing the issue of the origin of Sufism, emphasizes that the essence and basis of Sufism are an Islamic phenomenon. He also emphasizes the importance of studying the emergence of Sufism in the context of socio-economic and political factors. Thus, M. Bozorov proposes a search for ideological sources related to these factors. [2:224]

Research methodology. The methods of comparative analysis, analysis and synthesis, comparison of conceptual theories, field ethnographic work, historicity, logic, succession, and systematicity were used in this study.

Analysis of results. In the 70s of the 19th century, Helena Blavatsky put forward two fundamental ideas: “the unification of all world religions into one teaching and the recognition of the East as a source of true wisdom, available here and now” [3:40]. This bold statement caused a significant response. During the 20th century, Europe and North America experienced three waves of interest in Sufism: 1910-1959, 1960-1969, and since the 90s. Migrants from the East and Europeans themselves not only taught and published books on Sufism, but also helped shape the idea of Islam as a widespread religion. They created Sufi schools and affiliated orders to make Sufism accessible to society.

Here are their names. Hazrat Inayat Khan, an Indian musician and sheikh of the Chishti order; Murshid Samuel L. Lewis, also known as Abd al-Qadir al-Sufi; Dr. Javad Nourbakhsh, a sheikh of the Iranian Nimatullahi order; Richard Field, an English sheikh of the Mevlevi Order; Kabir and Kamille Helmenskikh are the founders and leaders of the existing Sufi circle; Bawa Muhayuddin is a Sheikh of the Qadiri Order from Sri Lanka; Said Hussein Nasr; Muzafar Ozak is a sheikh of the Helveti Jirahi Order; Sheikh Muhammad Nazim al-Haqqani and Sheikh Hisham Kabbani important figures in the Naqshbandi order; Sheikh Muhammad Nazim al-Haqqani is renowned as the founder of the Naqshbandi; Irina Tviadi and Omar Ali Shah, noteworthy figures associated with the Naqshbandi Order in North America; Omar Ali Shah serves as the

representative of the Naqshbandi Order in North America, Babakh Subuh, a follower of the Naqshbandi order; E. J. Gold, founder of the Institute for the Development of Harmonious Man in Nevada City (California); Sheikh Taner Vargonen - Sheikh of the Kodiri Rifai Sufi order; Sharif Bey is a sheikh of the Marufi Rifai order [7:18]**.** They, as well as others, played an important role in the development and understanding of Sufism in the West.

According to Professor Alan Godlas from Georgia State University, Sufism in America can be categorized into three symbolic types: Islamic, semi-Islamic, and non-Islamic. This categorization is influenced by Western concepts such as colonialism, secularization, modernization, postmodernism, and Orientalism. Professor Carl Ernst from the University of North Carolina at Chapel Hill defines American Sufism as a "new Sufism" that is oriented towards the West [4:257]. In a modern and multicultural environment, Sufism in America is influenced and adapted to incorporate modern Western ideas and contextual factors. These influences shape the expression and understanding of Sufism within the American cultural and religious landscape.

Islamic modernists and Islamic fundamentalists had opposing views on Sufism. Islamic modernists like Muhammad Iqbal could be critical of Sufism and its relationship with Islam, seeing it as a "wrong" or "backward" teaching. On the other hand, Islamic fundamentalists could criticize Sufism for deviating from the strict implementation of Sharia and for what they considered “pagan” or “distorted” practices [1: 200].

Certainly, the maintenance of identity and continuity with the mother orders in the East is a crucial focus in understanding Western Sufism in the United States. The transmission of teachings and practices through generations, as well as the mentorship and personal connections between masters and students, play vital roles in preserving the essence and authenticity of Sufi teachings. The intercultural interaction in the West takes place through the promotion of Sufi teachings, lectures, publications, and the establishment of new Sufi schools and orders. These endeavors ensure that Western Sufism maintains a strong connection with the origins of mystical knowledge in the East and stays aligned with the core principles and practices of the tradition. By nurturing these connections, Western Sufism retains its continuity within the broader framework of Sufi teachings and practices across different cultural landscapes.

There is a rich diversity of institutional organizations and entities associated with Sufism in the United States. Various Sufi orders and brotherhoods, such as the Murabitun, Shadhili, Naqshbandi, Chishti, Yusufi, Kadriya Batshiya, Kadriya Rifai, Tizhani, Mevlevi, Rifai Marufi, and others, serve as important platforms for the practice and dissemination of Sufi teachings. Additionally, international organizations like the International Sufi Order and the International Sufi Movement contribute to the global outreach and networking of Sufi communities. Educational institutions and schools, such as the Golden Sufi Center and the Beshara School of Intensive Esoteric Education, provide avenues for deepening knowledge and understanding of Sufism in American culture. The presence of these organizations and institutions illustrates the dynamic and multifaceted nature of Sufism in the United States, demonstrating its ongoing spread, preservation, and significance within American society.

Conclusions. In conclusion, our research on identity motivation and the practice of Western Sufism allows us to trace the evolution and adaptation of this spiritual tradition in the context of a Western environment. We have found that Western Sufism acts as a bridge between the Eastern mystical tradition and Western culture. It provides an opportunity to explore the depths of spirituality and allows people of different religious and cultural backgrounds to gain identity and understanding about themselves and the world around them.

In my opinion, intercultural communication is a key factor in Western Sufism, where sheikhs, teachers and murids engage in dialogue and exchange of spiritual experiences, transcending boundaries and welcoming diversity. Space and language also play an important role in the formation and development of Sufi identity, enabling communication and knowledge sharing.

Overall, the identity and practice of Western Sufism reflects a complex and dynamic process of searching for meaning, harmony and spiritual development, combining the spiritual traditions of the East and Western values in the search for a deep understanding of the Divine.

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MUNIS KHORAZMIY IS A GREAT ENLIGHTENER

Zaripboyeva Umida,
Namangan State University
umidazaripboyeva629@gmail.com

Annotatsya. Mazkur maqolada Xorazm musiqa san'atining asoschilaridan biri, o'zining nodir ilmiy-tarixiy asarlari bilan Xorazm adabiy muhitida o'chmas iz qoldirgan yozuvchi va shoir Munis Xorazmiy, ijodi haqida ma'lumotlar berilgan.
Kalit so'zlar va iboralar. Xiva xonligi, Munis Xorazmiy, Qiyat, mirob, xattot, shoir, tarixchi Eltuzarxon, Muhammad Rahimxon I, Ollohxulixon, Navoiy, "Firdavs ul-Iqbol", "Savodi ta'ilim", "O'rnalar".

Аннотация: В данной статье представлены сведения о писателе и поэте, одном из основоположников хорезмийского музыкального искусства Мунисе Хорезми, оставившим неизгладимый след в литературной среде Хорезма своими редкими научно-историческими произведениями, и его творчестве.
Ключевые слова и фразы. Хивинское ханство, Мунис Хорезми, Кият, мираб, каллиграф, поэт, историк, Эльтузархан, Мухаммад Рахимхан I, Аллаххулихан, Навои, «Фирдавс уль-Икбал», «Саводи таилим», «Орналар».

Annotation. This article provides information about the writer and poet, one of the founders of Khorezm musical art, Munis Khorezmi, who left an indelible mark in the literary environment of Khorezm with his rare scientific and historical works, and his work.
Key words and phrases. Khanate of Khiva, Munis Khorazmi, Qiyat, mirab, calligrapher, poet, historian, Eltuzarkhan, Muhammad Rahimkhan I, Allahkhulikhan, Navoi, "Firdavs ul-Iqbal", "Savodi ta'ilim", "Ornalar".

Introduction. The Khorezm literary environment is an integral part of Uzbek literature. As the President of the Republic of Uzbekistan Sh.M. Mirziyoyev noted, "Abu Rayhan Beruni, Muhammad Musa Khorazmi, Mahmud Zamakhshari, Najmuddin Kubro, Pahlavon Mahmud, Nasiriddin, who drank water from the Amudarya, grew up in the holy and blessed soil of Khorezm, and left an indelible mark in the history of our nation." The names of Rabguzi, Sulayman Bakirghani, Sakkoki, Munis, Feruz, Ogahi, Bayani and many other scholars, poets and thinkers are rightly written in golden letters in the history of world civilization" [1. - B. 241.].

One of the famous historical figures of Khorezm, Munis Khorezmi is a historian, poet, one of the founders of music art of Khorezm.

Amir Awazbi's son Shermuhammad, literary pseudonym Munis Khorazmi, was a poet, historian, scholar, translator, calligrapher and scholar who lived in Khorezm in the second half of the 18th - early 19th centuries.

Munis occupies an important place in the history of Uzbek literature and culture in general. As a historian, he wrote his historical work "Firdavs ul-Iqbal" and created a book as a poet. As a translator, he translated historical works into Uzbek, and as a pedagogue, he wrote a pamphlet entitled "Savodi telim". While studying the life and work of Munis, we will first turn to his literary and historical works. He gave a lot of

information about his biography in the preface to his book "Munis ul-Ushshaq" and in his historical work "Firdavs ul-Iqbal".

Munis was born in Khiva in 1778. "He is the son of Awazbi Mirob from the village of Qiyat in Khiva." His forefathers used to manage the works of “mirob” (person who deals with the distribution of water and irrigation system in the khanate) and in the palace of the Khans.

Munis's youth and teenage years were flawless. From a young age, he was interested in learning and loved history and literature. He received his initial education in the village of Qiyat, and later studied in Khiva madrasas. It was not limited to madrasa education. He is fluent in Arabic and Persian languages. He studied the riches of Eastern culture with thirst and diligence. Engaged in poetry reading. He was seriously engaged in husnikhat. One of the proofs of Munis's secretarial potential is that he transcribed Navoi's "Mezon ul awzon" correctly, correcting the mistakes made by some previous calligraphers. In 1797, he also read Munis Navoi's work entitled "Holoyi Sayyid Hasan Ardasher".[2. - B. 375.] After the death of his father in 1800, Khan of Khiva appointed Avaz Inaq Munis as the secretary of decrees of the Khiva palace. Munis was in close contact with the famous scientists, poets and artists of his time and devoted himself to science and enlightenment. He eagerly studies the works of poets and historians who lived before him.

(Literature review) Munis enjoyed the works of a number of oriental classical poets. From a young age, he was engaged in writing poetry and studied the works of historians who passed before him with great enthusiasm. The poet wrote his first book of youth in 1804. In 1813, he collected all his poems and compiled a collection called "Munis ul-Ushshaq". [3.]

Several manuscript copies of Munis's divans are stored in the fund of Oriental manuscripts of the Institute of Oriental Studies named after Abu Rayhan Beruni of the Academy of Sciences of Uzbekistan. Among them, manuscript number 1330 was copied from the biography of the poet in 1804-1805, when Munis was 27 years old.

Alisher Navoi's influence on the formation and development of Munis as a talented poet is significant. Munis is one of the strongest fans and campaigners of Navoi's work in Khorezm. He considered Navoi to be his teacher and mentor in the way of literary education. His ghazals, mukhammas, musaddas, rubai's and others are included in this divan of the poet. At the end of Devon, there is also a scientific work of the author called "Literacy", which describes the rules of calligraphy. Thus, the influence of master Navoi is clearly visible in Munis' work.

Of course, this does not mean that the poetry of Munis did not benefit from other rivers. After all, he stands out as a creative figure with a very broad literary education. This is witnessed by the great poets who are proudly mentioned in his radifil ghazal "Mango". In this sense, it would be correct to add two more tributaries to the literary source that Munis was influenced by, in addition to the influence of Navoi's art. One of them is the Persian-Tajik classic literature related to the names of Nizami, Khusrav, Ansari, Hafiz, Attar, Firdavsi, Khaqani, Anvari, Saadi, Jami, Iraqi, Bedil, and the other is the sweet-speaker Muhammad Fuzuli and his lyrics. He also admired Fuzuli's ghazals "Kerakmasmu sanga?" and "Etdigumdandur".[4.]

As mentioned above, in 1804, Munis created his first divan. He completed his first collection of lyrical works on November 11, 1804, and he completed the scientific and educational treatise "Savodi Talim" written in verse on December 6 and copied it into his collection with his own hand. ate

After Muhammad Rahim Khan I took the throne in 1806, he appointed Munis to the position of chief mirob. Munis was engaged in the profession of inheritance until the end of his life, and as a result of his experience as an heir, he wrote a work called "Ornalar" about the irrigation networks of Khorezm. According to the decree of Muhammed Rahim Khan, Munis began to write about the reign of Muhammed Rahim Khan I, after hesitating a lot about the history of Khorezm Khanate, describing the events of the Khiva Khanate at different times, Muhammed Rahim Khan I translated "Rawzat Us-Safa" from Persian to Turkish. orders to do. According to the decree of Munis Khan, he left "Firdavs ul-Iqbal" and began to translate "Rawzat us-Safa".[5. – B 67.]

Research methodology. In 1814-1815, Munis created a perfect book that fully reflected his literary heritage. This divan is so perfect that if the poet started the first divan without a prologue, he wrote a special prelude for it. The first divan was not named, but he named the perfect divan "Munis-ul Ushshaq". There is no complete information about Munis' family life. However, the poet's historical and translated works, especially "Debocha", show that his family life was full of tragic events. For example, while completing the translation of Munis Mirkhond's "Rawzat us-safo" chronicle, he adds sad verses.

Although the poet sang about beauty and love in his poetry, his ghazals also reflected the socio-economic life of that time. As a progressive thinker of his time, he took an active part in the life he was living.

According to the tradition of Eastern historians, Munis' work "Firdavs-ul-Iqbal" began with praise and praise sections. Then he wrote the history of Khorezm, giving brief information about his life and the writing of his work.

The work consists of an introduction, five chapters and a conclusion.

Chapter I describes the events from Adam to the generation of Prophet Noah. Chapter II discusses the period of the Mongol rulers from Yefas to the Kunghirat branch. In Chapter III, it is written about the events that happened during the reign of the Kurlos dynasty. Chapter IV describes the life of Eltuzor Khan's ancestors. In chapter 5, the pen is written about the events that happened from the birth of Eltuzor Khan to the completion of this work.

Analysis and results. Khatima contains information about scientists, saints, emirs, begs, poets, and craftsmen.

Munis could not finish his work called "Firdavs ul-Iqbal". He managed to write the events from ancient times to the seventh year of the reign of Muhammad Rahim Khan I (1813). This incomplete work of his was continued by his student Ogahi. Ogahi explains how he continued this work as follows. During the reign of Eltuzar Khan, he called Munis and ordered him to write the history of Khorezm. Eltuzor Khan died when Munis wrote his work until the time of Sherghazi Khan.

After him, his brother Muhammad Rahimkhan I came to the top of the state. Muhammad Rahim Khan I orders Munis to continue his work. When Munis continued

the work and finished recording the events that happened in the seventh year of the reign of Muhammad Rahim Khan I, in 1819, the Khan ordered Munis to translate Mirkhand's famous historical work "Rav-zat us-safo" into Uzbek. Muhammad Rahimkhan I died when Munis was translating the first volume of this work into Uzbek and continuing the second volume. His son Allahguli Khan will replace him. The new khan also orders Munis to continue the translation. However, Munis could not finish the second book and died in 1829. After ascending to the throne, Allahquli Khan called Ogahi, Munis's student and tutor in 1839-1840, and ordered him to continue the work "Firdavs ul-Iqbal", which had been interrupted by describing the events of 1813. From 1813, Ogahi begins to write and completes the events that happened in Khorezm.

Historian scholar Munis's work entitled "Firdavs ul-Iqbal" is a rich and valuable historical work in the study of the history of Central Asia, especially the Khanate of Khiva, covering a long period of time. In addition to the ancient era of Khorezm, the political history of the Khiva Khanate until 1825 is described in detail in the work, as well as the struggles for the throne and wealth, as well as a lot of information about the relations of the Khiva Khans with the neighboring Turkmen and Karakalpak peoples.

The work also contains a lot of information on studying the socio-economic and cultural life of Khiva Khanate. The Khiva khanate's diplomatic and trade relations with Bukhara, Kokhan khanates, and Russia, irrigation, taxation, construction works in the khanate, the lives and works of scientists, poets who lived at that time were recorded.

The first scientific article about Munis Khorazmi was written by Rakhmat Majidi. [6.] Samples of the poet's works were published in 1945, 1948, 1959. [7.] 1957 "Selected Works" by Yunus Yusupov, "Selection" was published in 1980. was published in full with comments. [9.] The poet's works and activities were analyzed and interpreted in the studies of A. Bobojonov, V. Zohidov, V. Abdullayev, J. Sharipov, A. Murodov, and N. Jumankhoja.

Conclusions and recommendations. In conclusion, it can be noted that Shermuhammad Munis Khorezmi was a talented poet of his time, a famous historian, a statesman and a skilled translator. His works serve as an excellent source for studying the history of the culture of the Uzbek people. Munis Khorezmi worked in the Khanate of Khiva for many years. Especially during the reign of Muhammed Rahim Khan II Feruz, there was a great rise in the cultural sphere. Munis left an indelible mark in history with his works. Many of his educational works were a great contribution to school and madrasa education in Khiva Khanate. Not only this work, but also other works serve as an important source for that period. Today, his heritage and creativity are being thoroughly studied in Uzbekistan.

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VIEWS AND SIGNIFICANCE OF THE GREAT SILK ROAD AS A BRIDGE BETWEEN CIVILIZATIONS

Chu Bei Bei
Researcher at the Department of World History of the National University of Uzbekistan, Wannan Medical College, Wuhu
253497357@qq.com

Annotatsiya: Ushbu maqolada Buyuk ipak yo‘lining tarixiy ahamiyati, uning sivilizatsiyalararo muloqot jarayonida turli xalqlar taraqqiyotida tutgan o‘rniga oid qarashlar bayon qilingan. shu bilan birga maqolada Buyuk ipak yo‘lining sivilizatsiyalararo ko‘prik vositasi sifatida qarashlar va ularning ahamiyati kabi masalalar tahlil qilinadi.

Kalit so‘zlar: Buyuk ipak yo‘li, sivilizatsiya, Turkiston, Markaziy Osiyo, Xitoy, Rim imperiyasi.

Аннотация: В данной статье изложены взгляды на историческое значение Великого Шелкового пути, его роль в развитии разных народов в процессе общения между цивилизациями. В то же время в статье анализируются такие вопросы, как взгляды на Великий шелковый путь как мост между цивилизациями и их значение.

Ключевые слова: Великий шелковый путь, цивилизация, Туркестан, Средняя Азия, Китай, Римская империя.

Abstract: This article outlines views on the historical significance of the Great Silk Road, its role in the development of different peoples in the process of communication between civilizations. At the same time, the article analyzes issues such as views on the Great Silk Road as a bridge between civilizations and their significance.

Key words: The Great Silk Road, civilization, Turkestan, Central Asia, China, the Roman Empire.

Introduction. One of the important conditions for the development of society is the active exchange of information between peoples and civilizations. In the past, cultural achievements were spread through international contacts, namely through trade, conquest, and migration. Various cultural layers of peoples moved to more favorable soil, where a new cycle of development took place in a different historical reality: change, adaptation, acquisition of local features, addition of new forms and content. Caravan roads were an integral part of this process, in particular the Great Silk Road, which connected China, India, Central Asia, the Middle and Near East, and the Mediterranean in ancient times and the early Middle Ages. The Great Silk Road is a historical experience for China, which went through a number of stages of development: from 3 thousand BC. the “lapis lazuli path” functioned from the end of the 2nd millennium AD. The “jade road” began to operate; in the middle of the 1st millennium, these two caravan roads began to merge into one. The Great Silk Road functioned from the 2nd century BC, when the Chinese ambassador Zhang Qian visited the countries of Central Asia on a diplomatic mission, and existed until the 16th century AD, until the Age of Discovery, the period of development of maritime trade.

Literature Review. The general characteristic of the literature of the period under study is that it actively studied significance of the great silk road as a bridge between civilizations. Scientists from Uzbekistan and other countries have shown great attention to the historical experience of the Great Silk Road due to the fact that it provides a unique opportunity to trace trans-regional integration ties within Eurasia over the past two thousand years. The experience of studying the history of the Great Silk Road is considered in projects carried out by scientists from many countries, in particular through joint projects in which scientific conferences are held at universities in the region, dissertations are defended, and elective courses are taught. Material of a theoretical, generalizing and historiographical nature is contained in a number of articles devoted to the theoretical aspects of the problems, in particular, the issue of the legacy of the civilizational values of the Great Silk Road. Appeal to the materials published in the above-mentioned works and collections will be useful for a wide range of researchers and readers; the contents of these articles, scientific monographs and dissertations can be used in teaching many humanities and applied disciplines.

Research methodology. This article was written based on generally accepted scientific methods – historicity, comparative logical analysis, consistency, principles of objectivity. In addition, when writing the article, such methods as system analysis, the relationship of facts, inductive analysis of the issue under study, generalization of the results obtained, and comparability were used.

Analysis and Results. "The Great Silk Road” is defined in a narrow sense and in a broader sense. The Great Silk Road in the narrow sense refers to the transportation and commercial trade routes that began in Chang'an or Luoyang in ancient China, passed through the Hexi Corridor in Gansu and the Xinjiang region today, crossed the Pamir Plateau, entered Central Asia, Iran and other places, and connected Asia and Europe. The Great Silk Road in a broad sense has become synonymous with economic and cultural exchanges between the East and the West in ancient times, i.e. any transport route from ancient China to neighbouring countries, whether by land or by sea, is known as the Great Silk Road. With the introduction of China's 'One Belt, One

Road' initiative, the 'Silk Road' has attracted even more attention from academics and society. Research institutions related to the Silk Road have been set up in various places, a number of academic journals have been established, and a large number of academic works and monographs have been published, which also deal with the generation, evolution and development of the concept of the Great Silk Road.

In 1877, the German geographer Leeichhofen first introduced the concept of the "Silk Road" in the first volume of his "China - A Personal Journey and Research", calling the route of communication between Chang'an, China and Central Asia the "Silk Road"[1].

Throughout its existence, the route of the Silk Road changed several times depending on various reasons. Some of its sections and branches became increasingly important, while other directions, on the contrary, died out, and the cities and trading stations located on them fell into decay. Despite these changes, there are two main routes of this route that connected the West and the East: 1) the southern road - from the north of China through Central Asia to the Middle East and Northern India; 2) northern road - from the north of China through the Pamirs and the Aral Sea region to the Lower Volga and to the Black Sea basin. The Great Silk Road was a connecting link between countries of different civilizations and socio-economic systems. The Great Silk Road performed such functions as the exchange of goods, the accumulation and dissemination of new technologies, cultures and religions, the active exchange of information, as well as a diplomatic function, sending embassies with caravans. Thanks to the Silk Road, China and the countries of Central Asia grew and developed at a faster and more efficient pace. The role of Central Asia itself was also great on the Great Silk Road, which served as an information storage facility, after which new technologies for that time were transferred from Central Asia to other countries. Central Asian goods were also highly valued.

In 1915, in his article “The Silk Road from China to the Roman Empire”, Hermann further proposed that the Silk Road should be a route of communication between China and Greco-Roman society via the Western Regions. Herman's extension of the Silk Road to Syria (Rome) is historically accurate, due to the fact that Chinese silk reached the territory of the Roman Empire shortly after Zhang Qian's mission to the West. In 65 BC, Pompey led a Roman expedition to capture the eastern shores of the Mediterranean, and Syria was subsequently incorporated into the Roman Empire. It is on the basis of these historical facts that Hermann argues that economic and cultural exchanges along the Silk Road reached beyond China to Central Asia and India to Rome. [2]

Understanding the emergence of the contemporary 'New Silk Road' in its historical context is one of the fundamental research horizons of this paper. Although the 'Silk Road' has now been gradually generalised from its original exclusive reference to the 'Oasis Road' through the deserts of Central Asia to the 'Oasis Road', the 'Sea Road', the 'Steppe Road', and the 'Southwest Road', in terms of the depth of actual interactions and the extent to which the 'Silk Road' has been used. "The two routes by sea and land between China and the Islamic world are still the most important in terms of the depth and breadth of actual interaction. As far as current research is concerned, the history of Chinese and Western transport The Silk Road is the basic framework for

Chinese scholars to understand the ancient Silk Road, while Western scholars have examined the Silk Road in a slightly different, but not significantly broader, world historical context.

The Silk Road spanned the birthplaces of Egyptian, Babylonian, Indian and Chinese civilisations, and the settlements of people of different nationalities and colours. By seeking common ground while preserving differences, being open and tolerant, different civilisations painted together a magnificent chapter of human civilisation's prosperity. The ancient Silk Road has become a model of civilizational exchange, mutual appreciation and coexistence in human history, and is of great historical value.

The Silk Road was the first to open up a major east-west corridor and for the first time built up a large network of world transport routes. The Silk Road was a miracle in the history of world road transport, crisscrossed and connected in every direction. The Silk Road is a network of numerous small, large and medium-sized Chinese and foreign transport routes, forming the "bloodline and meridian" of the Silk Road, which formed the basic pattern of the Silk Road and built the transport network that connected the East and West worlds in ancient times, making it the most convenient route between Asia and Europe.

The Silk Road greatly facilitated the flow of commodities, pioneering trade and economic exchanges between East and West. The Silk Road was the lifeline for trade between East and West in ancient times, and through it, China's silk, tea, porcelain and lacquer ware were exported to countries along the route in a constant stream; jewellery, herbs, spices and various crops such as grapes, carrots, walnuts and carrots entered China in an endless stream from Central and West Asia and Europe.

The Silk Road has facilitated the cross-pollination of science and technology, widely and profoundly contributing to the progress of production and even social change in countries along the route. The Silk Road was an important platform for the exchange of science and technology between China and the countries along the route. Before the modern industrial revolution in Europe, China's four ancient inventions and technologies such as ironmaking were introduced to the West one after another through the Silk Road and became important factors in driving the changes in the capitalist mode of production.

The Silk Road has facilitated the exchange of diverse cultures and is an important link between different countries, races and civilizations from the East and the West that have immersed themselves in each other and accommodated each other. The ancient Silk Road and the Maritime Silk Road were the paths of civilization where different peoples and cultures interacted and merged with each other. The Silk Road spanned dozens of countries in Asia, Europe and Africa, linking and intermingling the ancient civilizations of China, India, Egypt, Persia, Arabia and Greece and Rome.

Of course, the most active elements of trade along the Silk Road came mainly from the people, and even private trade always occupied the most prominent position along the Silk Road in ancient times. The groups that travelled along the Silk Road included monks, scholars, artisans, caravans, traders and other people from all regions of the countries along the route, showing a diversity of groups involved, multiple types of trade and diverse forms of trade.

History has shown that the combined effect of government support and the participation of multiple subjects was a fundamental guarantee of the prosperity of the Silk Road, and that one could not be achieved without the other.

The reason for the longevity and vitality of the Silk Road lies in the connection of ideological and cultural ties, the support of spiritual strength and the inheritance of diverse civilizations. The cultural development of different regions has its own internal logic, and there is no superiority or inferiority between different cultures. Different nations along the Silk Road have been able to respect, learn from and understand each other through cultural exchange, intermingling and even confrontation, and have been able to fully demonstrate and exchange philosophical ideas, educational ideas, humanistic spirits and moral concepts, creating a harmonious and different value orientation.

History has shown that the values of multiple civilisations were the source of the vitality of the ancient Silk Road. The mutual learning and appreciation of cultures is the spiritual fulcrum of the Silk Road, and is the essence of its eternal charm.

At the present stage of human development, initiatives to revive the Silk Road are finding broad international support. In this regard, it is necessary to highlight two interdependent trends that characterize the development of the modern world and actualize these initiatives:

− firstly, acceleration of information and capital flows, accelerated development and implementation of communication and computer networks, as well as the latest transport

technologies that neutralize almost all competitive advantages of maritime transport and maritime communications;

− secondly, the steady deepening of international interdependence, a high degree of integration on a regional and subregional scale.

In general, the revival of the Silk Road will not only increase the intensity of cooperation between parts of Eurasia in various fields, but also solve a set of problems of an intrastate nature. In particular, the implementation of a number of transport and infrastructure projects makes it possible to reduce the unemployment rate in the countries of Central Asia not only through the creation of jobs within the framework of these projects.

New transport routes will give impetus to the development of small businesses. This economic activity will have a greater beneficial impact on the socio-economic situation in Central Asian countries.

In addition, projects to revive the Great Silk Road, associated with improving socio-economic and investment conditions in the participating countries, will promote interest in investing in promising knowledge-intensive industries. Taking into account the fact that, for the purpose of self-realization, they received education at the world's leading higher education institutions, proved their professionalism, acquired invaluable practical experience and have a wide international network of contacts, the prospects for their possible investment initiatives are quite high.

Conclusion. To summarize, it is necessary to once again pay attention to a number of the following points. The history of the Great Silk Road, which in ancient times connected the East and West through trade, economic and political-diplomatic

contacts, goes back several thousand years. At different stages of its functioning, changes occurred in the content and meaning, directions and scale of these contacts,

However, what remained unchanged was that the Silk Road retained its role as an intercivilizational bridge. It was a trade channel that stimulated the development of handicraft, agricultural and industrial production. The researchers who traveled along it made a huge contribution to the study of the cultural characteristics of the countries located along its entire length. The world became acquainted with the ideas and works of great philosophers, scientists and statesmen. There was an intensive mutual enrichment of cultures: peoples exchanged knowledge, spiritual and philosophical concepts and views. The Great Silk Road made outstanding epic works the property of mankind. Through it, various faiths spread: Buddhism, Judaism, Islam and Christianity.

At the same time, he played a huge role in establishing and maintaining diplomatic relations between the centers of power of the Ancient World, the major states of the West and the East. Numerous written sources provide evidence of the significance of the functioning of the Silk Road in this aspect. The process of intercivilizational communication took place intensively throughout the entire period of operation of the ancient Silk Road.

The very concept of civilization in modern science is still in the process of formation and is changing its definitions. It seems legitimate to us to talk about a special Silk Road Civilization - which, practically, is synonymous with the Turkic-Islamic civilization - whose mission was to understand otherness, diversity as a source of opportunity, and thus not only serve as a mediator between cultures and continents, but, generating a powerful synergistic effect, thereby giving a new creative impulse to world history.

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PHILOSOPHICAL ASPECTS OF SOCIETY'S POLITICAL AND LEGAL CULTURE.

Komilov Abror Kuvondikovich
Independent researcher
of Urganch State University.
abrorshix0909@gmail.com

Annotatsiya: Ushbu maqolada Huquqiy ong - zamonaviy jamiyatda huquqiy madaniyatining asosiy elementi ekanligi masalalari ko'rib chiqilgan, insonlarning huquqiy ongi va huquqiy madaniyatini barqaror rivojlanish yo'li va jamiyatning siyosiy jihatdan rivojlanish tendensiyalari falsafiy tahlil qilingan.

Kalit so'zlar: huquqiy ong, siyosiy madaniyat, huquqiy madaniyat, huquqiy tarbiya, huquqiy jamiyat, demokratiya, huquqiy qadryatlar.

Аннотация: В данной статье были рассмотрены вопросы правосознания, являющегося основным элементом правовой культуры в современном обществе, философски проанализированы пути устойчивого развития правосознания и правовой культуры людей, тенденции политического развития общества.

Ключевые слова: правосознание, политическая культура, правовая культура, юридическое образование, правовое общество, демократия, правовые ценности.

Annotation: In this article, the issues of legal consciousness being the main element of legal culture in modern society were considered, the way of sustainable development of legal consciousness and legal culture of people and the trends of political development of society were philosophically analyzed.

Key words: legal consciousness, political culture, legal culture, legal education, legal society, democracy, legal values.

Introduction: The past of mankind shows that in the current era of law-making and law-enforcement activities, it is one of the most urgent issues to prioritize the principles of strong self-organization as well as conscious, organizational creativity, and intelligent work in these processes. . When studying these conscious and creative processes of law creation and law enforcement, legal theory carefully approaches the topic of legal consciousness and legal culture.

Humanity has been thinking about the legal aspects of social events in society since ancient times. For example, in "Avesta" social issues are given great importance. The one who did not cultivate the earth with his right hand or his left hand and did not work, then the Earth will say to those people: "O you, man, a person who does not worship me and does not work! Indeed, you will be among the beggars, bowing to foreign doors and bowing your head forever! In fact, they will carry all kinds of crops with you, and all these delicacies will go to the household that is working, that is, living full and prosperous. Abadul-Abad will be like this!", he answers. [1.104] In general, the social, political, moral, and legal ideas advanced in Zoroastrianism are the characteristics of states that rely on laws and strict discipline.

Methodology. The indicator of the formation of a legal state is the state of the

legal culture of society and its people, which is mainly determined by the level of legal consciousness of people, the development of democratic institutions that affect the social and legal activities of citizens. Therefore, creating an effective system of forming the legal consciousness and legal culture of the population, stability and development remains extremely urgent.

Legal consciousness, which is one of the indicators of the legal culture of the society, is a concept related to views, ideas, perceptions, emotions, people, their associations, and society as a whole in relation to law and legal events. [2. 52-56 B.] This concept is manifested in the formation of knowledge and evaluative attitude of people to past and current legislation, ideas, its further improvement, legality, justice. This includes understanding the objective necessity of the law in modern society, its social purpose, its connection with democratic ideas such as justice, freedom, natural and inalienable rights of the individual. And finally, this concept can be considered as the attitude to people's behavior from the point of view of legality or illegality, their evaluation characteristics, psychological attitude to strict compliance with legal norms, and the direction of values. At the end of the twentieth century, changes in the political, economic, cultural and other aspects of the country's life, new views on the nature of the state and law required solving the serious problem of the level of legal culture of modern society.

The legal consciousness in modern societies has manifested itself in a very diverse, conflicting and mostly deformed state. Legal nihilism, the attitude of disrespect towards laws and laws developed and had a significant impact on the social relations of the society. Crime and other illegal activities have increased. Legal consciousness has reached this state due to the crisis of the society, low political, legal and moral culture of citizens, ineffective work of law enforcement agencies.

The famous philosopher F. Engels wrote that there are two ways to destroy a nation: "to punish the innocent and not to punish the guilty." Unfortunately, at that time, both of these situations were observed together. When people see that there is a crime, but there is no punishment, or on the contrary, there is a punishment, but there is no crime, it means that their legal consciousness has been seriously deformed, they have stopped believing in law, power, and justice.

Legal awareness plays an important role in improving and developing the legal life of society. This is a necessary factor in creating a legal state. In fact, before being expressed in legal norms, the results of the activity of law-making bodies, certain interests and needs of people pass through the will and consciousness of the persons who create legal norms. Therefore, the quality of legal norms, their compliance with the needs of social development is inextricably linked with the level of legal ideas and legal consciousness of the creators of legal norms.

Among the main legal principles of the current society, it is possible to include protection of the rights and freedoms of citizens using the available opportunities, equality of social, economic, political, scientific, creative and other types of activities, humanitarianism, freedom, recognition of the rule of law. According to the legal level, i.e. according to the level, it is classified into ordinary legal consciousness, scientific legal consciousness, and professional (occupational) legal consciousness. [3. 112.B.]

Results and discussion. Legal awareness is an important and necessary condition

for clear and complete implementation of legal norms. The higher the level of legal consciousness of the members of the civil society, the more clearly the instructions of the legal norms are fulfilled. A developed legal consciousness ensures voluntary implementation of legal requirements, understanding of their correctness and validity. This creates a feeling of intolerance in people towards violations of law and order. That is, legal awareness is an important factor in the development of legislation, the stability of legality and order, and the provision of rights and freedoms of citizens.

The development of the legal consciousness of citizens and society helps to eliminate backward views, deviate from people's behavior, and prevent cases of arbitrariness and violence against a person. Introduction of science-based, proportionate legal ideas and views into the minds of citizens, the fight against crime is a necessary condition for strengthening legality and legitimacy, without which it is impossible to build a civil society and the rule of law. All this can be achieved by improving the quality of legal culture in the country.

Legal culture can be understood as a special social phenomenon that describes the legal status of society and an individual and represents an integral system of constantly interrelated and component parts. So, legal culture is a type of social culture that reflects a certain legal consciousness and legality, the perfection of legislation and legal practice. At the same time, it covers all the values created in the legal field.

Comparing the concepts of legal consciousness and legal culture, it can be said with confidence that the latter concept is much broader than the first. If the legal consciousness encompasses the spiritual life of society and is only a structural link of social consciousness, then legal culture, on the contrary, consists of both spiritual features and "material" components of law. For example, legal institutions, their organization and relations.

Analyzing the processes taking place in modern society, we can conclude that nowadays the concept of civil society and the issue of its improvement occupy one of the leading places in the world arena. However, compared to other developed countries, this is a very important factor affecting the level of legal culture. [4.]

We believe it is necessary to take the following measures to develop legal awareness among citizens:

• citizens should be equally familiar with legislation, government documents, decisions of local self-government bodies;

state authorities and local self-government bodies must give everyone the right to access documents and materials related to his rights and freedoms;

• creation and development of existing databases: an electronic open system of documents about registered legal entities, certificates and diplomas issued to citizens, rights to real estate should be created.

In the opinion of the author, if not solved, at least the level of legal culture of the population will be significantly increased.

Conclusion. In conclusion, in the modern era, in order to bring the legal consciousness and legal culture of people to the path of sustainable development, it is necessary and necessary to raise the general level of legal consciousness, to adopt and implement measures aimed at overcoming the legal nihilism of citizens. We must work to make the law and respect for the law a personal belief of every person in the society.

Among these activities, legal culture and legal consciousness, legal education should have a special place as one of the effective means of forming the needs and interests of a person, which are gradually formed in a legal society, and strengthening the rule of law and legitimacy. The purpose of legal education should be to form respect for laws. They should be based on strong legal beliefs, views, values, attitudes and should form a legal and socially active behavior of a person in the legal field. Thus, legal education should be focused on the legal development of a person, which is considered as the process of forming legal consciousness and legal culture.

Therefore, all civilized people and the state are two concepts that complement each other. Therefore, a cultured person cannot even be imagined without the state. Legal awareness plays an important role in the formation of a cultured person.

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