

# ACTUAL PROBLEMS OF MODERN SCIENCE, EDUCATION AND TRAINING









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#### MODERN PROBLEMS OF TECHNICAL SCIENCES

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### OBTAINING CLINKER BRICK ON THE BASIS OF ENRICHED KHOJAKUL CLAY AND QUARTZ-FELDSPAR SANDS

Boyjanov Islom RaJabboevich Ph.D., Assoc. Doctoral student of the Department of Chemical Technologies, Urgench state university,

b.islom@rambler.ru

Annotasiya: Maqolada Qoraqalpogʻiston Respublikasida joylashgan Xoʻjakoʻl koni kaolinlashgan kvars-dala shpatili qumni fizik-kimyoviy xarakteristikalarini oʻrganish hamda boyitilgan Xoʻjakoʻl gili va kvars-dala shpatili qumi asosida klinker gʻishti tarkiblarini yaratish boʻyicha tadqiqotlar olib borilgan.

Kalit soʻzlar: Keramika, gil, kvars qumi, dala shpati, gidroslyuda, boyitish, klinker gʻisht, yengil suyuqlanuvchan va qiyin suyuqlanuvchan, pishish.

**Аннотация:** В статье проведены исследования по изучению физикохимических характеристик каолинизированного кварц-полевошпатового песка Ходжакульского месторождения расположенного в Республике Каракалпакстан, также по разработке составов клинкерного кирпича на основе обогащенной глины и кварц-полевошпатовых песков.

**Ключевые слова.** Керамика, глина, кварцевой песок, полевой шпат, гидрослюда, обогащения, клинкерный кирпич, легкоплавкий и тугоплавкий, спекания.

**Abstract:** The article studies the physicochemical characteristics of the kaolinized quartz-feldspar sand of the Khodjakol deposit located in the Republic of Karakalpakstan and the development of acid-resistant compositions based on enriched Khodjakol clay.

**Key words.** Ceramics, clay, quartz sand, feldspar, hydromica, enrichment, acid-resistant, fusible and refractory, sintering.

**Introduction.** After the independence of the Republic of Uzbekistan, the volume of construction of residential buildings, etc. is carried out at a very fast pace. This requires high-quality ceramic products for the facade of buildings and sidewalks. But until now, for some reason, our Republic has not created its own production of ceramic clinker bricks. This is mainly due to the lack of high-quality clay raw materials, as well as the technology for producing clinker materials.

Based on this, it is an urgent issue to study the physical and chemical characteristics of local mineral raw materials available in the Republic of Uzbekistan, suitable for the production of clinker bricks and the development of clinker brick compositions based on them.

**Literature review.** Recently, in the world building materials market, clinker bricks have received much attention [1], which differ from ordinary ceramic bricks with high physical and mechanical properties.



Despite the fact that mankind has been using building ceramics for several millennia, clinker - a special kind of ceramic brick - appeared in the Netherlands only at the beginning of the 19th century. However, due to its superior quality, durability and strength, it soon spread throughout Europe and the United States. The name comes from the German "klirren", in Russian - "zvonkiy", it is also possible that this word is associated with the characteristic sound that clinker bricks produce when struck [2].

The author [3] gave the definition of clinker. The basic requirements for raw materials for the manufacture of clinker products are substantiated and formulated. The physical and technical properties of clinker ceramic products are given and it is shown how they affect the performance and durability of the finished product.

S.V. Morozova et al. [4] carried out a qualitative assessment of fusible clay and zeolite-containing raw materials. As a result of the experiment, samples of clinker ceramics were obtained from the studied raw materials that meet the requirements of domestic and European regulatory and technical documentation.

The authors [5] present the experimental results of obtaining clinker bricks based on local clays of the Republic of Tatarstan. The phase composition and thermal behavior of argillaceous rocks of various deposits has been studied. The optimal compositions of the charge for the production of clinker facade bricks have been established. The technical and operational indicators of the products obtained are also determined.

Laboratory and technological tests proved the possibility of obtaining high-quality clinker bricks of strength grades from 600 to 1000 on the basis of two-component mixtures, including low-melting Kalininsk clay as the main clay and Nijne-Uvelskaya refractory clay as an additive [6].

The authors of [7] analyzed information on the requirements for the chemical composition of clay raw materials for the production of ceramic products for various purposes. The difference in the chemical composition of clay raw materials for the production of ceramic products for various purposes from it is determined.

For the production of clinker bricks, refractory clays with a high content of aluminum oxide are mainly used. Aluminum oxide reduces the viscosity of the melt and reduces the deformation of the brick during firing. The optimal content of Al<sub>2</sub>O<sub>3</sub> is 17-23%. For the production of clinker bricks, clays with a silica module of 3-4,5 are suitable. Clays with a low index have a narrow sintering temperature range, which significantly complicates production. A brittle brick is obtained from clay with a high silica modulus [8].

Low-melting clays (mainly loess and loam) widely distributed on the territory of the Republic of Uzbekistan contain about 20-30% carbonate minerals [9], which, as a rule, narrow the sintering interval.

**Research Methodology.** Modern methods of physical and chemical analysis were used, such as chemical, petrographic, X-ray and etc. GOST 7025-91 and GOST 8462-85.

Analysis and results. Kaolonized quartz-feldspar sands of the Khodjakul deposit are complex raw materials containing easily separable lean and clay minerals, sintering at low temperatures, necessary for the production of ceramic products [10].



In this regard, in this work, we set the goal of studying the physicochemical characteristics and enrichment of the kaolonized quartz-feldspar sands of the Khodjakul deposit and developing a new composition of the ceramic mass for clinker bricks based on enriched Khodjakul clay, using Khodjakul quartz-feldspar sand.

Kaolonized quartz-feldspar sands of the Khodjakul deposit macroscopically represent a fine-grained loose rock of light gray, whitish-yellow and pink color, consisting of grains of quartz, feldspar, hydromica, kaolinite and an admixture of montmorillonite, etc., of various shapes and sizes.

According to petrographic analysis, the mineral composition of natural raw materials varies within the following limits: quartz - 32.4-57.8%; feldspar - 7.4-12.7%; fragments of siliceous and siliceous-quartz rocks - 6.1-27.8%; clay fraction consisting of hydromica, kaolinite and montmorillonite - 30.6-56.43%.

Thus, the results of a comprehensive study (chemical, mineralogical, granulometric) showed that the kaolonized quartz-feldspar sands of the Khodjakul deposit are heterogeneous in chemical and mineralogical composition. To carry out the production of ceramic materials based on this raw material, it is necessary to first separate the clay fraction from the quartz-feldspar fractions. Because their ratios in different areas and layers vary over a wide range.

The enrichment of the Khodjakul kaolinized quartz-feldspar sand was carried out by us in laboratory conditions by elutriation. It should be noted that a simple elutriation process makes it possible to obtain a homogeneous sample of the clay and quartz-feldspar fractions. As a result of laboratory studies, it was determined that, using the elutriation method, one can easily separate the original rock into a clay fraction (hereinafter Khodjakul enriched clay) and a quartz-feldspar fraction (hereinafter Khodjakul quartz-feldspar sand). In the process of enrichment by elutriation, heavy particles of quartz and feldspar in the free state, as well as other heavy impurities, are separated from the finely dispersed clay substance due to the difference in density [10].

In contrast to other deposits of kaolinized quartz-feldspar sands [11], the clay fraction obtained during the enrichment of Khodjakul kaolinized quartz-feldspar sand contains relatively more iron-bearing minerals. After enrichment, the chemical composition of the Khodjakul enriched clay and quartz-feldspar sands becomes more stable [10], and therefore, when used as part of building ceramics, there is no need for further deep enrichment of the clay fraction of this deposit with cumbersome operations (flotation, magnetic separation, etc.), as well as the separation of quartz and feldspar concentrate separately.

When enriched in the Khodjakul clay, the content of  $SiO_2$  significantly decreases (52.74-53.0%) than the original one, and the content of  $Al_2O_3$  increases (26.73-31.0%), there is a slight increase in the content of iron oxides. The amounts of CaO and MgO remain unchanged.

Characteristic features of the composition of the Khodjakul enriched clay are an increased content of  $K_2O$  over  $Na_2O$ , a relatively high content of  $SiO_2$  and a low content of  $Al_2O_3$  compared to other enriched clay raw materials.

It should be noted that the amount of free quartz in elutriated Khodjakul clay is much lower (no more than 5%) than in traditional kaolinite-hydromicaceous clays used in ceramic masses, such as Veselovskaya, Nikiforovskaya, Pechora, etc. [12].



According to X-ray analysis, the studied samples of enriched Khodjakul clay are hydromicaceous-kaolinite rock with an admixture of montmorillonite, quartz, and feldspar minerals.

The chemical composition of the original Khodjakul kaolinized quartz-feldspar sand and the tailings of quartz-feldspar sand formed after elutriation are given in Table 1. From Table 1 it can be seen that, a feature of the chemical composition of the Khodjakul quartz-feldspar sand is an increased content of alkali and alkaline earth oxides, a relatively low content of SiO<sub>2</sub>, as well as a high content of Al<sub>2</sub>O<sub>3</sub> and Fe<sub>2</sub>O<sub>3</sub> compared to conventional quartz sands used in fine ceramics and glass. It should be noted that the total amount of alkaline oxides in the Khodjakul quartz-feldspar sand is slightly lower than that of the feedstock (Table 1).

Table 1 The chemical composition of the original Khodjakul kaolinized quartz-feldspar sand and tailings of quartz-feldspar sand after elutriation.

C	Content of oxides, mass %												
Sample names	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	FeO	TiO <sub>2</sub>	MnO	Al <sub>2</sub> O <sub>3</sub>	CaO	MgO	Na <sub>2</sub> O	K <sub>2</sub> O	P <sub>2</sub> O <sub>5</sub>	SO <sub>3</sub>	П.П.П.
Khodjakul kaolinized quartz-feldspar sand (initial raw material)	77,78	3,31	0,10	0,30	0,01	9,36	0,42	0,40	0,86	3,61	0,10	0,10	4,38
Khodjakul quartz- feldspar sand (tails after elutriation)	89,27	2,91	0,22	0,27	0,01	3,28	0,45	0,56	0,73	2,36	0,19	0,10	0,51

According to the mineralogical composition of the studied samples, the Khodjakul quartz-feldspar sand is fine and fine-grained particles of quartz (60-65%) and feldspar minerals (17-21%), fragments of siliceous and siliceous-quartz rocks (7-15%), with an admixture of finely scaly micas, iron-bearing and other minerals (4-5%). Based on the chemical and mineralogical composition of the Khodjakul quartz-feldspar sand, it can be said that it can be used in the composition of ceramic masses as a complex raw material containing quartz and feldspar minerals.

Thus, the heavy fraction, like quartz-feldspar sand, released as a tail during the enrichment of the Khodjakul kaolonized quartz-feldspar sand, consisting mainly of quartz and feldspar, can also be used as part of building ceramic masses as a leaner and fluxing additive.

Obtaining samples of clinker bricks from ceramic masses based on the studied enriched clay with the addition of quartz-feldspar sand as a leaner and flux was carried out according to the accepted method in the production of clinker bricks.

The enriched clay was crushed until completely passed through a sieve with a size of 1 mm. Further, enriched clay and quartz-feldspar sand were mixed manually in the required proportions. Then the plastic mass was prepared with the addition of water to the dry mixture to a moisture content of 21-22%. Samples with dimensions of cubes 50x50x50 mm and beams 160x40x40 mm were molded according to the plastic method in laboratory conditions and dried in an oven at a temperature of  $110^{\circ}$ C. Samples with the best ceramic-technological parameters were selected from the dried samples for further research. Then the prototypes were fired in laboratory muffle furnaces at



different temperatures (from 900-1150°C with an interval of 50°C) with holding at the final temperature for 2 hours.

The fired samples were subjected to standard tests. Studies of the main physical and mechanical properties were carried out: water absorption and density according to GOST 7025-91, compressive strength according to GOST 8462-85.

The physical and mechanical properties of clinker brick prototypes fired at the optimum temperature are given in Table 2.

Physical and mechanical properties of ceramic masses

**Indicators Indicator values** Reference К-1 К-2 К-3 mass Firing temperature, °C 1100 1100 1100 1100 Water absorption, % 4,85 4,49 4,12 5,06 2,14 2,11 Density, g/cm3 2,12 2,16 11,2 General shrinkage, % 11,4 11,7 Compressive strength, MPa 104 99,86 101 106

For comparison in table. 2, as a standard, indicators of clinker bricks prepared on the basis of raw materials of Tatarstan are also given, the composition of which is given below:

Clay Kalininsk - 50%, Clay Nijne-Uvelskaya - 50% [6].

The data in Table 2 show that the use of enriched clay and quartz-feldspar sand of the Khodjakul deposit makes it possible to obtain samples of clinker bricks with improved physical and mechanical properties, compared with clinker bricks obtained from the charge of the reference composition.

It should be noted that the production of clinker bricks based on Khodjakul clay occurs in the presence of the mineral hydromica in the composition of the studied raw materials, which plays the role of a low-temperature flux, and due to this, in the experimental masses, the processes of liquid-phase sintering begin at relatively low firing temperatures.

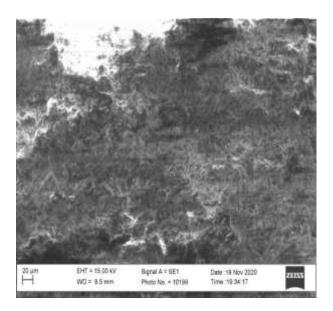
In this case,  $K_2O$ , as a rule, forms an alkaline silicate melt, in which  $Al_2O_3$  dissolves and helps to intensify sintering processes in general [13].

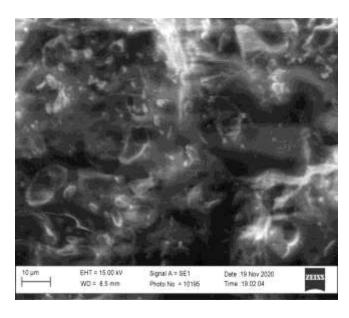
In addition, the increase in the physical and mechanical properties of the prototypes is explained by the fact that finely dispersed fragments of siliceous rocks in the composition of quartz-feldspar sand, above 1000 ° C, due to their high reactivity, are intensively dissolved in the liquid phase, increasing their amount and saturating it with silica. Fine-grained feldspar particles in the composition of quartz-feldspar sand at a temperature of 1050-1100 ° C also melt intensively and increase the amount of the liquid phase, and thereby help sintering and compacting the experimental masses at a relatively low firing temperature.

The study of the phase composition and microstructure of samples from the optimal masses of K-3, fired at the optimal temperature, was carried out using X-ray and scanning electron microscopic analysis.

Table 2







A) B)

Fig.1. SEM image of clinker samples from mass K-3 fired at 1100°C. Magnification: A) x500; B) x1000.

As a result of studying the phase composition and microstructure of the fired samples from the optimal masses K-3, using the methods of X-ray and scanning electron microscopic analyzes, it was established that the phase compositions of the synthesized clinker brick samples are represented by mullite, residual quartz, a spinel-like phase, and also a glassy phase that fills the gaps between the crystals .

#### **Conclusion/Recommendations:**

- 1) Quartz-feldspar sand released in the form of a tail during the enrichment of Khodjakul kaolinized quartz-feldspar sand, consisting mainly of quartz and feldspar, can be used as part of building ceramic masses as a leaner and fluxing additive.
- 2) The production of clinker bricks based on Khodjakul clay occurs in the presence of the hydromica mineral in the composition of the raw materials under study, which plays the role of a low-temperature flux, and due to this, liquid-phase sintering processes in experimental masses begin at relatively low firing temperatures
- 3) In addition, the increase in the physical and mechanical properties of the prototypes is explained by the fact that finely dispersed fragments of siliceous rocks in the composition of quartz-feldspar sand, above  $1000\,^\circ$  C, due to their high reactivity, are intensively dissolved in the liquid phase, increasing their amount and saturating it with silica.
- 4) As a result of comprehensive studies, it was found that, on the basis of enriched Khodjakul clay, using Khodjakul quartz-feldspar sand, it is possible to obtain clinker bricks with high performance.

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### THE RESULTS OF LABORATORY TESTS O N THE DETERMINATION OF FREE FIBERS

Muradov Rustam
Professor of department
"Processing of textile products"
of the Jizzakh Polytechnic Institute
muradovrustam340@gmail.com

Kazakova Dilafruz Erkinovna Associate Professor of "Processing of textile products" of the Jizzakh Polytechnic Institute Kazakova dilafruz@mail.ru

Yo'ldashev Xurshid Xazratqulovich Assistant of the Department "Processing of textile products" of the Jizzakh Polytechnic Institute xurshid-olimjon@mail.ru

Ergasheva Dildora Gayrat qizi
Magistr of
"Natural fiber and fabric processing"
Jizzakh Polytechnic Institute
xurshid-olimjon@mail.ru

Annotatsiya: Ushbu maqolada paxtani qayta ishlash natijasida shikastlanishi va undagi erkin tolalarni miqdorini oshishi to'g'risida taxlillar keltirilgan. Bundan tashqari erkin tolalarni aniqlash laboratoriya priborini yaratish va uni ishlashi to'grisida olib borilgan ilmiy tadqiqot natijalari keltirilgan.

Kalit so'zlar: erkin tola, jin, chiqindi, kolosnik, xavoning tezligi, sidirgich, vakuum-klapan, separator, tola yo'qolishi.

**Аннотация:** В этой статье представлен анализ повреждаемость хлопка, во время переработки и увеличением количества свободного волокна в нем. Кроме того, представлены результаты научных исследований по созданию и эксплуатации лабораторного прибора для определение свободных волокон.

**Ключевые слова:** свободные волокна, джин, отход, колосник, скорость хлопка, вакуум-клапан, грязасъёмник, сепаратор, потерия хлопка.

**Abstract:** This article provides an analysis of the damageability of cotton and the increase in the amount of free fiber in it during the reprocessing procedure. In addition, the results of scientific research on the creation and operation of a laboratory instrument for the detection of free fibers are presented.

**Key words:** loose fibers, gin, retreat, grate, speed of air, scraper, vacuum valve, separator, loss of fiber.



**Introduction** Today, the cultivation and processing of raw cotton is one of the most important industries. The growing demand for the quality of cotton fiber requires special attention to re-equipping factories with new equipment and technologies, which is one of the most pressing problems facing the textile industry, aimed at increasing its competitiveness in the world cotton fiber market, producing modern and technologically reliable and high-quality products.

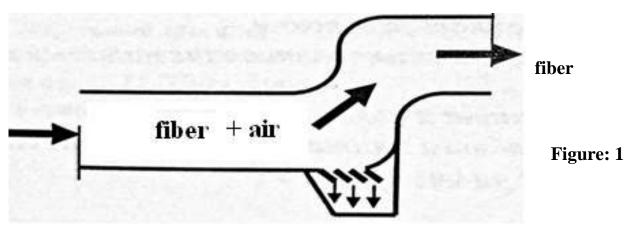
Special attention is paid to the creation, realization, implementation of new technologies and technologies that are highly effective in the global ginning industry, improve product quality, and create resource-saving technologies.

In the cotton industry, the fiber-seed separator is one of the main machines used in the processing of raw materials. This device separates the cotton fiber from the seeds, and the main raw cotton of the enterprise are pressed and sent to textile enterprises. The separation of cotton from seeds in the gin machine is performed in the fiber separation workshop. Here the cotton is separated by saws from the cotton roll formed in the working chamber of the machine. To date, the existing gin machine designs at cotton ginning plants have a number of disadvantages. In particular, the maximum non-separation of fibers in the gin machine, the impossibility of increasing productivity due to the timely removal of peeled seeds, and so on. To eliminate these disadvantages, it was necessary to study in more detail the process of separating fibers from seeds [1].

For this purpose, theoretical and practical research was carried out to improve the design of the gin and its basic elements in this work. In the main technological operation of the primary processing of cotton - in the ginning process - due to insufficient improvement of mechanisms to maintain the required density of the raw material roll, the quality of the fiber deteriorates, its composition contains uluk and minor impurities. The density of the fiber is about  $0.15 \div 0.25$  kg/m3, which makes it possible to clean it after gin.

Analysis of the literature on the subject. Fiber cleaning machines are divided into mechanical, aerodynamic and aeromechanical types, depending on the method of cleaning the fiber from weeds.

**1. The aerodynamic cleaning method** is based on changing the trajectory of the cotton-air flow in the line, due to the action of massive forces on the bends, intensive cleaning of the fiber occurs (Fig.1) [2,3,4].



**Aerodynamic method** 



**2. Mechanical cleaning method Here**, cleaning is carried out by feeding a layer of fiber with a feeding table 1 to the headset of cylinder 2 where the fiber barb is disheveled and the captured scraps of fiber by cylinder 2 are cleaned from debris on the grate grid 3 (Fig,2).

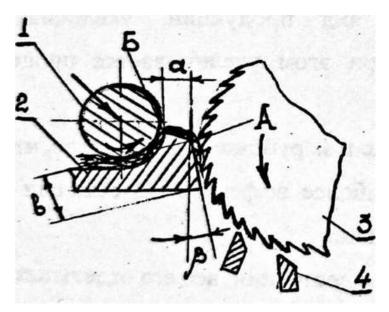


Figure: 2 Mechanical method

- 1. Sealing roller. 2. Feeding table. 3. Saw drum.4. Sorry grates
- **3. Aeromechanical cleaning method Here**, cleaning is carried out by feeding a layer of fiber in a mixture of air to the teeth of the saw cylinder, where the scraps of fiber captured by the teeth of the saw cylinder are cleaned of debris and snail due to the impact of the impact on the grate (Fig,3).

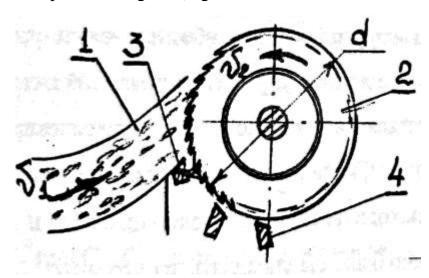


Figure: 3 Aeromechanical method

1. Neck. 2. Saw drum. 3. Lapping brush. 4. Grates.

**Research methodology.** Today, cotton ginning plants use 3OVP fiber cleaners. It consists of the inlet and outlet pipes of the cleaner, a saw cylinder and a grate [5,6,7]

During operation, the fiber coming out of the gin is fed into the saw cylinder through an intake pipe. The fiber attached to the teeth of the saw cylinder is transferred



to the fiber tube through the cleaning tube, striking the stationary grates. Uluk, fine litter, is separated from the fiber, removed from the machine by a belt conveyor [8,9,10].

When determining the efficiency of fiber cleaners, it is necessary to calculate the amount of fiber in the waste. The amount of fiber mixed with waste is determined by the following formula:

$$B = \frac{g_{fib}}{g_{waste}} * 100\% (1)$$

 ${\rm B} = \frac{g_{fib}}{g_{waste}} * 100\%~(1)$  Here:  $g_{fib}$  – amount of fiber mixed with waste;

 $g_{waste}$  - amount of fiber waste;

Waste amount  $g_{waste}$  can be defined as follows:

$$g_{waste} = g_{amo.tr} - g_{fib} (2)$$

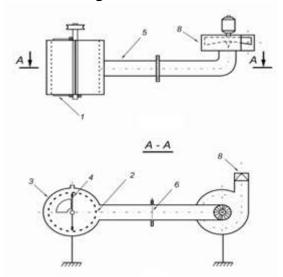
Here:  $g_{amo.tp}$  - is the amount of trash.

The  $K_M$ , factor, which indicates the amount of fiber added to the waste, is determined as follows:

$$K_{\rm M} = \frac{g_{fib}}{g_{amo}}; \tag{3}$$

 $K_{\rm M} = \frac{g_{fib}}{g_{amo.}}$ ; (3) Accurate determination of the amount of fiber in waste in this formula is very important for ginners.

To solve this problem, scientists of the Jizzakh Analysis and results. Polytechnic Institute have created a new device (Fig. 4). The device mainly consists of the following main elements.



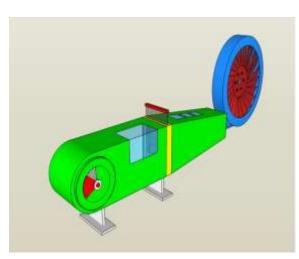


Figure: 4 Instrument for the determination of fibers in waste.

1- mesh drum, 2- Squeegee, 3- pipe, 4- mesh plate, 5- fan.

The device works as follows. Waste from the fiber cleaner is poured into the sieve drum. As a result of the fan operation, air begins to be sucked in through pipe 3. The fibers in the waste inside the sieve drum begin to be absorbed through the pipe 3. The fibers are held by a sieve plate with a thin hole installed inside the pipe. The rotating cider inside the mesh drum helps to keep the drum holes clean at all times. At the end of the experiment, the weight of the fibers trapped on the surface of the fine mesh placed on the pipe is determined and the amount of fiber in the waste is determined using the following formula.



$$\partial_m = \frac{Me}{M \cot} \bullet 100\%$$

Here:  $M_e$  - fiber count

M fiber - sample weight

An experimental sample of an instrument for the determination of fibers in waste was manufactured. The device is shown in Fig.5.



Figure: 5 Instrument for the determination of fibers in waste.

1-Corps; 2 Grid surface; 3-Shyotka; 4 Scraper; 5 Working chamber; 6-Val; 7 Air and single fiber suction pipe; 8 A mesh surface that holds a single fiber; 9-Ventilator; 10-Electric motor; 11- the foundation

**In conclusion.**In the technological process of cotton ginning enterprises, it is important to determine the amount of fiber in the waste leaving the gin - machine, which is installed after the gin - machine. As a result of using this device, it is possible to ensure that the amount of fiber in the waste does not exceed the established standards.

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### THE RESEARCH OF METHODS ON THE FORMATION OF MULTIGROUP TRAINS

Suyunbaev Shinpolat Mansuralievich, PhD, associate Professor, Department of Organization of transport movement, Faculty of Transport systems management, Tashkent State Transport University.

Jumaev Sherzod Bahrom ugli, PhD, associate docent, Department of Organization of transport movement, Faculty of Transport systems management, Tashkent State Transport University.

Akhmedova Muslima Djalalovna, Senior teacher, Department of Organization of transport movement, Faculty of Transport systems management, Tashkent State Transport University.

Khusenov Utkir Uktamjon ugli,
Trainee Researcher (PhD course), Department of
Organization of transport movement,
Faculty of Transport systems management,
Tashkent State Transport University.
shbjumayev 92@mail.ru

Annotatsiya: Maqolada koʻp guruhli poyezdlar tuzish usullari tadqiq qilingan. Ushbu usullarning asosiy tavsifi, afzalliklari va kamchiliklari yoritib berilgan va qiyosiy tahlil qilingan hamda eng optimal usul vagonlar oqimiga bogʻliq ravishda aniqlanishi koʻrsarilgan. Eng optimal usul tanlashni temir yoʻl stansiyasida



vagonlarning turib qolish vaqtini va stansiya yuklanganligini kamaytirishga hamda manyovr lokomotivlari ishini tezkor tartibga solish texnologiyasini ishlab chiqishga imkon beradi.

**Kalit soʻzlar:** koʻp guruhli poyezd, koʻp guruhli poyezdlarni tuzish usuli, saralash stansiyasi, oraliq stansiyasi, manyovr ishi, terma poyezdlar, qiyosiy tahlil.

Аннотация: В статье исследованы методы формирования многогруппных поездов. Освещен и произведен сравнительный анализ основные характеристики, достоинства и недостатки этих методов, также показаны, что наиболее оптимальный метод зависит от размеров вагонопотока. Выбор наиболее оптимального метода позволит сократить время простоя вагонов на станции и загрузку станции, а также разработать технологии оперативного регулирования работы маневровых локомотивов.

**Ключевые слова:** многогруппный поезд, метод формирования многогруппного поезда, сортировочная станция, промежуточная станция, маневровая работа, сборные поезда, сравнительный анализ.

**Annotation:** The article analyzed formation methods of a multigroup trains set. The main characteristics, advantages and disadvantages of these methods are described and compared, and it is shown that the most optimal method is determined by the flow of wagons. The selection of the most optimal method will allow to reduce the downtime and loading stations at the railway station, as well as to develop technology for rapid regulation of shunting locomotives.

**Key words:** multigroup train, method of formatting multigroup trains, sorting station, intermediate station, shunting operations, pick-up trains, comparative analysis.

**Introduction.** Multigroup trains increasingly gaining their importance for use in the remote transport segment. They combine the profitability of rail transport in greater distances and flexibility transport of individual wagons consignments. From the aspect of the organization and management of transport of individual consignments, the biggest problem is the optimization of wagon flows and the method of forming the multigroup train. The formation of multigroup trains reduces the retention of wagons due to accumulation, and therefore the total spent time of wagons in technical freight stations [1-7].

Methods for consecutive forming of multigroup trains. In forming of multigroup trains (pick-up trains) may apply different methods, which can differ according to the required number of shunting tracks and shunting mode. Which will be applied depends on the technical characteristics of marshalling stations and the number of intermediate stations. Thus, if the number of intermediate stations 4 or less than applied conventional shunting method which means that at every track, wagon allocate to each individual intermediate station.

However, in the case, which is more common, applies some of methods for succession forming a multigroup trains. These methods are considered the train marshalling problem, which consists of disassembling the incoming accumulated composition wagons on a separate marshalling track (track for sorting) and reassembly (merging) group of cars (wagons) according to the plan for formatting multigroup train. Shunting is conducted in such a way that the wagons with the same destinations (intermediate



stations) occurring in succession, forming individual groups of wagons, in the final formed multigroup train.

*Single-stage sorting method*, in addition to the initial disassembling operation (roll-in operation), allows only one more operation - the wagon accumulation according to the plan of formation the group of trains. Both processes are performed shunting locomotive.

In a single-stage sorting, the required number of tracks for one train sorting is equal to the number of groups of wagons i.e. the number of intermediate stations [8]. However, analyses of the [9] have shown that the number of tracks for sorting does not depend on the number of intermediate stations so there are two important parameters:

- number of accumulated composition wagons of the train and
- the minimum number of wagons from one of intermediate stations.

Let  $S = \{S1, ..., St\}$  be a partition of the set  $I_n = \{1, 2, ..., n\}$ . The numbers from  $I_n$  correspond to wagons of a train, while elements of S correspond to intermediate stations. Thus, wagons  $a_i, a_j$ , have the same destination if and only if the numbers i, j belong to the same part of S. Now, the train marshalling problem (TMP) reads as follows: Find the smallest number k = K(S) so that there is a permutation  $\pi(1), ..., \pi(t)$  of 1, ..., t so that the sequence of numbers 1, 2, ..., n, 1, 2, ..., n, 1, 2, ..., n, 1, 2, ..., n, where the interval 1, 2, ..., n, is repeated k times, contains all the elements from  $S\pi(1)$ , followed by all the elements of  $S\pi(2),...$ , and finally all the elements of  $S\pi(t)$ . In this formulation the trivial bound becomes  $KS \leq t$  [9].

This example is shown schematically as a rearrangement of railway wagons in Fig. 1.

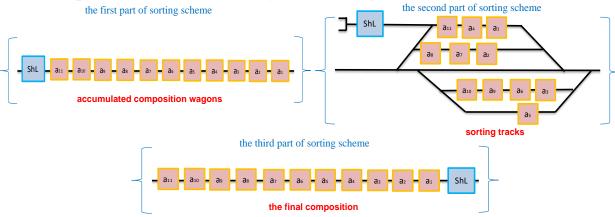


Fig. 1. The forming of single stage multigroup train

Thus, according to the authors, the best possible ways to determine the number of shunting tracks, in the event that the dispatcher has only information on the total number of wagons, represents dependency:

$$KS = \frac{n-6}{4} + 2 \tag{1}$$

where is: n - the total number of incoming accumulated composition wagons of the train In the case of  $d(\sqrt{n} then m) \sqrt{n}$  cannot get anything better than do K(S) = d

**Method of step by step (Method SBS)** is based on marshalling system where on one track performs classification of the wagons - wagon for several different intermediate stations. The root of the number intermediate stations determines the required number of shunting tracks for two-step sorting procedure [10]:



$$n_t = \sqrt{n_{is}} \tag{2}$$

where is:  $n_t$  - the required number of shunting track, rounded to a whole number,  $n_{is}$  -number of intermediate stations. After determining the required number of shunting track, the procedure disassembling of accumulated wagons is done in relation to the number of intermediate stations as follows:

- In the first sorting phase:

\* on the first track segregate wagons for intermediate stations: 1,  $\sqrt{n_{is}} + 1$ ,  $2\sqrt{n_{is}} + 1$ ,  $n_{is} - \sqrt{n_{is}} + 1$ ;

\* on the second track segregate wagons for intermediate stations: 2,  $\sqrt{n_{is}} + 2$ ,  $2\sqrt{n_{is}} + 2$ , ...,  $n_{is} - \sqrt{n_{is}} + 2$ ;

\* on  $n_t$ -th track segregate wagons for intermediate stations:  $\sqrt{n_{is}}$ ,  $2\sqrt{n_{is}}$ ,...,  $n_{is}$ .

Now the first phase of sorting is completed in which, on each track, segregate the group of wagons for the same intermediate stations but not yet in an order that would correspond to intermediate stations. With that, go to the second sorting phase.

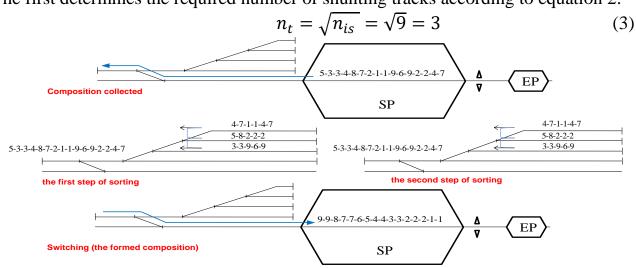
- *In the second sorting phase*, after the unification of multigroup train (in order of increasing tracks number) sorting performs on the marshaling tracks in the order of intermediate stations [10]:
- on the first track segregate wagons for intermediate stations:  $1,2,3,\ldots,\sqrt{n_{is}}$ ;
- on the second track segregate wagons for intermediate stations:  $\sqrt{n_{is}} + 1$ ,  $\sqrt{n_{is}} + 2$ ,  $\sqrt{n_{is}} + 3$ , ...,  $2\sqrt{n_{is}}$ ;
- on the third track segregate wagons for intermediate stations:  $2\sqrt{n_{is}} + 1$ ,  $2\sqrt{n_{is}} + 2$ ,  $2\sqrt{n_{is}} + 3$ , ...,  $3\sqrt{n_{is}}$ ;
- on  $n_t$  -th track segregate wagons for intermediate stations:  $\sqrt{n_{is}}$  1,  $\sqrt{n_{is}}$ +1, ...,  $n_{is}$ ;

So, two important parameters for application method SBS are:

- the number of intermediate stations on the basis of which is determined;
- the number of shunting tracks.

An example of the real system. Let accumulated composition of 19 wagons for 9 intermediate stations in order 5-3-3-4-8-7-2-1-1-9-6-9-2-2-4-7 (Fig.2) [11].

The first determines the required number of shunting tracks according to equation 2:





#### Fig. 2. Method SBS

When the number of necessary tracks is determined  $n_t = 3$  shunting is performed as follows:

I track: 1, 4, 7 II track: 2, 5, 8 III track: 3, 6, 9

After the first sorting, follow the second phase of sorting, according to accumulated composition from the first stage (first pulling groups from the first track, then the second and the third at the end of the track). Next, composition of the train is formed in order of intermediate stations.

**General method.** In contrast to the method SBS which, at  $n_t$  tracks, can form a train which consists of  $n_t^x$  group of wagons, the general method can form the train whose number of intermediate stations is the highest:

$$n_{is} = \frac{n_t \cdot (n_t + 1)}{2} \tag{4}$$

After determining the required number of shunting tracks, the procedure disassembling accumulated composition of wagons is done on the basis of equality between the ordinal number of tracks in the group for forming and the number of groups that are segregated on track at the moment to begin the process of sorting wagons [9]:

- on the first track segregate wagons for intermediate stations: 1, ..., -;
- on the second track segregate wagons for intermediate stations: 2,  $n_t + 1$ , -;
- on the third track segregate wagons for intermediate stations: 3,  $n_t + 2$ ,  $(2 \cdot n_t 1) + 1$ , -;
- on  $n_t$ -th track segregate wagons for intermediate stations:  $n_t$ ,  $2 \cdot n_t 1$ ,  $3 \cdot n_t (1+2)$ ,  $4 \cdot n_t (1+2+3)$ ,...,  $n_t \cdot (n_t + 1)/2$ .

Next steps sorting does not have to implement by unified pulling and sorting of all wagons from all tracks, but can be achieved with a series of extraction and sorting wagons from individual tracks.

This characteristic can come to the fore with limited resources (insufficient length of pull out or insufficient power of shunting locomotives) [9].

Thus, in the second phase of the sorting:

- on the first track segregate wagons for intermediate stations: 1, 2, 3, ...,  $n_t$
- on the second track segregate wagons for intermediate stations:  $n_t + 1, ..., 2 \cdot n_t 1$
- on the third track segregate wagons for intermediate stations:  $(2 \cdot n_t 1) + 1, ..., 4 \cdot n_t (1 + 2 + 3)$
- on  $n_t$ -th track segregate wagons for intermediate stations:  $n_t \cdot (n_t + 1)/2$

However, the negative characteristic of the general method is that at certain the number of tracks can sort a smaller number of groups in accordance with the method SBS.

To make it easier to detect characteristics of these methods shows an example of forming multigroup trains that consist of 10 wagons for intermediate stations (Fig. 3). In the first step of sorting at the first track, segregate the wagon for intermediate stations 1, at the second track, wagons for stations 2 and 5, at the third track, wagons for stations 3, 6 and 8, at the fourth, wagons for stations 4, 7,9 and 10.



The second step of sorting can be realized pulling of unified wagons or individual wagons pulling from each track separately. At the end of the second step of sorting are obtained sorted wagons, according to intermediate station, and that, at the first track wagons for intermediate stations 1, 2, 3 and 4, at the second 5, 6 and 7, at the third 8 and 9, and at the fourth 10.

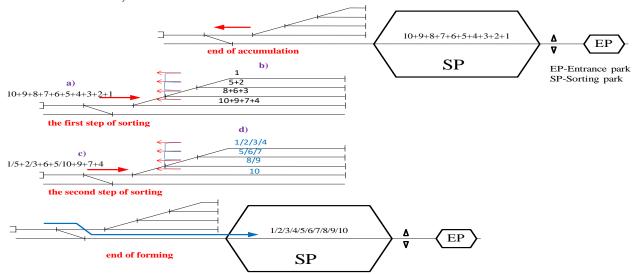


Fig. 3. General method of forming multigroup train set

The process of forming multigroup trains train ends up assembling a wagon for tracks and they're by dragging at the track with which it is carried relegate [9].

**The special method** is based on an arbitrary number of tracks, i.e. the number of tracks that is available for shunting. In contrast to the previous methods in the special methods, therefore, there is no correlation between the number of intermediate stations and the number of shunting tracks. [12]

Forming of the multigroup train set after classification according to the intermediate stations is carried out to the following procedure:

In the first stage of sorting, wagons for intermediate stations  $n_{is}$  to  $n_{is} - n_t + 2$  leave on separate tracks, and all the other wagons together at first track. Then, the first assembly of wagons on the tracks should be followed and unification from the first to the  $n_t - 1$  track, in order to prepare for the second stage of sorting.

At this stage all wagons for intermediate stations from  $n_{is} - 1$  to  $n_{is} - n_t + 2$  are grouped according to the order of intermediate stations and are left on track  $n_t$  where there are already wagons for intermediate station  $n_{is}$ .

Groups of wagons on track  $n_t$  added wagons for intermediate station  $n_{is} - n_t + 2$ , and on the other tracks is carried out sorting in the following order: on track  $n_t - 1$  wagons for intermediate station  $n_{is} - n_t$ , on track  $n_t - 2$  wagons for intermediate station  $n_{is} - n_t - 1$  and so on, until the second track where coming wagons for intermediate station  $n_{is} - 2 \cdot n_t + 3$ .

Any remaining wagons, for intermediate station l to  $n_{is} - 2 \cdot n_t + 2$ , leave to the first track. After this disassembling is carried out unification of wagons per tracks from the first to the  $n_t - 1$  tracks and pull them in order to prepare for the third stage sorting which procedure is similar to the previously described procedures.



This process continues until are not sorted wagons the first intermediate station [9 – 13]. So, as an important parameter for the use of special methods, stand out the number intermediate station, which does not condition the required number of shunting tracks. An example of the application of special methods is shown in Fig. 4 for the case of multigroup trains for 9 intermediate stations and 3 tracks for shunting works.

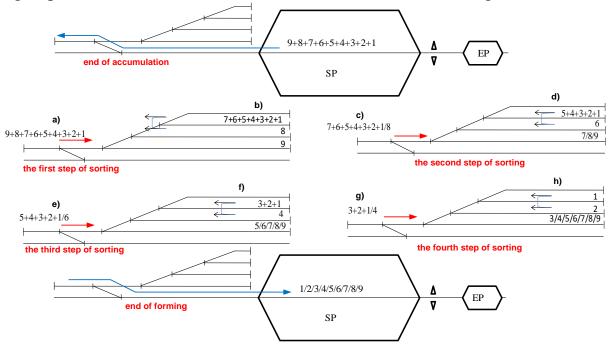


Fig. 4. Example of special methods

Modification of special methods is achieved by eliminating the need for merging, after the completion of each step of sorting. This switching operation of each next step is further facilitated because of the smaller number of wagons that need to move. Unifying composition wagons segregate per tracks is done only after the last step of sorting thereby forming composition for multigroup train, in the order of intermediate station. In the case of applying the modified special methods, in the same case, sorting 9 groups on 3 tracks is done in the following way. In the first step of sorting at the second and third track stand out wagons for intermediate stations 5 and 9, and all remaining wagons accumulate on the first track. In the coming steps move is done only with unsorted wagons accumulated on the first track. In these steps, on the second and third track leave the wagons whose serial number of intermediate stations one less compared to those that have been separated in the previous steps on the tracks. The process of forming multigroup train by using special methods of modification is shown in Fig.5 [9].



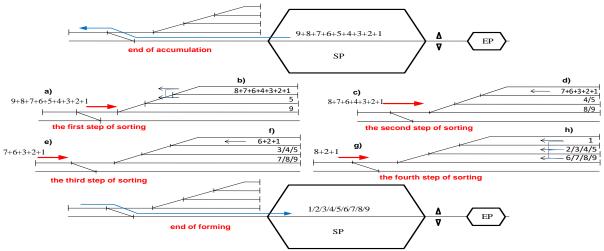


Fig. 5. An example of a modified special methods

*Method unified group.* The Parameter that characterizes the method of unified groups is a large number of groups to sort and the insufficient number of tracks. This method is based on the implementation process of sorting a group of some of the previous methods which is suitable for forming the train which has a half less intermediate station  $n_{is}/2$ . Unifying the group is carried out by pairing the wagons for: intermediate stations: 1 i  $n_{is}/2 + 1$ , 2 i  $n_{is}/2 + 2$ , 3 i  $n_{is}/2 + 3$  etc.

An example of application method of unified group is shown in Fig. 6. for the case of multigroup train for 18 intermediate stations and 3 tracks for shunting. In the first step the wagons for intermediate stations 1, 4, 7, 10, 13 and 16 are left on the first track, the wagons for intermediate stations 2, 5, 8, 11, 14 and 17, on the second, and wagons for intermediate stations 3, 6, 9, 12, 15 and 18 on the third track.

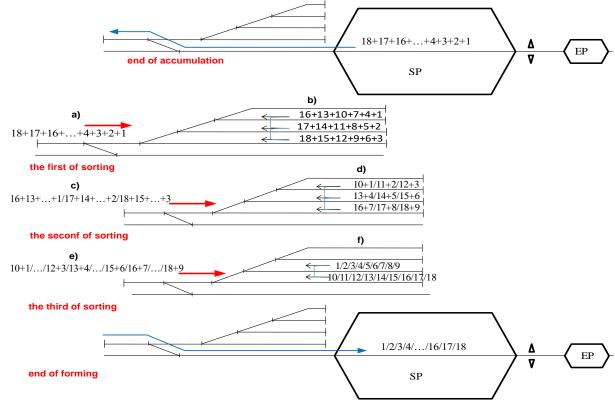


Fig. 6. An example of a method unified group

The process of sorting wagons continued by pulling all wagons and forming a unified group for intermediate stations: on the first track is pairing the group 1 and 10, 2 and



11, 3 and 12, on the second track 4 and 13, 5 and 14, 6 and 15, and on the third track 7 and 16, 8 and 17, 9 and 18. In a further sorting procedure is necessary to once again pull out all wagons and disassemble unified groups.

At the end of this step, the two sorted compositions are obtained, on the first track for the first nine and on the second, for the remaining nine intermediate stations. The process of forming multigroup train ends up by uniting these two compositions and pulling on a track which performs carried relegate [9]



Table 1. Comparative analysis consecutive methods for formation of multigroup trains

Method name	Parameters for application	Basic characteristics	Advantages	Disadvantages	
Single stage sorting method	Number of accumulated composition wagons of the train	Determination of required number of shunting tracks depending on number of	Number of necessary tracks can be reduced if taken into account the relative positions of wagons in	With the increase the number of wagons or a number of groups within the wagons, increasing complexity of the problem, and the possibility of reducing the number of required tracks is reduced	
nictriod	The minimum number of wagons from one of intermediate stations	accumulated composition wagons of the trains	accumulated composition		
M.d. LGDG	The number of intermediate stations	Determination of required number of shunting tracks	Sorting a large number of groups; forming multigroup trains through	Steps sorting are implemented through unified pulling and sorting of all wagons on all tracks	
Method SBS	The number of shunting tracks	depending on number of shunting tracks	the two-steps sorting		
General method	The number of intermediate stations	Determination of required number of shunting tracks	Application of the method in resource-limited (insufficient length of pull out or insufficient shunting locomotive power) because the	Sorting a small number of groups	
	The available number of shunting tracks	depending on number of intermediate stations	sorting steps can make a series of extraction and sorting wagons from individual tracks		
	The number of intermediate stations	Shunting according to the	There is no rigid correlation between	Typical applications in stations with a small number of tracks; the need for merging and uniting sorted group of wagons at the end of each step of the sorting	
Special method	The available number of shunting tracks	available number of shunting tracks	the number of intermediate stations and the number of shunting tracks		
	The number of intermediate stations	Shunting according to the	There is no rigid correlation between the number of intermediate stations	Typical applications in stations with a small number of tracks	
Modified special method	The available number of shunting tracks	available number of shunting tracks	and the number of shunting tracks; Eliminating the need for merging and uniting sorted groups of wagons at the end of each step		
Method unified group	A large number of sorting group	Shunting large number of groups according to the available number of shunting	Application in conditions insufficient number of tracks; sorting a large	Method is based on the implementation process of sorting a group of some of the previous method	
	Insufficient number of tracks	tracks	number of groups of wagons		



**Conclusion.** The formation of multigroup train set can be done using conventional or the simultaneous methods. The required number of tracks to accumulation of wagons for all the classic method is the same and depends on the number of shunting tasks, while the number of tracks on which it is subsequently sorted wagons vary in relation to the applied method of forming and depending on the number of intermediate stations per trains. The main disadvantage of these methods can be seen in direct dependence of the total time of forming the number multigroup train, which restricts and precludes their effective use in case of a large number of trains.

The research conducted showed that limitations from the point of exploitation and the design of shunting installations greatly affect and change the final effects of the methods applied in relation to the theoretical formulations. Based on the results obtained through research can be given a unique response which method is most appropriate.

In Table 1. given comparative analysis for six methods and their parameters, the basic characteristics and advantages and disadvantages. Number of group wagons on the formation and size of the wagons flow affects the process of sorting the wagons, which is particularly evident in terms of the large number of wagons on the formation. Finally, there are some conclusions for marshalling yard sorting methods analysis.

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### CHANGES IN MECHANICAL PROPERTIES OF DIFFERENT FABRIC ON T-SHIRT FABRICS

Khaydarov Ulugbek Panjievich Assistant, Tashkent Institute of Textile and Light Industry <a href="mailto:khaydarovulugbek@mail.ru">khaydarovulugbek@mail.ru</a>

Ismailova Sabida Israilovna Professor, Tashkent Institute of Textile and Light Industry sabinaismailova@mail.ru

Quryozov O'rinboy Sobirovich Lecturer, Department of Light Industry Technology and EquipmentTechnologies in Faculty of Chemical Technology, Urgench State University

quryozov@gmail.com

**Annotasiya:** Ushbu maqolada "OSBORN TEXTILE" IP MChJ korxonasida 5% jun+65% lavsan+30% paxta tolali, 6% jun+17% lavsan+67% paxta tolali, 12% jun+10% lavsan+78% paxta tolali, 4-50% bambuk +50% poliamid tolali 90% akril +10% poliamid tolali va 40% akril +60% bambuk tolali aralashmalardan olingan iplardan namunalar olib, "Yigirish texnologiyasi" kafedrasi qoshidagi laboratoriyada



500 br/m gacha buramlar berildi hamda Uster Tester-6 asbobida iplarning sifat koʻrsatkichlari aniqlandi.

Kalit soʻzlari: ilgʻor "klaster modeli"ni, uzilish kuchi boʻyicha kvadratik notekislik, uzilishdagi uzayish boʻyicha kvadratik notekislik, colishtirma uzulish kuchi boʻyicha kvadratik notekislik.

**Аннотация**: В данной статье на предприятии ООО ИП «ОСБОРН ТЕКСТИЛЬ» 5% шерсть + 65% лавсан + 30% хлопковое волокно, 6% шерсть + 17% лавсан + 67% хлопковое волокно, 12% шерсть + 10% лавсан + 78% хлопок. волокно, 4- Образцы пряжи из 50% бамбука + 50% полиамидного волокна 90% акрила + 10% полиамидного волокна и 40% акрила + 60% бамбукового волокна были скручены до 500 б / м в лаборатории кафедры прядения. Технология »и Uster Tester-6 параметры качества пряжи определяли на приборе.

**Ключевые слова:** продвинутая «кластерная модель», квадратичное неравенство с точки зрения прочности на разрыв, квадратичное неравенство с точки зрения удлинения при разрыве, квадратичное неравенство с точки зрения смешанной разрывной силы

**Annotation**: This article discusses the process how a bamboo fiber were spun to 500 b/m in the state enterprise LLC IP "OSBORN TEXTILE" and laboratories of the spinning department by using 5% wool + 65% lavsan + 30% clap fiber, 6% wool + 17% lavsan + 67% clap fiber, 12% wool + 10% lavsan + 78% cotton. Fiber, 4-Samples directly from 50% bamboo + 50% polyamide fiber 90% acryl + 10% polyamide fiber and 40% acryl + 60%. Technology and quality parameters of Uster Tester-6 were directly determined on the device.

**Keywords:** advanced "cluster model", quadratic inequality in terms of tensile strength, quadratic inequality in terms of increase at break, quadratic inequality in terms of change in mixing

**Introduction.** Ensuring high and stable growth rates in the textile and clothing industry of the Republic, mobilising and attracting foreign direct investment, production and export of competitive products, implementation of strategically important projects of modernization of new high-tech jobs Systematic work is being carried out to further deepen the restructuring of enterprises, technical and technological modernization of enterprises, the introduction of an advanced "cluster model". At the same time, a comprehensive analysis of the development of the textile and clothing industry, the changing world market conditions in the face of increasing competition requires government support for the industry, as well as the development and implementation of more sustainable and dynamic development mechanisms.

The textile industry is becoming one of the most powerful industries in the world. This is characterized by the availability of raw material reserves, which are the most important, decisive factor for the development of the industry.

In a market economy based on free competition, one of the main tasks facing textile enterprises is to produce high-quality, competitive and marketable shirts. For the produced fabric to be competitive and in demand, its quality indicators must be able to meet the requirements of the world market for this product, ie the requirements of world standards. At the same time, the cost of production should be low, the company



should have advanced equipment and technology, high labor productivity should be achieved. In solving these problems, it is possible to increase labor productivity in textile enterprises, reduce labor costs, mechanize manual labor, take full advantage of internal resources, and implement the technology automatically through computer systems.

The mechanical properties of cotton fiber are important in the spinning process, ie its resistance to abrasion, compression, bending and interlocking fibers.

The length, strength and linear density of the fiber are important in the production of quality yarn in the spinning mill. The higher the quality of the fiber, the more demanding yarn can be produced from it. To do this, it is necessary to choose the right raw materials, as well as to create optimal conditions for the process of storage, drying, cleaning, separation of fiber from the fiber, fiber cleaning in ginneries.

The quality of the finished products largely depends on how smoothly the spun yarns are processed. If the roughness of the yarn is high, its specific tensile strength is reduced, which means that the strength of the fabric woven from it is also lower. One of the main reasons for the unevenness is that the amount of components in the fiber mixture is not constant, they do not mix well.

In spinning machines, the greater the breakage of the yarn during winding and forming, the higher the roughness of the yarn. Unevenness indicators harm the physical and mechanical properties of spinning and weaving products. Many factors, such as the unevenness of the properties of raw materials, often occur as a result of the technological process and the design of the machine, the violation of the operating mode, as well as the distance of workers from the machine and repairs.

The mechanical properties of shirt fabrics include tensile strength, elongation at break.

The higher the density of the fabric, the higher its tensile strength, abrasion resistance.

The tensile strength of fabrics is the force expended to break the dimensional patterns mentioned above. The tensile strength indicates the tensile strength of the fabric. The tensile strength of fabrics depends on their fiber content, the structure of the forming yarns and the linear density, weave, density, type of finishing. The thicker and denser the yarn, the stronger it is. Finishing processes such as pressing, appretting increase the strength of fabrics, while bleaching, dyeing processes slightly reduce the strength.

Simultaneously with the determination of the tensile strength, the elongation at elongation of the specimens is also determined. Elongation at elongation is the difference between the initial length of the specimens and the length at elongation before breaking.

**Methodology.** The amount of energy expended to break the samples is the actual amount of work done in breaking them.

To compare the mechanical properties of fabrics of different structures, indicators such as relative breaking strength and the specific amount of work performed in breaking are used.

Research has been conducted to determine the mechanical properties of shirt fabrics with different fiber content, and the test results are given in Table 1 below.

Table 1
Mechanical of shirt fabrics of the different fiber content
change in properties

change in properties						
<u>№</u>	Fiber content	The tensile	strength	Elongation	The	
		of the fabric, H		fabric at break, %		surface is
		on the	on the	on the	on the	dense,
		body	back	body	back	g/m <sup>2</sup>
1.	100% cotton for body yarn and 5%					
	wool for back yarn + 65% lavsan	348,5	322	13	29	126,6
	+ 30% cotton					
2.	100% cotton for body yarn and 6%					
	wool for back yarn + 17% lavsan	316,2	280	12	31	127,3
	+ 67% cotton					
3.	100% cotton for body yarn and					
	12% wool for back yarn + 10%	306,5	290	11	22	120,5
	lavsan + 78% cotton					
4.	100% cotton on the body yarn and					
	50% bamboo on the back yarn +	357,5	343	11	25	117,4
	50% polyamide fiber					
5.	90% acrylic + 10% polyamide					
	fiber on the back yarn with 100%	441,3	356	10	38	131,1
	cotton on the body yarn					
6.	40% acrylic + 60% bamboo fiber					
	on the back yarn with 100% cotton	438,4	332	12	35	125,5
	on the body yarn					

Results And Discussion. The results of the study are compared with the performance of fabrics obtained from 100% cotton yarn with 5% wool + 65% lavsan + 30% cotton fiber blends. The tensile strength of the obtained fabrics decreased by 9.3%, the tensile strength decreased by 14.1%, the elongation at the back decreased by 8.7%, the elongation at the back increased by 7.5%, the surface density increased by 1.6%. Fabrics made of 100% cotton yarn with back yarn 12% wool + 10% lavsan + 78% cotton fiber blends with a tensile strength of 12.1%, a tensile strength of 10.0% 16.4%, back elongation by 25.2%, surface density by 5.9%, body strength by 100% cotton and back yarn by 50% bamboo + 50% polyamide fiber blends 3, 6%, the tensile strength on the back increased by 7.2%, the elongation at the waist increased by 16.4%, the length at the back The elongation at break is 14.8%, the surface density is 8.3%, the tensile strength of fabrics made of 100% cotton and 90% acrylic + 10% polyamide fiber blends is 22.1% strength increased by 10.6%, elongation at truncation decreased by 24.1%, elongation at truncation increased by 24.7%, surface density increased by 4.5%, tanda yarn increased by 100% cotton and back yarn by 40% acrylic + Fabrics made from 60% bamboo fiber blends increased the tensile strength by 21.6%, the tensile strength by 4.1%, the tensile strength decreased by 8.7%, and the tensile strength increased by 18.2%. surface density decreased by 6.0%.

Conclusion.



- the tensile strength of the fabric is more than 100% cotton and 90% acrylic + 10% polyamide fiber;
- the quality of fabrics made from 100% cotton yarn with 90% acrylic + 10% polyamide fiber and 100% cotton yarn with 40% acrylic + 60% bamboo fiber is higher than other fabrics;

-the analysis of the results showed that the tensile strength of fabrics made of 100% cotton yarn with 90% acrylic + 10% polyamide fiber and 100% cotton yarn with 40% acrylic + 60% bamboo fiber blends found to be higher than other fabrics.

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Influence of different mixture structure on mechanical damage and fiber length on transitions of spinal processes.

Izvestiya Vysshikh Uchebnykh Zavedenii, Seriya Teknologiya Tekstil'noi

Promyshlennostithis link is disabled, 2019, 384(6), p. 129–132

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## CHANGE OF PHYSICAL AND MECHANICAL PROPERTIES OF BED FABRICS BASIC TO THE COMPOSITION OF SECONDARY MATERIAL RESOURCES

Ashurov Hasan Tulkin o'g'li PhD student Tashkent Institute of Textile and Light Industry

Xamraeva Sanovar Atoevna Professor, Tashkent Institute of Textile and Light Industry

Sobirov Doniyor Xolmurodovich Lecturer, Department of Light Industry Technology and EquipmentTechnologies in Faculty of Chemical Technology, Urgench State University Sabirov19861010@gmail.com

Annotasiya: Ushbu maqolada paxta tolali matolar, turli foizlarda paxta va rooz oʻsimligi tolari aralashmasidan olingan ip va matolar, toʻquv dastgohi, choʻzish asbobi, Buxoro "Al Hakim plyus", Samarqand "Urguttextil" MChJ korxonasi jihozlari va ishlab chiqarilgan mato namunalarining fizik-mexanik xususiyatlarini aniqlash uchun TTESI qoshidagi "CentexUz" sinov laboratoriyasidagi zamonaviy asbob-uskunalar tanlandi va davlat standartlari asosida tajriba ishlari olib borildi.

Kalit soʻzlari: ishqalanishga chidamliligi, gʻijimlanmasligi va issiqlik oʻtkazuvchanligi, matoning tayanch sirti, yumshoq toʻpchalar – pillar

**Аннотация**: В данной статье для определения физико-механических свойств хлопчатобумажных тканей, пряжи и тканей, полученных из смеси хлопковых и розовых волокон в разном процентном соотношении, ткацких станков, подрамников, оборудования бухарских «Аль Хаким Плюс», самаркандских ООО «Ургуттекстиль» и образцы тканей Подобрано современное оборудование испытательной лаборатории «ЦентексУз» при ТТЕСИ и проведены экспериментальные работы на основе государственных стандартов.

**Ключевые слова:** стойкость к истиранию, отсутствие складок и теплопроводность, базовая поверхность ткани, мягкие шарики - столбы



**Annotation**: The given article discusses the ways how to determine the physical and mechanical properties of cotton fabrics, yarn, and fabrics obtained from a mixture of cotton and pink fibers in different percentages loom, stretchers, equipment from Bukhara "Al Khakim Plus", Samarkand LLC "Urguttekstil" and fabric samples laboratories "CentexUz" at TTESI and experimental works that were carried out on the basis state standards.

**Keywords:** abrasion resistance, no wrinkles and thermal conductivity, base surface of fabric, soft balls - pillars

**Introduction.** Prospects for the export of bedding produced in our country to the world market and the increase in safety requirements of domestic consumers include the production of new textile bedding, the use of natural raw materials and the improvement of production [1,2].

The peculiarity of the use of bedding fabrics is that they are in constant contact with people (at home, in hospitals, hotels, nurseries, soldiers' beds, etc.) even in bed.

Humidity, temperature, and friction forces affect the use of upholstery fabrics in different conditions. At the same time, its long-term use without washing creates conditions for the growth of various microorganisms, and the close contact of the bedding with people in the bed requires increased safety of these tissues [3,4].

The problem of the effects of textile materials on the human body is now widely discussed in scientific circles. Different methods and the production of fabrics with different fiber content have been proposed to determine the negative effects of textile bedding fabrics on the human body, but microorganisms that are an integral part of the home environment have not been taken into account [5].

One of the main indicators of fabrics is their abrasion resistance, non-wrinkling and thermal conductivity.

Abrasion of clothing materials is mainly due to the effect of friction. The abrasion resistance of fabrics depends on their fiber content, surface texture. First of all, the fiber ends protruding from the surface of the fabric are subject to friction [6,7]. The fibers protruding from the bends of the threads in the fabric begin to break down. Some areas of the fiber surface are damaged and the fibers break. The yarns are also broken as some fibers or pieces of fiber come out of the yarn. The bent areas of the threads protruding from the surface of the fabric are the first to be eroded by the action of friction. These areas are called the base surface of the fabric, i.e. the larger the base surface of the fabric, the better its abrasion resistance. By strengthening the base surface of the fabric, its abrasion resistance can be increased. For this purpose, longcoated wraps (satin, satin), abrasion-resistant fibers (kapron, lavsan) or finishing processes (appreting) are used. The abrasion resistance of knitted fabric also depends on the amount of base surface. However, when the yarns that make up the knit are rubbed and torn, the loops on the hoop columns or rows come out of each other depending on the weave of the fabric, and the structure of the fabric is disrupted. The abrasion of non-woven fabrics obtained by the weaving method is also mainly due to friction. During the friction process, the fibers in the fiber bundle of the fabric come out of the fabric structure because they are not well bonded to each other, and the threads that hold the fibers together are rubbed and broken [8,9].



Another key indicator of fabrics is that they do not wrinkle.

As a result of the action of bending and compression deformations, fabrics become wrinkled, i.e. they form folds and creases. wrinkles and creases can be removed only by wet ironing. The shrinkage of fabrics depends on their fiber content, the thickness of the yarns used in their structure, the type of weaving and finishing, the density. The crease of fabrics is one of their negative properties. It spoils the look of the item. Fabrics that are easily creased will wear out quickly because they will rub more in bent and twisted areas. Non-wrinkling of fabrics means that they are resistant to wrinkling and return to their original state after wrinkling [9].

When fabrics are exposed to heat energy, they have a number of properties, namely the ability to conduct heat, the ability to absorb heat, the ability to change or retain their properties under the influence of heat. The greater the thickness of the fabric, the better the heat retention property. This is why heat-retaining garments are sewn in multiple layers. If the density of the fabric is low, the air permeability increases, and the heat retention properties deteriorate [10].

**Methodology.** Thermal conductivity is the process of transferring heat between parts of immobile liquids and gases at different temperatures. The thermal conductivity is used to evaluate it. This coefficient indicates the amount of heat that passes through a square meter of fabric in one hour with a thickness of one meter and a temperature difference of one degree between the right and reverse sides [10].

The abrasion resistance of the fabrics, non-creasing along the longitudinal and transverse, thermal conductivity were determined. The results of the study are presented in Table 1.

Table 1 Changes in the physical and mechanical properties of bedding fabrics based on the composition of secondary material resources

$N_{\underline{0}}$	From secondary material	Friction	riction Do not shrink		
	resources of different	resistance,	leagu	conductivity	
	composition	cycle	on the on the		
	obtained fabrics		compartment	transverse	
1.	100% cotton fiber secondary	7600	44,4	63,88	68
	material resources			·	
2.	70% rogoza plant fiber with				
	secondary material resources	23300	66,7	72,22	78
	and 30% cotton fiber	25500	00,7	, 2,22	, 0
	secondary material resources				
	Fiber from 50% rogoza plant				
3.	is 50% cotton fiber waste	18500	62,8	70,5	74
3.	with secondary material	16300	02,8	70,5	/ <del>' +</del>
	resources				
	30% cotton fiber with				
4	secondary material resources	17620	58,6	67,8	71
4.	70% cotton fiber secondary	17630			71
	material resources				

**Results And Discussion.** The results of the study are compared with the performance of 100% cotton fiber secondary material resources with different secondary material resources, 70% rogoza plant fiber waste with 30% cotton fiber



secondary material resources, abrasion resistance of 67.4%, no creasing along the length 33.4%, transverse shrinkage increased by 11.5%, thermal conductivity increased by 12.9%, 50% rogoza fiber with secondary material resources, 50% cotton fiber, secondary material resources, abrasion resistance of upholstery fabric increased by 58.9%, longitudinal shrinkage increased by 29.3%, transverse shrinkage increased by 9.4%, thermal conductivity increased by 8.1%, 30% rogoza plant fiber with secondary material resources 70% cotton fiber secondary material resources Friction resistance of bedding fabric 56, 9%, longitudinal wrinkles 24.2%, transverse wrinkles density increased by 5.9% and thermal conductivity by 4.2%.

#### Conclusion.

- the results of the research show that the lining fabric obtained from secondary material resources of rogoza plant fiber has high abrasion resistance, crease and thermal conductivity;

-the analysis of the results of the study showed that the friction resistance, longitudinal wrinkling, non-transverse wrinkling, thermal conductivity of linen obtained from a mixture of 70% rogose plant fiber secondary material resources and 30% cotton fiber secondary material resources obtained from a mixture of other mixed secondary material resources seemed to be high. In addition, the results of the study show that the non-woven fabric obtained from secondary material resources of rogoza plant fiber has high abrasion resistance, non-wrinkle and thermal conductivity;

-the results of the study show that 70% rogoza plant fiber with secondary material resources and 30% cotton fiber from secondary material resources. found to be relatively high.

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### OBTAINING ACID-RESISTANT MATERIALS ON THE BASIS OF ENRICHED KHOJAKUL CLAY

Boyjanov Islom Rajabboevich Ph.D., Assoc. Doctoral student of the Department of Chemical Technologies, Urgench state university,

b.islom@rambler.ru

**Аннотация:** В статье проведены исследования по изучения физикохимических характеристик каолинизированного кварц-полевошпатового песка Ходжакульского месторождения расположенного в Республике Каракалпакстан и разработки кислотоупорных составов на основе обогащенной Ходжакульской глины.

**Аннотация:** Мақолада Қорақалпоғистон Республикасида жойлашған Хужакул кони каолинлашған кварц-далашпатили қумини физик-кимёвий характеристикаларини ўрганиш ва бойитилган Хужакул гили асосида кислотабардош таркиблар яратиш буйича тадқиқотлар олиб борилган.

Abstract: The article studies the physicochemical characteristics of the kaolinized quartz-feldspar sand of the Khodjakul deposit located in the Republic of

Karakalpakstan and the development of acid-resistant compositions based on enriched Khodjakul clay.

**Ключевые слова.** Керамика, глина, кварцевой песок, полевой шпат, гидрослюда, обогащения, кислотоупор, легкоплавкий и тугоплавкий, спекания.

**Калит сўзлар.** Керамика, гил, кварц куми, дала шпати, гидрослюда, бойитиш, кислотабардош, енгил ва кийин суюкланувчан, пишиш.

**Key words.** Ceramics, clay, quartz sand, feldspar, hydromica, enrichment, acid-resistant, fusible and refractory, sintering.

**Introduction.** After the independence of the Republic of Uzbekistan, the production volume of the chemical, metallurgical and other industries are expanding at an accelerated pace, but despite this, the high-quality acid-resistant ceramic materials necessary for the needs of these enterprises of the Republic, such as acid-resistant bricks, acid-resistant tiles, etc., are imported in large quantities at the expense of hard currency.

Based on this, it is very relevant to study the physicochemical properties of local mineral raw materials available in the Republic, suitable for the production of acid-resistant materials and the development of effective compositions of ceramic masses based on them.

**Literature review.** Ceramic materials have high chemical resistance and can withstand the impact of confrontational antagonistic products at high temperatures [1].

Acid-resistant products are used in the chemical, pulp and paper, hydrolysis, textile, food and other sectors of the national economy in which chemically antagonistic reagents are used or produced. The main raw materials for the manufacture of such products are basic and semi-acid sintering clays of high and medium plasticity [2].

For the production of each type of ceramic products, clay of a certain chemical composition is needed. The author [3] collected information on the requirements for the chemical composition of clay raw materials for the production of ceramic products for various purposes. The difference in the chemical composition of clay raw materials for the production of ceramic products from it for various purposes was determined.

At present, natural clays in their pure form are rarely a standard raw material for the production of acid-resistant ceramic materials. In this regard, they are used with the introduction of additives for various purposes [4].

For example, to increase the thermal stability of products, up to 8-12% of natural additives containing MgO - talc or dunite are introduced into the mass. In order to reduce the flamable temperature, various fluxes are introduced [5,6].

A significant content of alkali oxides with increased content of alumina is a sign of the ability of clay to sinter early while maintaining fire resistance. Such raw materials are especially valuable since a wide range of products can be made from them: both refractory fireclay and acid-resistant-densely baked. At a low firing temperature of products (950-1000°C), the action of flux minerals - feldspars, carbonates, etc., exert their intense fluxing effect at firing temperatures of the order of 1050°C and above, is manifested to a very small extent [7].



Therefore, in the composition of ceramic acid-resistant masses, low-melting fluxing additives have often been introduced that act at low temperatures, such as perlite, nepheline-syenite, etc. Since there are no deposits of the above low-melting fluxes on the territory of the Republic of Uzbekistan, it is necessary to find alternative types of local raw materials suitable for the production of ceramic acid-resistant products.

The fundamental work on the fluxing role of fusible clays in ceramic masses was carried out by V.F. Pavlov [8,9].

According to the literature data [10], the Republic of Uzbekistan has huge reserves of clay raw materials, including kaolin. But fusible and refractory sintering (hydromicaceous) clays with a sufficient sintering interval are very rare. Low-melting clays (mainly loess and loam) located on the territory of the Republic contain about 20-30% carbonate minerals, which, as a rule, narrow the sintering interval.

**Research Methodology.** Modern methods of physical and chemical analysis, such as chemical, radiographic, electron microscopic raster, etc. GOST 473.1-81, GOST 474-90 and GOST 961-89.

Analysis and results. Kaolinized quartz-feldspar sands of the Khodjakul deposit are a unique raw material containing complex and easily separated lean and clay minerals, sintering at low temperatures, necessary for the production of ceramic products. In connection with this, in this work, we set the goal of studying the physicochemical characteristics of kaolinized quartz-feldspar sands of the Khodjakul deposit and developing compositions of an acid-resistant mass-based on enriched Khodjakul clay.

Kaolinized quartz-feldspar sands of the Khodjakul deposit are macroscopically represented by fine-grained white, whitish-gray and whitish-yellow varieties. The sandstones are weakly cemented with light gray clays. According to X-ray analysis, the mineral composition of the Khodjakul kaolinized quartz-feldspar sand contains quartz, microcline, orthoclase, albite, and hydromica minerals glauconite, muscovite, biotite, chlorite, as well as kaolinite and impurities of montmorillonite, etc. [11].

In its natural state, the productive stratum of this deposit does not meet the requirements of GOST for the production of ceramic products. Therefore, to obtain conditioned concentrates, we have carried out studies on enrichment.

The results of the chemical analysis also show that the natural Khodjakul kaolinized quartz-feldspar sand is a chemically heterogeneous raw material, the chemical composition of the samples under study is presented in Table 1.

Table 1. Chemical composition of kaolinized quartz-feldspar sands of the Khodjakul deposit

	Content of oxides, mass %												
№ probes	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	FeO	TiO <sub>2</sub>	MnO	Al <sub>2</sub> O <sub>3</sub>	CaO	MgO	Na <sub>2</sub> O	K <sub>2</sub> O	P <sub>2</sub> O <sub>5</sub>	SO <sub>3</sub>	П.П.П.
I (Initial raw material)	77,78	3,31	0,10	0,30	0,01	9,36	0,42	0,40	0,86	3,61	0,10	0,10	4,38



I (Khodjakul enriched clay)	52,58	4,01	0,28	0,50	0,01	26,73	0,70	0,60	0,30	2,77	0,08	0,10	10,88
II (Initial raw material)	81,87	2,45	0,32	0,30	0,01	9,82	0,30	0,30	0,24	3,81	0,03	0,10	2,60
II (Khodjakul enriched clay)	52,74	2,96	0,18	0,67	0,02	28,96	0,56	0,50	0,11	2,91	0,03	0,10	10,20
I (Initial raw material)	83,37	2,60	0,21	0,23	0,02	8,96	0,30	0,30	0,41	3,00	0,06	0,10	2,52
I (Khodjakul enriched clay)	53,0	2,24	0,21	0,57	0,01	31,0	0,30	0,60	0,10	2,64	0,06	0,10	10,30

Enrichment of the Khodjakul colonized quartz-feldspar sand was carried out by us in the laboratory using the soaking method. As a result of laboratory studies, we determined that, using the elutriation method, one can easily separate the original rock into a clay fraction (hereinafter Khodjakul enriched clay) and a quartz-feldspar fraction [11].

After the enrichment of the Khodjakul kaolinized quartz-feldspar sand, the chemical composition of the Khodjakul enriched clay becomes more stable (Table 1). In the composition of the Khodjakul enriched clay, the content of  $SiO_2$  significantly decreases (52.74-53.0%), and the content of  $Al_2O_3$  increases (26.73-31.0%), there is a slight increase in the content of iron oxides. The amounts of CaO and MgO remain unchanged.

Characteristic features of the chemical composition of the Khodjakul enriched clay are high content of  $K_2O$  over  $Na_2O$ , relatively high content of  $SiO_2$  and low content of  $Al_2O_3$  compared to other enriched clay raw materials. It should be noted that the amount of free quartz in elutriated Khodjakul clay is much lower (no more than 5%) than in traditional kaolinite-hydromicaceous clays used to obtain acid-resistant products, such as Veselovskaya, Nikiforovskaya, Pechora, etc.

According to X-ray analysis, the studied samples of enriched Khodjakul clay are hydromicaceous-kaolinite rock with an admixture of montmorillonite, quartz, and feldspar minerals.

Research and industrial practice by the author [12] proved that masses containing 8-12% RO+ $R_2$ O at RO/ $R_2$ O=0.1-1 can be used for the production of sintered products.

In elutriated Khodjakul clay, the amount of  $Fe_2O_3 + RO + R_2O$  varies within 8-9%, and the ratio RO /  $R_2O$  varies within 0.2-0.3, which can be assumed to produce sintered products based on it.

Obtaining samples from acid-resistant masses based on enriched clay of the Khodjakul deposit, with the addition of fireclay prepared on its basis, was carried out according to the accepted method in the production of acid-resistant materials.

To impart a number of properties to acid-resistant products, such as heat resistance, water permeability, etc., in the development of experimental compositions, fireclay prepared on the basis of enriched clay from the Khodjakul deposit was used as a thinner. The water absorption of which was not more than 5%.

The acid resistance of finished prototypes was determined after one hour of boiling in concentrated sulfuric acid according to GOST 473.1-81. "Products chemically resistant and heat-resistant ceramic. Method for determining acid resistance." The



mechanical strength, water absorption, heat resistance and other properties of the finished samples were also determined according to the accepted method. Physical and mechanical properties of acid-resistant materials are given in table.2.

For comparison, Table 2 also shows the indicators of acid-resistant materials obtained from the reference mass prepared on the basis of Russian raw materials, the composition of which is given below:

Cambrian clay - 20%, Artemovsk clay (I-grade) - 50%, Lukoshinsky chamotte - 30% [9].

Table 2 Physical and mechanical properties of acid-resistant materials

**Indicator values Indicators** Reference M-1 M-2 M-3 M-4 mass Firing temperature, °C 1100 1100 1100 1100 1200 Water absorption, % 5,0 4,6 4,2 4,4 6,3 Density, g/cm3 2,14 2,16 2,18 2,17 2,12 General shrinkage, % 6,5 7,0 6,2 6,8 Compressive strength, MPa 73 81 83 86 85 Thermal resistance, number of heat cycles 5 5 Acid resistance, % 98,3 98,5 98,7 98,6 98,1

The data in Table 2 show that the physical and mechanical properties of the experimental acid-resistant samples from the compositions of the masses M-1, M-2, M-3 and M-4 have increased indicators compared to those of the acid-resistant samples obtained from the reference mass.

Also from Table 2 it can be seen that the sintering of the reference composition is 1200°C. The sintering of the experimental acid-resistant masses is 1100°C, which is 100°C lower than the standard.

It should be noted that a significant decrease in the firing temperature of experimental acid-resistant masses compared to classical acid-resistant masses mainly occurs under the influence of the fluxing action of the predominant hydromica mineral in the composition of Khodjakul clay, which melts much earlier than feldspar. Since the composition of hydromica contains flux  $(K_2O)$  in the structure of the particles themselves, due to this, the process of liquid-phase sintering begins at low firing temperatures [12]. At the same time,  $K_2O$  forms an alkaline silicate melt, in which  $Al_2O_3$  dissolves and helps to intensify sintering processes in general.

The study of the microstructure of samples from masses M-3 was carried out on a scanning electron microscope. Also, the microstructure of the sample was studied using a Joel electron probe microanalyzer in the form of polished sections.



In SEM images of acid-resistant materials from masses M-3, crystals of mullite, residual quartz and remains of clay material, ferruginous spinel and glass phase are visible. Samples from masses M-3 have pores. In this case, isometric isolated pores predominate, and pores with a tortuous shape are rare. Also, using scanning electron microscopic analysis, it was found that the prototypes from masses M-3 are distinguished by a vein-like merging of hydromica with the main mass (img. 1a and 1b) leading to the formation of a dense structure, and as a result, high physical and mechanical properties.

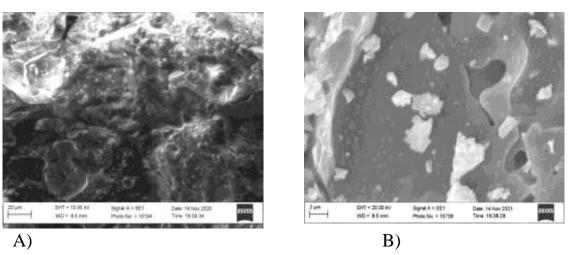


Fig.1. SEM image of acid-resistant samples from mass M-3 fired at 1100°C. Magnification: A) x500; B) x5000.

With the help of an electron probe microanalyzer, in addition to obtaining an image from different parts of the sample, microprobing of specific areas was also carried out and their chemical composition was determined.

Since, the fired samples from acid-resistant masses have a reddish-brown tint. During microprobing, several areas of red-brown color were selected, as well as rare areas with black dots. It was determined that the chemical composition of the red-brown areas refers to the iron compound of aluminum, i.e. ferruginous spinel. The chemical composition of the black fly refers to ferrous oxide.

As a result of studying the microstructure of fired acid-resistant samples from the optimal masses M-3, using the methods of scanning electron microscopic and electron microprobe analysis, it was found that the phase compositions of the synthesized acid-resistant materials are represented by mullite, residual quartz, a spinel-like phase and a small amount of gelenite crystals, as well as a glassy phase, filling gaps between crystals.

Thus, as a result of comprehensive studies, it has been established that, on the basis of enriched Khodjakul clay in the composition of chamote prepared on its basis, it is possible to obtain high-quality acid-resistant materials, such as acid-resistant brick GOST 474-90. "The brick is acid-resistant. Specifications" and acid-resistant tiles GOST 961-89. "Acid-resistant and thermo-acid-resistant ceramic tiles. Specifications (KSH brand)".

## **Conclusion/Recommendations:**

1) As a result of laboratory studies, it was determined that, using the elutriation



method, it is possible to easily separate the original rock into a clay fraction (Khodjakul enriched clay) and a quartz-feldspar fraction.

- 2) A significant decrease in the firing temperature (100°C) of the experimental acid-resistant masses compared to classical acid-resistant masses, mainly occurs under the influence of the fluxing action of the predominant hydromica mineral in the Khodjakul clay composition, which melts much earlier than feldspar.
- 3) In laboratory studies, the possibility of obtaining ceramic acid-resistant materials that meet the requirements of GOST 474-90 and GOST 961-89 based on enriched Khodjakul clay has been proven.

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### MODERN PROBLEMS OF PEDAGOGY AND PSYCHOLOGY

**UDC: 37.02** 

# FORMATION OF RESEARCH SKILLS AND ABILITIES IN YOUTH STUDENTS

Navruzov Saparbay Associate Professor History faculty Urgench State University

Otamuradova Aziza Sultonmurodovna Master of History faculty Urgench State University

otamuratovaaziza@gmail.com

**Annotasiya.** Maqolada Oliy ta'lim tizimida universitet talabasi o'quv ishlarida seminar mashg'ulotlari uchun ma'ruza tayorlash jarayonida ilk ilmiy-tatqiqotchilik malaka va ko'nikmalarini shakllantirish yo'llari ko'rsatilgan.

Kalit soʻzlar. ma'ruza, ilmiy tadqiqodchilik, malaka, seminar

**Аннотация.** В статье речь идет о формирование первоначально научнотворческих умений и навыков при подготовке доклада на семинарских занятиях у студентов первокурсников в системе Высшего образования Республики Узбекистан.

Ключевые слова. лекция, исследование, квалификация, семинар

**Annotation.** The article deals with the formation of initially scientific and creative abilities and skills in the preparation of a report at seminars for first-year students in the Higher education system of the Republic of Uzbekistan.

**Introduction.** Our ancestors, great scholars, gave a genius assessment of science, the essence of science, its importance, role and place in the life of society. However, today, a University student does not always understand that a bachelor's degree should be conducted only in science-related activities. Especially when a student works as a teacher in schools after graduation, he cannot realize that all his aspects are only connected with science, that it is firmly connected with it.

The bachelor of the university is known to work as a specialist historian in research institutes, state archives, museums and research laboratories. Therefore, it is natural that the graduate bachelor's activity is connected with science. It should be noted that the essence of pedagogical activity is inextricably linked with science.

**Literature Review.** Well-known pedagogue V.A.Sukhomlinsky said, "The activity of a teacher is close to scientific research in its essence.[1] " This means that in order to graduate student to work successfully in school, he or she must know the issues in all areas of history, including his or her scientific and theoretical maturity, breadth of knowledge and specialization, and even have his or her own views. The training of such high-potential teachers, as well as the formation of their research skills, is especially important in higher education today.



The content and essence of the concepts of knowledge, skills and abilities in the pedagogical literature:

- 1) "Knowledge is a systematized set of scientific information about existence in the mind of a person in the form of concepts, schemes, certain images";
- 2) "A skill is a set of actions performed according to tasks and conditions based on the acquired knowledge."
- 3) "Qualification is an automated component of conscious behaviour. [3] " It should be noted that the teacher's work is complex and requires good pedagogical and methodological training, as well as research skills. This means that the teacher must master the methodology of independent research activities.

No wonder such thoughts are repeated. This is because most students spend a lot of time mechanically memorizing knowledge. Describing the situation, the great writer and critic Gertsen recalled his student years: "The moments of saying goodbye to the university are approaching. We have a lot of responsibilities to it, and the university has given to student a lot of knowledge, especially in science, and most importantly, the methods I needed and I learned in addition to the sum of my knowledge.[4]"

It is no coincidence that the famous scientist, academician A.D.Alexandrov said in this regard, "Skills are greater than knowledge, because skills create innovation, and only knowledge itself is nothing.[5] "

**Research Methodology.** The purpose of higher education is to prepare students for research activities independently. This requires the student to have a wide range of theoretical knowledge, constantly improving their knowledge in the higher education system. That is why there are many forms of independent work for a student in university education. In particular, the preparation of various abstracts, lectures and abstracts, writing term papers, etc. Today, in the higher education system, a bachelor writes 4-5 course papers in the process of passing a full course. It should be noted that the learning process inevitably brings the student's activity closer to the researcher's activity.

In the Address of the President of the Republic of Uzbekistan Sh.M.Mirziyoev, said to the Oliy Majlis: "We will continue to work intensively to find more science in our country, to educate our youth as owners of deep knowledge, high spirituality and culture, to form a competitive economy.[6]"

Finally, the final stage of a student's creative research work at the university is the graduate qualification work. The qualification work summarizes the student's activity during 4 academic years. As the students get prepared for their dissertation, they fully apply theoretical knowledge and the studied method in their work style.

The skills and abilities acquired by the undergraduate student in the process of working with literature, various sources and archival documents are constantly improved, refined and strengthened. So, for a student, the process of preparing for qualifying work is a process of developing independent creative activity. It is essential that the preparation of the student's qualification diploma work is a report document for the graduate.



Analysis and Results. It can be said that the same graduation qualification work fully and visually demonstrates the level of methodological and theoretical maturity of the young specialist, while ensuring the methodological preparation of the student. Thus, the graduate qualifying work is a responsible stage in the professional preparation of the student as an important research work for the bachelor. It should be noted that various information and materials are extremely important for research work. In particular, in the process of choosing a topic and working on it, the issue of selection of non-verbal research literature is also difficult. Choosing a scientific research works topic is a particularly responsible step.

It is for the research student that the period of topic selection for a qualification work is the pioneering stage for starting a job. This period is known to be important for most students to take topics that seem "easy" and "light". Student activity is very important in this event. In this case, the work will be easier if the student chooses the topic according to his interests. The scientific field of the student is formed in the whole educational process. It is the student's interest in either world history or a particular part of homeland history that puts an end to some of the difficulties in his or her career. It is also important that student actively participates in lectures or seminars. The qualifications and experience of the professor-teacher are important in ensuring that the student is interested in any scientific problem. In particular, the relevance of the chosen topic is a factor that increases the convenience and interest of the student.

Another situation in this regard is noteworthy. The relevance of the topic is its scientific and theoretical significance, criteria that should be considered when choosing a topic. The relevance of the topic is not only for the student also represents the interest of the department. The researcher emphasizes the importance of choosing a topic for the student, even in a figurative sense "If the theatre starts with a hook in the lobby for the audience, and for the first-year student who has taken the first step in science, the problem to be discussed in the seminar is to choose a topic for the lecture. [7]

Indeed, preparing for a lecture in a practical lesson of a theoretical course is also the student's first experience in research. So, such a result is the first independent step in the science of the first-year student of the university. It should be noted that a student who has started his or her first creative scientific work knows exactly why, for what purpose he or she is doing this work or not, and a first-year student can successfully complete the task in his or her work only if he or she has first research skills.

**Recommendations.** "My heroes,- wrote the famous Italian researcher Eco Umberto,- are an inquisitive student and a teacher who develops this interest. " In this case, the choice of topic for the student must meet the following requirements:

- 1. The chosen topic is of interest and sincerity of a particular student (related to the subject of the exam, the books which or she reads and the political, ideological and spiritual culture of the graduate).
- 2. The main reading texts should be at a level that can be mastered (both physically and spiritually suitable for a particular student).
- 3. The main texts should be at a level that can be clearly mastered intellectually for the student.
- 4. The chosen methodology should be tailored to the specific student's capabilities.



**Conclusion:** to conclude, in addition to scientific and theoretical knowledge in the preparation of students for research activities, the formation of skills and competencies necessary for research activities is an important and topical issue for university professors.

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### **UDC: 372.2**

# THE IMPORTANCE OF THE "DIGITAL COMPETENCE" MODEL IN THE DEVELOPMENT OF DIGITAL SKILLS IN STUDENTS

## Sheraliyev Odiljon Shukhratjon ugli PhD student of Kokand SPI sheralievodiljon@gmail.com

Annotatsiya: Ta'limni raqamlashtirish sohasidagi tadqiqotlar tahlili shuni koʻrsatadiki, raqamlashtirish bosqichi ta'limni kompyuterlashtirish kabi muhim muhimdir. Yurtimizda ta'limni raqamlashtirish, avvalambor, oʻqituvchilarni raqamli tehnologiyalardan samarali foydalanishga tayyorlash va motivatsiya berish orqali amalga oshirilishi kerak. Maqolada "raqamli kompetensiya" modeli raqamli koʻnikmalarni tasniflash va maktab oʻquvchilarining rivojlanish dinamikasini baholash usuli sifatida taqdim etilgan.

Kalit soʻzlar: raqamli kompetensiya, raqamli savodxonlik, raqamli kompetensiyalar modeli, axborot kompetensiyasi, matematik kompetensiyalar.

**Аннотация:** Анализ исследований в области оцифровки образования показывает, что этап оцифровки так же важен, как и компьютеризация образования. Оцифровка образования в нашей стране должна происходить, прежде всего, путем подготовки и мотивации учителей к эффективному использованию цифровых технологий. В статье представлена модель «цифровой компетенции» как способ классификации цифровых навыков и оценки динамики развития школьников.

**Ключевые слова:** цифровая компетенция, цифровая грамотность, цифровая модель компетенций, информационная компетенция, математическая компетенция.

**Abstract:** The analysis of the researches in the field of Education digitization shows that the digitization stage is just as important as the computerization of Education. Digitization of education in our country must first of all be carried out by



training and motivating teachers to use digital theology effectively. In the article, the model "digital compensation" is presented as a way of classifying digital skills and assessing the dynamics of development of schoolchildren.

**Keywords:** digital competency, digital literacy, digital competency model, information competency, mathematical competences.

**Introduction.** Every day, the comprehensive development of young people and the educational process is carried out in a digital environment. We are all in the process of moving to a digital system of education. The ability to communicate and learn in the virtual world is becoming a criterion for student success in communication with the environment and in education. Existing models and teaching approaches need to be reconsidered, taking into account the development of general digital literacy skills to develop the skills to use digital technologies in the younger generation.

**Literature review and methodology**. Despite the fact that the first information about the digital world and the skills of using digital devices is given to children in the family, the issue of teaching them to use information technology has become a topic of scientific discussion of many scientists (Y.A.Pervin, I.V.Sokolov, T.B.Kaziahmedov, A.A.Oleinikov, E.V.Tikhonov and others). Today, with the rapid development of digital technology, a new approach to the organization of work and education, resulting from the digitalization of our lives, is becoming increasingly important, especially in raising the digital literacy of the population.

The concept of digital literacy refers to the ability to accurately and securely receive, manage, integrate, share, create and evaluate information through digital devices and network technologies to participate in economic and social life . Digital literacy includes ICT skills, media literacy, interpersonal skills in the digital world, and other similar competencies.

Our President addressed to the Oliy Majlis, the active transition to the digital economy has been identified as one of the priorities for the next 5 years. It is no coincidence that this year has been declared the Year of Science, Enlightenment and the Digital Economy.

Over the past two years, the Ministry of Information Technology and Communications has undertaken extensive and comprehensive work. At the same time, today the ministry faces important tasks reflected in the Petition. The main task is to implement the concept of "Digital Uzbekistan - 2030", which covers all areas and sectors. The implementation of such a large project will contribute to the complete and comprehensive transformation of the economy of our country, to ensure competitiveness. A number of large companies and state corporations are interested in developing digital skills for professionals in the future.

Skills such as "programming, robotics, artificial intelligence" are one of the most highly skilled skills needed for future professionals.

The article presents the "digital competence" model as a way to classify digital skills and assess the developmental dynamics of school students. In this paper, digital competencies refer to the ability to solve a variety of problems in the use of information and communication technologies (ICT):

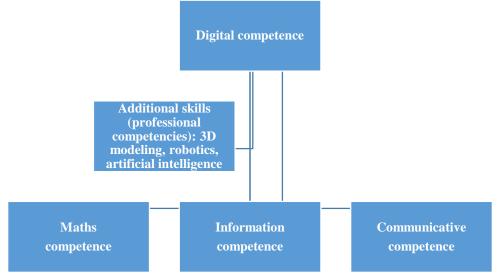


- □ creation and use of content using digital technologies, including information retrieval and sharing, answering questions, collaboration with other people (general powers);
- □ computer programming (professional competencies).

**Discussion.** Underlying the concept of digital skills is an automated model of action based on the knowledge and skills in using digital devices, communication networks and applications to receive and manage data.

Recent social research to determine the level of digital literacy of adolescents shows that the majority of adolescents in our country are aware of the possibilities of the Internet, for them to work on new gadgets, information from several sources at once it is not difficult to obtain, but they do not understand the threats of the digital environment and believe in its security [2].

Thus, systematic work on the development of digital competencies in the younger generation, including the development of safe behaviors and digital interaction skills, is becoming increasingly important. In describing the digital competence system, we consider the following "Digital Competence Model".



Picture 1. Digital Competence Model.

## List of digital competencies:

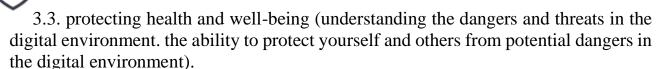
- 1. Mathematical competences.
- 1.1. ability to work with characters, mathematical speech literacy;
- 1.2. ability to separate basic and important information, summarize mathematical materials and work with text assignments;
- 1.3. ability to draw conclusions and think logically.

## 2. Information competences:

- 2.1. work with data (work with spreadsheets);
- 2.2. digital content creation (media and text files, sites, personal pages);
- 2.3. programming, creating applications.

## 3. Digital communication (communication competence):

- 3.1. work with internal means of communication (messengers);
- 3.2. teamwork on projects (ability to set clear goals, assess risks, assign responsibilities, and describe performance results;



## 4. Professional competencies (additional skills):

- 4.1. projects in the field of robotics;
- 4.2. 3D modeling (knowledge of at least one 3-D program);
- 4.3. technical skills (practical application of the basics of electronics and robotics, working with microprocessor technology, 3D printing machines, measuring techniques, the ability to interact with artificial intelligence).

**Result.** To monitor the dynamics of the development of digital competencies in the educational process, the table "Digital Competence Model" was developed:

Table 1 Digital Competence Model.

	Name of the		Level of competence formation			
No Competence		Structure of Competence	Time to start reading	End of study		
1	Maths Competence	ability to work with characters, mathematical speech literacy; ability to separate basic and important information, summarize mathematical materials and work with text assignments; ability to draw conclusions and think				
		logically; General				
2	Information Competences	Working with data (working with spreadsheets); Digital content creation (media and text files, sites, personal pages); General				
		Working with internal means of communication (messengers);				
3	Digital	Ability to work in a project team (clearly set goals, assess risks, assign responsibilities and describe results)				
	communication (communication competence);	Protecting health and well-being (understanding the dangers and threats in the digital environment. The ability to protect yourself and others from potential dangers in the digital environment).  General				
4	Professional competencies (additional skills)	Robotics projects; 3D modeling (knowledge of at least one 3-D program); Technical skills (practical application				
		of the basics of electronics and				



robotics, working with microprocessor technology, 3D printing machines, measuring techniques, the ability to interact with artificial intelligence).	~		
Total		microprocessor technology, 3D printing machines, measuring techniques, the ability to interact with	
1000		Total	

It is recommended to use the following form to assess the development dynamics of digital competencies:

**elementary level** - the availability of skills and their application under the supervision of others:

**intermediate level** - general and systematic understanding of science; be able to apply skills by following specific guidelines;

**high level** - the ability to work effectively in this area.

Conclusion. To sum up, research in the field of digitalization shows that today the issue of digital technologies, the safe and efficient use of Internet resources, the issue of increasing the digital literacy of schoolchildren is of great importance. The foundation of digital literacy consists of digital competencies that help solve a variety of problems using information technology. The development of digital competencies in school education allows adolescents to be effective in education, work and social life, and to take a creative approach to solving problems.

To this end, a Digital Competency Model has been developed to develop digital skills. This model can be used to organize training courses or to identify and develop an individual student's field of study.

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# METHODOLOGY OF TRAINING FUTURE ELEMENTARY CLASS TEACHERS ON THE SUBJECT OF «UPBRINGING»

Khalilov Farhod Furkatovich
PhD student,
Department of General Pedagogy
Andijan State University
khalilovfarhod@gmail.com

Annotatsiya: Ushbu maqola bo'lajak boshlang'ich sinf o'qituvchilarini kichik yoshdagi o'quvchilarni ijtimoiy tarbiyalashga tayyorlash muammosini ko'rib chiqadi. Bo'lajak o'qituvchilarning nazariy va amaliy tayyorgarligiga, ta'limning nazariy va uslubiy asoslarini bo'lajak o'qituvchilar tomonidan o'zlashtirilishiga alohida e'tibor qaratiladi; o'z-o'zini tarbiyalashga bo'lgan ehtiyojni rivojlantirish; talabalarning ijodiy salohiyatini rivojlantirish. Ushbu fan yosh mutaxassislarni shakllantirishda axloqiy munosabatlarning kasbiy-pedagogik madaniyatini shakllantirishga qaratilgan.

Kalit soʻzlar: Kelajak oʻqituvchisi, boshlangʻich maktab, tayyorgarlik, ijtimoiy ta'lim, texnologiya, paradigma, insonparvarlik, pedagogika, oʻqituvchi, fan, novator, ijodkorlik, modernizatsiya, insonparvarlik, ta'lim-tarbiya tizimi.

**Аннотация:** В данной статье рассматривается проблема подготовки будущих учителей начальных классов к социальному воспитанию младших школьников. Особое внимание уделяется теоретической и практической подготовки будущих учителей, усвоение будущими учителями теоретических и методических основ воспитания; развитие потребности самообразования; развитие творческого потенциала студентов. Эта дисциплина нацеливает на формирование профессионально-педагогической культуры нравственных установок в становлении молодых специалистов.

**Ключевые слова:** Будущий учитель, начальные классы, подготовка, социальное воспитание, технология, парадигма, гуманизм, педагогика, педагог, наука, новатор, творчество, модернизаця, гуманизм, воспитательнообразовательная система.

**Abstract:** This article examines the problem of preparing future primary school teachers for the social upbrining of younger students. Special attention is paid to the theoretical and practical training of future teachers, the assimilation by future teachers of the theoretical and methodological foundations of education; development of the need for self-education; development of the creative potential of students. This discipline aims at the formation of a professional and pedagogical culture of moral attitudes in the formation of young specialists.



**Keywords:** Future teacher, primary school, preparation, social education, technology, paradigm, humanism, pedagogy, teacher, science, innovator, creativity, modernization, humanism, educational and educational system.

**Introduction.** Currently, there is a process of modernization of education aimed at changing the content of education, approaches, methods. The educational paradigm is changing: different relationships are proposed, the ideas of humanistic pedagogy are being implemented, active methods of teaching and upbringing are being introduced. The future teacher needs to know modern technologies, developed according to the latest achievements of psychological and pedagogical studies, and be able to apply this knowledge in their professional activities. In addition, pedagogical science is rich in the innovative experience of teachers who are creatively approaching the educational process, which can also be used in modern conditions in practice.

In accordance with the Concept for the modernization of education for the period up to 2030, "Upbringing, as a top priority in education, should become an organic component of pedagogical activity, integrated into the overall process of learning and development." In addition to learning and the development of activities, education is moving into the category of a way of understanding, the philosophy of modern education, which determines the style of all the work of a teacher. The modern upbringing and educational system should lead to child understanding and internal acceptance of the meaning of human life, to promote the free, natural, internally conscious perception of humanistic values by each pupil. In the process of mastering educational traditions and innovations, the future teacher masters the values of a social and pedagogical nature.

Literature review and methodology. The high level of difficulties that they experience in the process of organizing pedagogical activity is due, in our opinion, to:

- insufficient connection between theory and practice, a low level of knowledge about the specifics of professional skills;
- about innovative technologies, with the help of which it is possible to effectively carry out personality-oriented learning, positive interaction with the subjects of the pedagogical process;
- insufficient level of mastering the task approach in the use of professional skills in the practice of primary school. The result of social education will be a socially formed personality, ready for conscious activity and independent creative activity, capable of setting goals and solving socially significant tasks.

Each person experiences certain difficulties when taking first steps in their profession. Everything seems unfamiliar, incomprehensible and requires enormous efforts to achieve this goal.

The formation of a teacher is much more difficult than a person of any other profession; for successful formation and development, it is not enough for him to have a set of pedagogical knowledge, skills and abilities acquired in an educational institution. Personal qualities play a huge role here.

A particular difficulty for a young teacher is psychological contact with students, especially with young tartar. Also problems in establishing contact with parents. Young specialists are often lost, do not know how to get out of difficult, conflict situations. It



is important to note here that joint extracurricular work helps to establish relationships with students and their parents.

Social education takes a special place among the components of the process of socialization. It is social education that contributes to the formation in a person of the qualities he needs to solve personal problems, determine the strategy and tactics of building relationships with other people.

**Discussion.** For a teacher today it is important not only to master the forms, means, methods of education, to study the experience gained, but also to find an individual way of using them, the optimal combination in each specific pedagogical situation, to create relevant pedagogical technologies, to select and revive the productive traditions of organizing educational work of the past years, become the author of your own concept of education. In the context of cardinal changes in the socio-economic life of our society, humanization and democratization of the modern school, the need for the training of highly qualified specialists has increased.

The ability to correlate precisely formulated goals and ideals with technologies, forms of interaction between teachers and students and the content of education and upbringing is the most important criterion for the innovative culture of a modern teacher. The methodology of upbringing primary schoolchildren is a didactic course, the main purpose of which is to prepare a future specialist for the conscious implementation of an integral pedagogical process. Improving the professional and pedagogical training of the future primary school teacher should be maximally focused on the formation of his individuality and the development of creative thinking, which is unthinkable without awareness of the deep connections of pedagogical phenomena at various stages of upbringing and primary education.

Therefore, the discipline "Methods of upbringing" determines the model of training a teacher, a competent organizer of the educational process, capable not only of joining the system of an innovative school, but also independently solving non-standard tasks of its further improvement and providing an individual trajectory of self-determination and versatile development of a child as a self-actualizing, self-fulfilling personality ... The leading methodological approaches in the content choice, forms, and methods of teaching students are: personal-activity, cultural, anthropological, psychological concept of human individuality as an intrinsic value, acme logical concept focused on the holistic development of the personality of the future teacher. The educational system presented in the program is designed to help students "find themselves", choose and build their world of values, master creative ways of solving pedagogical problems, discover the reflective world of your own "I" and learn to manage it. And also to achieve the correspondence between the theoretical and practical training of future teachers, it is necessary to create an educational environment that includes:

- observation by students of the real educational process in primary grades in the study of psychological and pedagogical disciplines (by demonstrating educational videos or visiting school) and analyzing the results of activities;
- the use of educational material, diverse in content and forms, which reflects the versatility of the teacher's professional tasks;



- providing the student with the freedom to choose the methods of completing educational tasks;
- the use of active forms and teaching methods (business games, solving problem pedagogical situations) in classroom classes, which put students in the position of researchers, encourage the identification of creativity in the process of applying knowledge in practice;
- constant attention of the teacher to the content, analysis and assessment of individual methods of educational activity, which stimulates the student to understand not only the result, but also the process of his work;
- development and use of individual training programs that take into account the stages of the formation of skills, and their coordination with the system of appropriate control.

**Result.** We laid the basis for the mastery of innovative technologies for teaching and upbringing of primary school children by future primary school teachers, based on the idea that the basis of pedagogical activity is the solution of a system of a special kind of tasks for organizing the educational process. Presenting the content of the lesson in the form of a cognitive task, the teacher immerses younger students in the natural situation of acquiring knowledge.

**Conclusion.** In conclusion, I would like to say that education as a social problem can be solved only if society, the state, mobilizes maximum personal resources for educational activities. Universities implement educational programs in a wide range of vocational training areas and specialties, carry out not only vocational training, but also retraining and advanced training of personnel, are scientific and methodological centers. Thus, the declared technologies make it possible to bring the training of a future primary school teacher in the "college - university" system to a qualitatively new level that meets the requirements of the time and ensures the implementation of the requirements of the state educational standard.

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### MODERN PROBLEMS OF PHILOLOGY AND LINGUISTICS

UDK: 80/81+811.111

# THE ROLE OF TOPONIMICAL STUDIES IN THE FIELD OF LINGUOCULTUROLOGY

Sobirova Nodirabegim Murodjon qizi Lecturer at Kokand University nodirabegimsobirova600@gmail.com

Annotatsiya: Tilshunoslik jamiyatida lingvokulturologiya sohasidagi toponimik tadqiqotlar muhim oʻrin tutadi. Shunga qaramay, til tarixi jamiyat va xalq tarixi bilan chambarchas bogʻliq boʻlganligi sababli, til materialini oʻrganishning ajralmas qismi boʻlgan toponimik ma'lumotlarni toʻplash va tahlil qilish ham ilmiy, ham ma'naviy jihatdan dolzarb boʻlib qolmoqda. Buning sababi shundaki, tarixiy uzoq davrlar mahsuli boʻlgan toponimik materialni tahlil qilish nafaqat tilshunoslik, balki til haqidagi tarix, etnografiya, geografiya va hatto geologiya fanlaridan ham ma'lumot beradi

**Kalit soʻzlar:** lingvokulturologiya, toponimika, tilshunoslik, millatlararo munosabatlar, onomastika, milliy mentalitet, etnolingvistika, frazeologik tilshunoslik, leksikografiya, lingvodidaktik tilshunoslik, sotsiologiya.

**Аннотация**: Топонимические исследования в области лингвокультурологии имеет большую роль в обществе языкознания. Тем не менее, поскольку история языка тесно связана с историей общества и людей, сбор и анализ топонимических данных, которые являются неотъемлемой частью изучения языкового материала, остаются актуальными как с научной, так и с духовной точек зрения. Это связано с тем, что анализ топонимического материала, который является продуктом исторически длительных периодов, который дает информацию не только по лингвистике, но также по истории, этнографии, географии и даже геологии о языке.

**Ключевые слова:** лингвокультурология, топонимические исследования, лингвистика, межнациональные отношения, ономастика, национальный менталитет, этнолингвистика, фразеологическая лингвистика, лексикографика, лингводидактическая лингвистика, социология.

**Abstract**: Toponymical research in the field of cultural linguistics has a large role in the society of linguistics. Nevertheless, since the history of the language is closely related to the history of society and people, the collection and analysis of toponymical data, which are an integral part of the study of linguistic material, remain relevant both from a scientific and spiritual point of view. This is due to the fact that the analysis of toponymical material, which is the product of historically long periods, which provides information not only on linguistics, but also on history, ethnography, geography and even geology about language.

**Keywords**: linguoculturology, toponymic studies, linguistics, interethnic relations, onomastics, national mentality, ethnolinguistics, phraseological linguistics, lexicography, linguodidactic linguistics, sociology.



**Introduction.** Toponymic research in the field of linguoculturology has an important role in the society of linguistics. Nevertheless, since the history of a language is closely connected with the history of society and people, the collection and analysis of toponymic data, which are an integral part of the study of linguistic material, remain relevant from both scientific and spiritual points of view. This is due to the fact that the analysis of toponymic material, which is the product of historically long periods, provides information not only on linguistics, but also on history, ethnography, geography and even geology about the language.

Linguistics is a separate branch of linguistics. It puts on the agenda issues of the nation, economic, political, cultural, and scientific relations between countries, as well as intercultural communication processes in the field of linguistics, worldview and linguistic culture of the national identity of the language. This new direction is linguistics and cultural studies: Linguistics and culture studies is a new field that has its own direction and subject. The growing interest in the concept of "language – culture" makes it necessary to define the concepts included in the terminological layer. The concept of "language – culture" unites all the sciences of mankind because it is impossible to study a person outside of his language. Thus, the language reflects the presence of national culture and the main forms of expression.

The problem of language, culture, interethnic relations is not a new phenomenon. Since the beginning of the 19th century, German scientists, the Grimm brothers, have solved this problem. It is an open secret that they tried to study. An integral part of the concept of "language - culture" initially actually appears in the works of W. von Humboldt. According to his opinion, [13.251] the language "Spirit of the people" is the "original image" of the people. Culture is primarily reflected in language. Therefore, culture manifests itself only through language. The idea that language is the main concept in culture and it is only through language that a person enters culture has its importance.

According to the modern requirements of science, the main goal of "Uzbek Linguistics" [4.16] is to find reasonable and adequate solutions to controversial issues in general and private linguistics in the country. To do this, it is necessary to conduct scientific and practical research that meets the modern requirements of this area, as well as to find ways to improve the teaching of this area in the field of education on the basis of scientific, interesting, and controversial evidence. Of course, the independence of our country has created unique objective and subjective opportunities in this area. **Literature review.** The first studies on linguoculturology in Uzbek linguistics were carried out by such scientists as Sh. Safarov, N. Makhmudov, D. Khudoyberganova, Sh. Usmanova. Linguistic and cultural features of zoonyms, articles with a zoonymic component were studied by D. Tosheva. Also, Uzbek phraseology and parems were studied by Sh. Rakhmatullaev, B. Yuldashev and other young researchers. [1.16]

The problems of toponymy arose an interest of people for a long time. Our ancestors - Abu Raykhan Beruni, Mahmud Kashkari, Zahiriddin Muhammad Babur and other scientists paid great attention to the interpretation, history and correct spelling of toponyms. Narshakhi, who wrote the history of Bukhara at the beginning of the 10th century, wrote that Bukhara had such epithets as Numuchkat Madinat-at-tujor



(city of merchants), Madinat Sufriya (city of copper workers), Fakhira. Narshakhi writes that some parts of Zerafshan are called Ruduzar, Haromk, and Shopirkan actually means Shopur kom, this is "Shopur-dug canal". A manuscript written in Bukhara during the Eastern Renaissance, whose author is still unknown, states that the original name of the Syrdarya was Khashart. Another of our compatriots who lived and worked at that time was Mahmud Kashkari. He was a prominent linguist and has had his unique place in the world of science as "a tourist". "Devoni lugatit turk" by Mahmud Kashkari is one of the most famous works of its time as a dictionary of toponyms. In addition to the nearly 100 known names on the accompanying world map, the Devonian text contains many minor names with geographical and etymological explanations. The second stage of the Eastern Renaissance. Abu Rayhan is characterized by Beruni's contribution to the development of geography, including toponymy. The history of place names of Abu Rayhan Beruni and his interest in their correct spelling can be inferred from the information he wrote. He also writes about the laws of toponymy in Beruni India. According to the scientist, the meanings of the words have changed due to the fact that the Greeks and Arabs distorted the Turkic words.

Scientific conferences on toponymy and spelling of geographical names are held, the "Department of Toponymy" was created at the Institute of Geography. In particular, the Department of Toponymy was created at the Azerbaijan Institute of Geography, which for many years was headed by the old toponymist Ramzi Yuzbosh. The importance of toponymy in cartography and, conversely, the role of cartography in toponymy were highlighted in the studies of E.M. Pospelov. K.Kankashbaev, A.Abdramonov and Toychibaev in Kazakhstan, S.Otaniezov in Turkmenistan, B.A. Dzhuchkievich, S.Koraev, Kh.Gasanov, T.Nafasov, Z.Dosimov created many works, articles, monographs on the toponymy of Uzbekistan. There are also institutions of toponymy and transcription in foreign countries. For example, the Committee on Geographical Names in the United Kingdom, the Geographical Council in the United States, the Council on Toponymy and Dialectics in Belgium, and others. A geographical bulletin has been published in Poland, in which oceans, seas, bays, straits, peninsulas and islands are shown in Polish. Sweden publishes special journals on geographical names. V.A. According to Nikonov, [10.14] a toponymist should not be a linguist or historian, but a geographer. In other words, a scientist who wants to study geographical names must be a complex specialist with a deep knowledge of both the linguistic style and the historical style and geographical style of toponymic research.

Research Methodology. It should be noted that linguoculturology is a science related to the science of culture and linguistics. It represents a clear unity of the concept of national and cultural characteristics in science and its linguistic reflection. One of the goals of linguoculturalism is to preserve culture and pass it on to future generations, with a broader interpretation of the method of studying language patterns in their parts. One of the main tasks of linguoculturology is the study and description of the interaction of language and culture. According to V. Telia, [11.14-16] one of the leading scientists in the field of linguistic theory, the study of the influence of language and culture lies on the study of language and etymology, language and national



mentality. Analysis of the movement and execution order of the influence of language and culture is a set of practical techniques of linguoculturological methods. It should be noted that different methods can be used in the research process, but conceptual, descriptive, contextual, practical, comparative methods are appropriate in this area.

To cover the topic, methods of analysis, synthesis and comparison were used. In particular, it was used in the works of Uzbek toponymists Z.Dosimov, Kh.Gasanov, S.Koraev, T.Nafasov, T.Enazarov, in the works of such famous scientists as V.A.Nikonov, E.M.Murzaev, A. L.Khromov, A.V.Supurenskaya, who have been studied using the composition of diachronic, synchronous, toponyms methods and techniques as comparatively, complexly (scale) and statistically.

Analysis and results. The modern development of human language and its study in various aspects confirms the existence of the linguistic features mentioned above. The problem of language and its interaction with various social phenomena today attracts the attention of linguists. In world linguistics, one of them is the relationship between the language and its users. The study of linguistic and cultural relations from a linguistic point of view is also one of the most important tasks of modern linguistics. Questions of ethnolinguistics and linguoculturology, phraseological linguistics, conceptual, lexicographic, linguo-didactic linguistics, and sociology began to arise. All these areas are also unique in that they relate to the disclosure of the features of human language as a factor or means that reflects ethnic culture. The language expresses these features more vividly and vividly in lively, practical speech.

The question of which science deals with toponymy: linguistics, geography or history is till discussion. At the same time, this point of view does not contradict the idea that it should be considered as a branch of linguistics. Although toponymy is considered in the context of onomastics from the point of view of nouns, it also has its own characteristics. First, the lexical units considered in toponymy are functionally limited to the names of geographical places. Secondly, although these units are common to all onomastic units. From the point of view of terminology, they have certain differences in construction models, the role of different extralinguistic situations in the process of naming, toponymic construction, although the Uzbek language is fueled by the laws of word formation. In addition, such features are the presence of their own methods of construction, sociolinguistic factors of the transition of a word from an appellative to an onomastic state, stagnation and instability in the preservation of names. From a sociolinguistic point of view, the name is also a linguistic phenomenon. Hence, appearance, stabilization or vice versa. Changing the meaning of toponyms depends on the fate of society. It follows that from the very first days of the existence of man as a community, that is, the next stage in the development of language and society, it became necessary to name the place where they lived and their environment. This need originally arose from a geographical point of view. To get a destination, or to distinguish one destination from another, is one of these geographic needs. The original state of these names could have the same meaning as the archaeological remains that have come down to us today, such as various symbols engraved on stones.



However, the naming process is becoming more and more a matter of language and humanity. The language grew and improved along with its cultural development. We don't know how stable the original place names are. But it is obvious that over the past thousand years there have been several changes, updates. For this reason, scholars of toponymy argue that although it is possible to reconstruct the processes that preceded the emergence of writing, it is extremely difficult to determine the etymology of many ancient toponyms. There are different views on the stability of toponyms. In fact, only after the appearance of the record, names were assigned to geographical objects, but this is not yet one system, because it is rarely necessary to agree on the name of an object, to make appropriate decisions on this matter. Usually, the natural way of life of people, habits prevail in the naming of places. The naming of places based on the geographical landscape, relief, or, on the basis of the ethnic composition of the peoples living here, is based on this naturalness and habit. At the moment, those who gave the names of the places of appropriation could be known to people, its meaning and the reasons for which it was named. It is not uncommon to note in writing that there is a naming tradition and that it is called that.

As the distance between the naming and studies on that name increases, so does the reason for the naming and the etymology of the names. Nevertheless, since the history of a language is closely connected with the history of society and people, the collection and analysis of toponymic data, which are an integral part of the study of linguistic material, remain relevant from both scientific and spiritual points of view. What for? This is due to the fact that the analysis of toponymic material, which is the product of historically long periods, provides information not only on linguistics, but also on history, ethnography, geography and even geology about the language. The people who lived and live in the areas affected by these names provides additional information on the ethnic composition, ethnography and geographical landscape.

## Conclusion.

- 1) The study of toponymy is of great importance for the history and theory of language.
- 2) Many place names are very old. Comparing the geographical names mentioned in the original monuments with their later forms and their current pronunciation, one can find out changes in the vocabulary of the language, in the original form of words.
- 3) As a result, if we conclude, the role of toponymic research in the field of linguoculturology is of great importance for the languages of the world.
- 4) Studying the cultures of peoples, we cannot ignore the units of toponymic research. If we want to learn the language of one people without knowing the culture, we will never improve it.

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#### **UDK: 81**

# THE CAUSE OF PRAGMATIC CONCEPT FORMATION (RELEVANCE, INFERENCE AND IMPLICATURE PHENOMENA)

Bekmanova Sayyora Shokirjonovna Master`s student of Linguistics: English of Urgench state university, Uzbekistan bekmanovasayyora097@gmail.com

Madaminova Qunduz Alimbayevna Teacher of the Foreign Philology Faculty at Urgench state university, Uzbekistan

qunduz.m@urdu.uz

**Annotatsiya:** Ushbu tadqiqotning maqsadi pragmatik mazmunni shakllantiruvchi hodisalarni tadqiq qilish, relevantlik, inferensiya va implikatura hodisalari haqida qo'shimcha ma'lumot berish va ularni misollar bilan qo'llabquvvatlashdir.

**Kalit so'zlar:** pragmalingvistika, nutqiy muloqot matni, nutq akti, ma'no, relevantlik, inferensiya va implikatura.



**Аннотация:** Целью данного исследования является исследование факторов, которые приводят к формированию прагматических понятий, предоставление дополнительной информации о релевантности, умозаключениях и импликативных явлениях, а также их пояснение примерами.

**Ключевые слова:** прагмалингвистика, коммуникативный текст, речевой акт, смысл, релевантность, умозаключение и импликатура.

**Annotation:** The purpose of this study is to research the factors that lead to pragmatic concept formation, to provide additional information on relevance, inference, and implicature phenomena, and to support them up with examples.

**Key words:** pragmalinguistics, communicative text, speech act, meaning, relevance, inference and implicature.

**Introduction**. One of the phenomena which has cognitive nature of the verbal communication text is the phenomenon of relevance. Psychologists Dan Sperber and Der Dre Wilson propose to look at this principle as a phenomenon that ensures verbal communication success as well as the meaningful formation of the communicative text [3]. Relevance is, first, a specific semantic coherence, which requires meaning correspondence of speech act to the meaning of the act from the text. Second, a certain speech structure must be appropriate to the communication environment and text, and only then can the listener "digest" the transmitted information quickly and easily. Therefore, the authors of the principle propose to measure the degree of relevance with the contextual effect to be achieved: "The validity of this or that hypothesis in a given text is determined by its contextual effect in this text."

Let's compare the following communicative texts:

- 1.a) Guest: I'm tired, shall we leave now.
- 1.b) Host: I know that you are tired, but Pilaf is going to be ready now
- 2.a) Guest: I'm tired, shall we leave now.
- 2.b) Host: Pilaf will be served soon.

Imagine what result was achieved in communication through speech (1.b), what effect was achieved in terms of mutual respect?! The next sentence (2b) is structured in a tone appropriate to the communication text content, so it is possible to assume that its usage will lead to the communicative result [4].

From the given example it is clear that relevance is determined by logical analysis. However, not everyone prefers the fact that such analysis has a very formal-deductive form, because it should be borne in mind that textual propositions can be distinguished by inductive analysis, as well as on the basis of probabilities.

**Research methodology.** Another way to draw semantic conclusions based on various logical-semantic actions is to guess and understand what the speaker means. This method is called conversational inference. For example, when you hear the words "Winter has come." you may conclude that the speaker is advising you to "Get your warm clothes in the cold." But the conclusion is that the speaker is probably saying, "Heat the home." This is probably why Makarov emphasizes the need to distinguish between two types of inference, which can be performed on the basis of deductive and inductive logic actions [6].

The conclusion reached on the basis of deductive action is as follows:



- 1) If no one is answering the call, then no one is at home.
- 2) There is no answer to the call.
- 3) There is no one at home.

An example of inductive inferences and a possible conclusion:

- 4) Abbas went to school.
- 5) Abbas is a schoolboy.

In distinguishing semantic interferences that differ on the basis of deductive and inductive actions, H.P. Grays recommends relying on the practice that cannot deny a possible conclusion [1,2].

- H.P. Grays explains the difficulty of refuting a deductive conclusion in the following example:
  - 6) If Socrates is a man, he is mortal;
  - 7) Socrates is a man;
  - 8) There for Socrates is mortal.

Judgment 8 is true because the evidence in sentences 6 and 7 is true. There is no denying the inductive argument:

- 9) I have dug up 1001 carrots;
- 10) Everyoneofthe 1001 carrots is orange;
- 11) Therefore, all carrots are orange.

But if another judgment is added to this line, the conclusion will be incorrect [2]:

- 9.b. I have dug up 1001 carrots
- 10.b. Every one of the 1001 carrots is orange.
- 12.b. The 1002nd carrot is green.
- 13. Incorrect: Therefore, all carrots are orange.

The addition of a sentence (12b) to the text leads to a vague and incorrect form of the evidence and the conclusion that follows from it. Probable-inductive inference performed by the listener is important for the development of the dialogue text, there is a need to constantly compare the conclusions and check their correctness in order to understand the content of speech structures and continue the exchange of ideas [4].

Analysis and results. Now we want to touch on the issue of text implicature. H. Grays was one of the first to propose to consider the implicature as a phenomenon of text pragmatics. He also used this concept in his1967 lectures as his teacher, J. Austin, at Harvard University's William James Studies program. As mentioned above, the use of linguistic units in communication is based on certain principles, rules, and in certain circumstances the speaker may deliberately not follow these principles. Such a purposeful "rule-breaking" results in semantic inference and meaning that is inconsistent with the presupposition. H. Grace believes that the direct, the figurative meanings that appear in the text, depend on the phenomenon of implicature.

Consider the following micro-dialogue between husband and wife:

- Let's go to the jewelry store. I saw a sapphire ring last night.
- I have little money.

Implicature in the process of this communication is "I can't go to the store right now" or "I don't want to go to the store".



Conclusion. To sum up, it is obvious that the communicative implicature is close to the phenomenon of presupposition in this example. But these phenomena are different. The implicature is an element of meaning, content that is not permanent, changes rapidly in the text, can even disappear. Presupposition, on the other hand, is a semantic phenomenon that does not disappear in the text, but has a permanent character. Another difference between the two phenomena is that presupposition is often associated with a linguistic form, implicature is completely within the scope of meaning, and changes in the linguistic form have almost no effect on it.

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**UDC: 81`44** 

# THE GENESIS OF THE IMAGE OF MAGICAL OBJECTS IN ENGLISH AND UZBEK FAIRY TALES

Nozima Djumaeva Senior lecturer of English Linguistics department Bukhara state university, nozimadjumaeva@gmail.com

Annotatsiya: Sehrli-fantastik ertaklardagi tilsim predmetlar ertaklarni yanada qiziqarli va ifodali qilishga xizmat qiladi. Ularning har biri tarixiy ildizlari, genezisiga ega bo`lib, aksariyati animizm, totemizm, fetishizm, shomonlik kabi qadimgi diniy e`tiqodlarga borib taqaladi. Mazkur maqolada ingliz va o`zbek xalq ertaklaridagi sehrli predmetlarning kelib chiqishi, tarixiy ildizlari haqida so`z yuritilib, ularning kelib chiqishi ertaklar muallifi bo`lmish xalqning e`tiqodlari, orzu-istaklari bilan chambarchas bog`liqligi ochib berilgan.

**Kalit so`zlar:** ingliz va o`zbek xalq ertaklari, fetishizm, totemizm, animizm, din, etnograf

**Аннотация:** Волшебные предметы делают сказки выразительными и интересными. Каждый из этих магических предметов имеет свое происхождение, корни. Большинство из них восходит к таким верованиям, как анимизм, фетишизм, тотемизм и шаманизм. В статье рассматривается генезис, исторические корни волшебных предметов, используемых в английских и



узбекских сказках, и выявляется, что они тесно связаны с древними верованиями, мечтами и чаяниями народов, создававших сказки.

**Ключевые слова:** английские и узбекские народные сказки, фетишизм, тотемизм, анимизм, религия, этнограф.

**Abstract:** Magical objects make fairy tales expressive and interesting. Each of these magical objects have their genesis, roots. Most of them go back to such beliefs as animism, fetishism, totemism and shamanism. The article discusses the genesis, historical roots of the magical items used in English and Uzbek fairy tales and reveals that they are closely connected with ancient beliefs, dreams and aspirations of the people who created fairy tales.

**Keywords:** English and Uzbek folk tales, fetishism, totemism, animism, religion, ethnographer

**Introduction.** Primitive people deified various things and phenomena in nature without understanding how and why they came to existence. As a result, interpretations of supernatural, mysterious, magical things have emerged. They depict the worship of man. Different view points of primitive people, religious beliefs, such as, animism, fetishism, totemism rituals influenced the appearance of magical objects in the fairy tales. Fairy tales of different nations have different magical objects, though there exist similar objects as well. And to investigate and analyse their genesis is of great importance nowadays.

Literature review and methodology. Russian philologist, one of the founders of the structural typological approach in folklore, Vladimir Propp, wrote a book "Historical roots of fairy tales" (Исторические корни волшебной сказки), which deals with the origin of magical tales, the scientist addresses ancient mythology and rituals, as well as folk culture. The author emphasizes that the magic fairy tale is closely connected with myth, religion, rituals, primitive thinking and history.

J. Frazer in his work "Golden bough" was a great attempt to define the shared elements of religious belief and scientific thought, discussing fertility rites, human sacrifice, the dying god and many other symbols and practices whose influences had extended into 20th-century culture. He thinks that old religions were fertility cults that revolved around the worship and periodic sacrifice of a sacred king. Frazer proposed that mankind progresses from magic through religious belief to scientific thought.

V.Propp, D. Fang, A, Scholey, R. Bottigheimer conducted research on fairy tales and magical objects in them, but the genesis of magical objects in English and Uzbek fairy tales, their similarities and differences have not been investigated yet and more investigation in this field is needed. Though living in different parts of the world, English and Uzbek people have similar magical objects and similar roots and genesis. In this article we are going to reveal the genesis of magical objects in fairy tales of both nations.

While conducting the research, we used comparative-typological and comparative-historical methods. The main materials for our research were "English fairy tales and more English fairy tales" by Joseph Jacobs, "English fairy tales" by Flora Annie Steel, 3 volumes of Uzbek fairy tales collected by M. Afzalov, "Magical objects in Victorian literature" by Dan Fang, "Historical roots of fairy tales"



(Исторические корни волшебной сказки) by Vladimir Propp, "Golden Bough" by J. Frazer.

The usual and most common magical objects are:

The wishing wand or ring that fulfills any desire in an instant.

The flying carpet that swiftly transports us.

The bottomless purse that never runs out of money.

The super spyglass through which we can see thousands of miles.

Magic boots that enable us to walk miles in one stride.

The horn or whistle with which we can summon help.

The crystal ball that enables us to know the future.

The invisibility cloak or shield that hides us from danger.

The endless table that feeds hundreds with a bountiful feast.

And each of them has its own genesis, history which may be religious beliefs, primitive thinking and views of people, dreams and aspirations of people.

Analysis and results. Most of the objects go back to such beliefs as animism, totemism, fetishism and shamanism. The immortality of the soul of the ancients, the animistic and manistic views associated with the cult of ancestors, gave rise to the depiction of magic bones in folk tales. It also reflects people's religious beliefs. Based on this, in some fairy tales, the skull is depicted in a magic, mysterious way.

For example, in the Uzbek folk tale "Mysterious Carpet" (Sirli gilamcha), a girl gets pregnant after eating the powder of skull. The interpretation of the epic motif associated with such a strange feature of the skull has its own historical basis. Because in ancient times, the cult of the skull was worshiped. The fact that the remnants of this belief are still preserved can be justified by the example of some homeowners who hung a ram's skull over the gate.

For example, the ancient Uighurs and Eskimos, who lived on the banks of the river, also believed that the fourth soul of man, that is, his name, lived in the skull. Therefore, the Ugaris made a puppet in the sense that if someone died, his soul would be resurrected, and put it on his head from the hair of the deceased.

It is known that the motif of rolling the head without a body is also found in the plot of many toponymic legends. Examples of such toponymic Uzbek legends are "Quvkalla", "Minorai kalon".

The motive of the mythological hero's head rolling is one of the traditional epic motifs common in Uzbek folk magic tales and toponymic legends. Ethnographer V.N Basilov writes that "the historical basis of the motive of a hero carrying his severed head in his hand or the rolling of his severed head is a connection of the cult of ancestors and ancient notions of the resurrected gods."

Signs of bone-related animism are also found in English folk tales. For example, in the English folk tale "Three cows", a cow was resurrected when the bones of a dead cow were collected and placed with its skin and beaten with a stick. In the fairy tale "Binnorie," a harper makes a harp from the bones of a dead girl, and this harp speaks out and tells how he was killed.

English ethnographer J. Fraser, on the other hand, reports that the ancients were afraid to cut their hair and throw it into the fire, believing that the spirit of the head was



embodied in the hair. In fact, according to the peoples of Western Europe, each person has three spirits, the first of which is called "Olori". It is located in the human head. This spirit always protects a person from calamities, protects him, gives him useful advice.

The religious beliefs of the ancients regarding the head also led to the formation of beliefs related to hair. This was also mentioned by A.M. Cherchiev in his article on the use of strange hair motifs in Dagestani mythology.

Hair magic can be seen in the fairy tale Rapunzel, one of the most popular fairy tales included in Grimm's fairy tales.

We also see the magical properties of hair in the English fairy tale "Yallery Brown". The fairy tale depicts a small creature with long hair and a beard, whose hair is all over the place and it is a bright golden color. As she sings and dances to her song, her golden hair wraps around her, lifts her into the air, and ascends and disappears.

The activation of magic through the hair goes back to the beliefs associated with hair. The beard of the magical creature in this fairy tale is also very long.

In Uzbek folk tales, the images of a golden-haired child, a long-haired fairy or a licker, an old man with a white beard, a bald man without hair, and a beardless man are often used in connection with hair. In particular, it is common for a wizard to spread its long hair on a girl or a boy, to lose its magical power when it is tied to their hair, to be weakened, and for a bald person to be the smartest and smartest of all. In particular, in Uzbek and English fairy tales, the image of an evil old man with a long beard is very common. One can defeat this old man only if the hero grabs him by the beard and cuts him off.

It can be said that since the family is tied to fertility cults, hair is also interpreted as tied to the idea of fertility due to its growth feature.

Among the Uzbek people, the baby's belly hair is cut into a special "hair wedding", the girls' hair is braided twice after the engagement, forty on the wedding day, and when the mother dies, the eldest daughter cuts a bunch of hair inside her head, burying it and other rituals. the expression of confidence in the hair cult can be seen in the content of the secrets.

Yu.P. Frantsev thinks about the attitude to the things that are used in religious ceremonies and revered and underestimated at the fetish level, while J. Eshonkulov says that in epic works, actions related to ancient ceremonies are often interpreted in the heart of epic works as motives. These views can be fully endorsed. Indeed, the artistic interpretation of some rituals formed based on the views of ancient people related to the cult of hair is found in fairy tales. Evidence of this can be seen in the example of images such as magic hair, golden hair, magic hair, magic fiber, in particular, in fairy tales.

**Conclusion and recommendations**. This indicates that the magic of hair has been actively used in black magic since ancient times, the belief that a person can magically influence himself through the hair fiber.

The advent of the animal's way as a healer was also observed in fairy tales. In the fairy tale "Generous and stingy", with the help of a goat's path, a generous princess



is cured of a serious illness. In the fairy tale "Erkajon", when a horse's mane is burned, you can immediately see the motive for the appearance of that horse.

The Uzbek fairy tale "Erkenja" is one of the fairy tales with many magical objects, in which we observed that the creatures gave him magical objects as a gratitude for helping several animals.

An English folk tale called "Three feathers" depicts a magical bird feather, which a husband who has become a bird gives to his wife and tells her to ask for whatever she wants.

Totemism is the belief that a person is related to an animal or plant species, according to which an animal or tree, flower, or plant species is sanctified and interpreted as a relative of a human being. Most importantly, they are portrayed as the protector, the helper of man. Based on similar totemistic concepts, in some fairy tales the image of a magic plant, a magic flower, a magic wand occurs.

For example, the story of the Princess of Colchester tells the story of a princess who endured torture by her stepmother, and was deprived of her father's love. The girl, who has left home, meets an old man on the road and gives him some of her food. In return, the old man presents the girl with a magic wand and tells her that a thick barrier will appear in front of her, and if she hits it three times with this stick, the barrier will open. The magic wand helps the girl to overcome her difficulties and achieve her goal.

The story of Cindrella (Jacobs' version of Cindermaid) tells of the magic wand, which helps the protagonist through its evolutionary feature. It is known that the plot of this fairy tale is similar to the plot of the fairy tale "Zumrad and Kimmat", which is popular among the Uzbek people. But in "Zumrad and Kimmat" there is no image of a magic wand. In "Cindrella", a hard-working girl achieves happiness and luck with the help of a magic wand. With the help of the magic wand a pumpkin transfers into the chariot, four white mice into horses to join the chariot, three lizards into three servants,

The "magic wand" is widely used in English folk tales. For example, in "Three Heads of the Well", the princess is loved by the old man for giving her food to the old man, and she gets a magic wand and removes the barriers she meets along the way with her.

In the tale of the Three Cows, a cow is resurrected when a magic stick hits the bones and skin of a dead cow. The function of resurrecting of the stick was not observed in Uzbek folk tales.

The depiction of herbs and plants also goes back to totemism. You can see the image of tulips singing in the fairy tale "Tulip bed". To a beautiful tulip garden near the place where the elves lived, the elves often brought their children to the tulip garden at night. As night fell, the tulip bed was filled with strange music that no human child could play, and a mysterious song that no one could sing. This song was sung by the tulips in the tulip bed. Under this tune the elf children fell asleep. By the magic power of the elves, the tulips gave off a very pleasant scent and never faded.

In the Uzbek folk tale "Orzijon and Kambarjon" there is an image of a magic herb that opens the blind eye.

Thus, fairy tales, which were created in connection with the ancient worldview, ideas, beliefs and labor, way of life of primitive people, first of all, served as an



expression of the views of the ancients, and were mainly of educational importance. And the genesis of magical objects in English and Uzbek fairy tales are almost similar.

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#### **UDC: 811**

# THE ROLE OF MILITARY TERMINOLOGY IN ASPECTS OF SYSTEM FORMATION

Abdurazakova Shohruza Valievna, Lecturer, Department of English Linguistics, Faculty of Foreign Philology National University of Uzbekistan named after Mirzo Ulugbek abdurazakovashohuza@gmail.com

**Annotation:** This work is devoted to a comprehensive study of the military-terminological system. As part of the work, we are attempting to analyse the structural and semantic features of the military terminology, which are still at the stage of its formation that is, during term formation, and are fixed in the process of functioning in the language.

**Key words:** term, terminology, military terminology, a comprehensive study, terminological system, structural and semantic features, term formation.

**Аннотация:** Данная работа посвящена всестороннему изучению военнотерминологической системы. В рамках работы мы пытаемся проанализировать структурно-семантические особенности военной терминологии, которые выявляются еще на этапе ее формирования, то есть при терминообразовании, и закрепляются в процессе функционирования в языке.



**Ключевые слова:** термин, терминология, военная терминология, комплексное изучение, терминосистема, структурно-семантические особенности, терминообразование.

Annotatsiya: Ushbu maqola harbiy-terminologik tizimni har tomonlama oʻrganishga bagʻishlangan. Ishning bir qismi sifatida biz harbiy terminologiyaning shakllanish bosqichida, ya'ni atama shakllanishi davrida namoyon bo'ladigan va tilda faoliyat ko'rsatish jarayonida mustahkamlangan tarkibiy va semantik xususiyatlari tahlil qilingan.

**Kalit so'zlar:** atama, terminologiya, harbiy terminologiya, har tomonlama o'rganish, terminologik tizim, tarkibiy-semantik xususiyatlar, atama shakllanishi.

**Introduction.** Since the military term is one of the specific forms of realization of the scientific term in the military sublanguage [1], we started our study by defining the concept of the scientific term as a whole and identifying its distinctive characteristics.

Currently, there are a significant number of works in the field of terminology, in which attempts have been made more than once to define the concepts of "term" and "terminology". Despite numerous attempts by scientists to form a single definition of the term, not all of them achieve the desired result. This can be explained by the fact that the term is an object of a number of sciences, and each science seeks to highlight it in the term features that are essential from its point of view [2].

V.M. Leichik distinguishes two stages in the formation of the meaning of the word "term": the stage of the formation of the material and the stage of its comprehension [2]. The first stage refers to the 1930-1960s and is characterized by the definition of a term as a special word or phrase studied by linguistic methods with the involvement of the methods of logic. Further, he notes that "a term either only designates, or both designates and expresses a concept. The ability of a term to designate is its most important feature" [3]

**Literature review.** Philosophical and epistemological approach, the essence of which is to consolidate the result of cognition in special areas of knowledge and activity by the term and, along with this, to discover new knowledge.

According to this approach, "a term is a dynamic phenomenon that is born, formulated, deepened in the process of cognition (cognition), the transition from a concept - a mental category - to a verbalized concept associated with a particular theory, the concept that comprehends a particular field of knowledge and activity [4]. V. A. Zvegintsev believes that the basis of the philosophical and epistemological definition of the term is its symbolism, which emphasizes that the results of cognition are fixed in material form with the help of the term [5].

The logical approach to the interpretation of the term is based on its connection with the concept. In the context of the main characteristic of this approach, V.A. Levina gives the definition of S.I. Ozhegova: "A term is a word or a phrase - the name of a certain concept of some special field of science, art technique" [6].

Giving a linguistic definition to the term, O. S. Akhmanova indicates that the term is "a word or phrase of a special (scientific, technical, etc.) language, created (accepted,



borrowed, etc.) for the exact expression of special concepts and designations of special objects" [7].

The controversy about the essence and status of the term begins with the work of A.A. Reformatsky, which clarifies a number of basic issues on the distinction between terminology and nomenclature: "Terminology, first of all, is closely connected with the system of concepts of a given science; nomenclature only labels its objects" [8]. The author defines the concept itself as follows: "Terms are special words limited by their special purpose, tending to be unambiguous as an accurate expression of concepts and naming things. This is necessary in science, politics and diplomacy" [8].

According to B.N. Golovin and R.Yu. Kobrin, "a term is a word (or a subordinating phrase) that has a special meaning, expresses and forms a professional concept and is used in the process of cognition and development of scientific and vocational objects and the relationships between them" [9].

M.Ya. Bloch believes that it is necessary to distinguish between the meanings of a word when used in the everyday sphere and in a special, scientific sphere. Unlike ordinary meanings, professional-scientific ones "receive a detailed definition in any area of professional activity (scientific or practical) and, therefore, reflect a scientific or practical concept", and "a word whose meaning forms a concept in the indicated sense, that is, is professionally differentiated, constitutes a term" [10].

**Research methodology.** The linguistic approach to the definition of the term combines two points of view. The essence of the first, called substantial, is the designation of terms as special words in the lexical composition of a natural language. Another point of view, the functional one, is to define a term as a word in a special function.

According to representatives of the substantial group, terms, unlike other nominative units, are characterized by monosemantic ability, accuracy, consistency, contextual independence, and emotional neutrality [Lotte 1961; Alexandrovskaya 1973; Danilenko 1987; Golovin 1987; Petrova 1987; Kiyak 1989 and others].

The founder of the Russian terminological school D.S. Lotte wrote that a term is a word or phrase designed to accurately designate a concept and its relationship with other concepts within the same sphere [11].

Thus, according to the supporters of the substantive point of view, the term is characterized by five main features: unambiguity, accuracy, consistency, independence from the context, emotional neutrality.

At the origins of another point of view, which is considered traditional, is G.V. Vinokur, whose ideas are supported by many scientists. In accordance with his understanding, a term is not a special word, but "a word in a special function <...> any word can act as a term, no matter how trivial it may be" [12].

The supporters of this approach include V.V. Vinogradov, G.O. Vinokur, N.P. Kuzkin, V.M. Leichik, A.I. Moiseev, V. A. Nikiforov and others.

Among domestic philologists, the ideas of V. V. Vinogradov are most popular. Offering a definition of a scientific term, the scientist wrote: "The word performs a nominative or definitive function, i.e. or it is a means of clear designation, and then it is a scientific term" [13].



According to L. A. Kapanadze, the meaning of a term is the definition of a concept, "the definition that is attributed to it" [14]. Speaking about the essence of the term and offering to identify terms with common vocabulary, N.P. Kuzkin wrote: "Neither in form, nor in content can one find a significant difference between a word of common, non-specific vocabulary and a word of terminological vocabulary. The real, objective boundary between these two concepts is beyond the scope of the language. If a word of common vocabulary correlates with a well-known object, then a word of terminological vocabulary with a specific object known only to a limited circle of people - specialists" [15].

EAT. Galkina-Fedoruk reasonably believed that terms are words in a special function, in the function of naming a special concept [16].

Another approach to the definition of the term "term" can be considered terminological, according to which terms are lexical units of the language of special purposes.

**Analysis and results.** Giving a definition to the concept of a term, T. L. Kandelaki wrote: "A term is a word or a lexicalized phrase that requires the construction of a definition in order to establish its meaning in the corresponding system of concepts" [17].

According to V.P. Danilenko, a term is a word (or phrase) of a particular sphere of use, which has a name as a special concept that requires definition [18].

S.V. Grinev defines a term as "a nominative special lexical unit (word or phrase) of a special language, accepted for the exact naming of special concepts" [19].

Despite the differences in approaches listed above, almost all researchers agree that the terms should be characterized by special essential properties, which were briefly formulated by A.A. Reformatsky: "The term is ideally as abstract as possible, unambiguous, stands outside expression, international, logical and systematic" [8]. However, in reality this does not always happen. All of the above definitions of the term "term" to a certain extent allow us to formulate a theoretical basis for conducting a study of the military terminology of the Vietnamese language and the formation of the terms included in it.

The theoretical basis of our study from the standpoint of terminology is the definition of the term proposed by V.M. Leichik: "A term is a lexical unit of a certain language for special purposes, denoting a general - concrete or abstract - concept of the theory of a certain special field of knowledge or activity" [2].

G.M. Strelkovskiy defines a term as a word or phrase, the linguistic sign of which is correlated with one concept or denotation (or with several identical objects) within the same field of science or technology. Military terms have a specific unambiguous correlation within one area of military affairs [7]. S. I. Gavrilenkov adheres to a similar point of view, defining a military term as follows: "A term is a word or phrase that expresses a special concept of science and technology and requires the construction of a definition for this. A military term is a special case of a term that expresses the concepts of military affairs" [6].

L.L. Nelyubin defines a military term from a linguistic point of view as a word or phrase of a special language, created or borrowed to accurately express special



concepts and designate special subjects in a particular field of knowledge, respectively, military terminology denotes concepts directly related to military affairs, the armed forces, methods of conducting armed struggle [1].

A somewhat different understanding of the military term is offered by V.N. Shevchuk, making adjustments and specifics to the approaches of his predecessors. He believes that the definitions given by the aforementioned terminologists do not indicate what kind of phrases are meant. The military term is by no means the only means of designating the corresponding military concept. It correlates or is assigned to this concept constantly as one of the possible options for its designation, moreover, as a variant generally accepted in the professional field. In addition, many of the proposed definitions do not reflect such important features of the term as its consistency and definitiveness [10].

Based on the above remarks, V.N. Shevchuk offers his own definition of a "military term", which seems to be the most suitable for our study: "A military term is a stable one-word or several-word name assigned to the corresponding concept in the system of concepts of a certain field of military science and military equipment and limited to a special area of use in the meaning, strictly regulated by its definition" [12].

Terminological studies indicate that some properties of a term, such as consistency, accuracy, unambiguity and stylistic neutrality, can only appear within the framework of a term system [3].

The system of terms is an adequate reflection of the system of analysed concepts, since the system of concepts is a logical model of a special area of knowledge or activity, and the terminological system is a language model of this area.

It seems relevant to distinguish between the concepts of terminology and terminology. Thus, terminology is a set of terms of a certain branch of knowledge, and a terminology system is a hierarchical system of terms ordered by terminologists [6].

As applied to our study, the definition of terminology proposed by B.N. Golovin and R.Yu. Kobrin: "Terminology is a set of terms of a professional field of activity (fields of knowledge, technology, management, culture, etc.) related to each other at the conceptual, thematic, lexico-semantic, word-formation and grammatical levels" [7].

**Conclusion.** As well as the concept of "term", the concept of "terminological system" does not currently have an exhaustive and unambiguous definition. However, almost all researchers share the point of view that the term system is an artificial formation, and its main properties are because it corresponds to the theory of the corresponding field of knowledge, reflecting it in one way or another. Thus, a terminology system is a language model of a special area of knowledge and/or activity, which makes the terminology system closer to the system of concepts of a special area than terminology.

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# SOCIO-POLITICAL VOCABULARY: ISSUES OF HISTORIOGRAPHY AND DEFINITION OF A CONCEPT

Akbarova Ma'suma Ismonali qizi, Lecturer, Department of English Linguistics, Faculty of Foreign Philology National University of Uzbekistan named after Mirzo Ulugbek akbarovamasuma@gmail.com

Annotatsiya: Ushbu maqolada oʻzbek va ingliz tillarida ijtimoiy-siyosiy leksikaning shakllanish tarixi yoritilgan, ijtimoiy-siyosiy lugʻat va ijtimoiy-siyosiy terminologiyaning xususiyatlari, ularning oʻzaro ta'siri koʻrsatilgan. Jurnalistik diskurs ijtimoiy-siyosiy leksika va ijtimoiy-siyosiy terminologiyaning faoliyat doirasi sifatida qaraladi.

Kalit soʻzlar: diskurs, jurnalistik diskurs, ijtimoiy-siyosiy leksika, ijtimoiy-siyosiy terminologiya

Аннотация: в данной статье описывается история формирования общественно-политической лексики на узбекском и английском языках, предлагается авторское определение общественно-политической лексики, демонстрируются особенности общественно-политической лексики общественно-политической терминологии, их взаимодействие, сходства и различия. Журналистский дискурс рассматривается сфера как общественно-политической функционирования лексики общественнополитической терминологии.

**Ключевые слова**: дискурс, публицистический дискурс, общественнополитическая лексика, общественно-политическая терминология.

**Annotation:** This article describes the history of the formation of the socio-political vocabulary in Uzbek and English, proposes the author's definition of the socio-political vocabulary, demonstrates the features of the socio-political vocabulary and the socio-political terminology, their interaction, similarities and differences. The journalistic discourse is considered as the sphere of functioning of the socio-political vocabulary and socio-political terminology.

**Key words**: discourse, journalistic discourse, socio-political vocabulary, socio-political terminology

**Introduction.** Socio-political vocabulary is "an important part of the lexical system of the language, it covers a fairly wide range of words related to the socio-political system and ideology of the state and society, with the areas of their functioning" [1].

The formation of the modern socio-political vocabulary "began in the petrine era, when all areas of the life of society: politics, economics, culture were reformed, and the socio-political vocabulary was found basically in the 18th-19th centuries" [2].



In the scientific literature there is no single approach to the identification of stages in the development and study of socio-political vocabulary. Therefore, L.L. Bantysheva points to three stages in the formation of the socio-political vocabulary of the 20th century, each stage had a certain meaning for the Russian language, which developed due to changes in various areas of public life:

- 1. "1917 early 1950s. XX century, different approaches to the study of sociopolitical vocabulary are presented in the works of A. Barannikov, G.O. Vinokura, L.V. Shcherby and others;
- 2. Early 1950s late 1990s are characterized by the scientific works of such scientists as A.N. Baranov, A.L. Golovanevsky, Yu.D. Desheriev, I.F. Protchenko and others.
- 3. 1992 2000 The post-Soviet stage is reflected in the works of O.P. Ermakova, L.A. Zhdanova, E.A. Zemskoy, N.A. Kupina, D.E. Rosenthal, G.Ya. Solganika, I.A. Sternina and others." [3].

**Literature review.** Scientists distinguish several periods in the history of the study of political language [Chudinov 2003: 19-20; Volodina 2008: 38 and others]:

The patterns of language development have a certain influence on the formation of the socio-political vocabulary. L.L. Bantysheva rightly notes that "changes in the language occur gradually, as a result of the emergence of new lexical units and the death of obsolete words. The nature of vocabulary changes in different periods is not the same, their character is influenced by transformations caused by social and political restructurings" [3].

One of the main features of the fourth stage in the development of the socio-political vocabulary is borrowed vocabulary, which actively penetrates language with the advent of Western values and way of life in a broad sense, including in the political and economic spheres. Borrowings: leitmotif (in the meaning of the main theme, main idea), spoiler, press release, anti-globalist, preferences, congressman, electorate, public relations, publicity, clearing, childfree, performance, mainstream, crowdfunding, primaries, fact-checker, men spreading, downshifting, futures, bitcoin, blockchain.

Data on some borrowings of the political vocabulary of the modern period and examples of foreign neologisms in the modern political lexicon are widely presented in the article by O.V. Zagorovskaya, S.A. Esmaeel "On foreign borrowings in the political vocabulary of language" [4].

As the main ones in political discourse, the concepts of POWER and POLITIC are distinguished in the works of E.I. Sheigal [5], in the conceptual structure of O.E. Rozhkova names the actual concepts POWER, SOLIDARITY, WAR, ENEMY [6]

At the end of the 20th century, a new science began to form - "political linguistics, which was facilitated both by rapid changes in the political language, reflecting fundamental social transformations in post-Soviet Russia, and the emergence of the opportunity to openly express one's views, use the experience of Western political science" [7].

The European socio-political vocabulary and socio-political terminology formed into a special layer of vocabulary in the 17th-18th centuries predominantly in England.



This terminology reflected the political and social events taking place in English history.

In the 19th century, the formation of American political terminology takes place. A.L. Ignatkina points to the following political terms that are typical for

19th – second half of 20th centuries: "lobbyist; split ticket; filibuster, slush fund, gubernatorial" and others. (XIX century); "smoke-filled room, grass roots, brain trust, Koreagate, Quakergate" (early 20th century); "guerilla strategy, offensive strategy, defensive strategy" (second half of the 20th century) [8].

**Research methodology.** In foreign linguistics, the study of political language falls on the second half of the 20th century and it was carried out in a different direction compared to the approaches described above. From the 1980s to the present day, there has been an increased interest in the language of politics, however, as O. Feldman notes, research on this issue until the end of the 20th century "was fragmentary" [9].

It is important to emphasize that they mainly study political language (Political language), political discourse (Political discourse), language of politics (Language of politics), socio-political language (Political and social language). Despite the fact that scientists use different approaches when studying such concepts as "political language", "language of politics", "political rhetoric", "political speech", "political style", "political discourse", it is obvious that these terms represent equivalent terms for the relationship between language and politics [9].

Among the authors involved in the study of political language, we highlight the works of A. Beard "The language of Politics" (2001), T. Carver, J. Pikala "Political language and Metaphors" (2008), M. Edelman "Political language: Words that succeed and Policies that fail" (1977), K. Hudson "The language of Modern Politics" (1978), J. Joseph "Language and Politics" (2006), B. Lewis "The political language of Islam" (1988), J. Pocock "Politics, Language, and Time" (1989), E. Robinson "The language of progressive politics in Modern Britain" (2017), but J. Orwell's essay "Politics and the English language" (1946) is most often cited.

Analysis of political discourse is presented in the works of P. Chilton "Analysing political discourse: theory and practice" (2004), I. Fairclough "Political Discourse Analysis: A Method for Advanced Students" (2013), M.A. Mayhead, B. Marshal "Women's Political Discourse: A 21st-century Perspective" (2005), N. Phillipson, C. Skinner "Political Discourse in Early Modern Britain" (1993), R. Wodak "Language, power and ideology: studies in political discourse" (1989), J. Clark "The language of liberty 1660-1832: Political discourse and social dynamics in the Anglo-American world" (1994).

Analysis and results. Political language is the language for communication on political issues, which manifests itself in the language of newspapers, television, radio (including parliamentary debates, mass meetings, party meetings), propaganda publications (including election publications, political booklets), in administrative, legal and diplomatic language (including texts of laws, treaties, international political negotiations) [9], i.e. lexical units for discussing politics, government, law and society.

When studying political language, foreign scientists distinguish three different, but interrelated approaches:



- 1) The first approach is fundamentally focused on the content of the political language. Such studies are related to the characteristics, norms and values of the speaker or the ideological content of the message.
- 2) The second approach is supported by scholars who try to reveal what politicians say by focusing on the structure of the arguments and their motivation. This approach is used in almost all areas of the study of political language.
- 3) The third approach focuses on the style of political language and its form. Scientists are trying to complement research that only considers content. The researchers emphasize that depending on what politicians use in their speech and how they verbally express their thoughts, it has an impact on the meanings that words acquire. Such researches study the language in its specific application, reflecting the connotative meanings and emotional impact of words. More and more research is devoted to the analysis of style in order to better understand how political language acquires meaning and power of persuasion [10].

In the work of M. Edelman "Political language: Words that succeed and Policies that fail", dedicated to the study of American politics, an analysis of the language as a symbolic system is presented. The author conducted an analytical work on the study of the term "consent" (consent), showed how society can be controlled with the help of linguistic forms, myths and figurative answers.

M. Edelman believes that "if political language causes fear or can dispel it, then language is an integral part of politics: language is not just a tool for describing ongoing events, it is part of these events, it is he who forms their significance, helps to form political roles officials and common socio-political vocabulary" [11].

A. Beard in the book "The Language of Politics" explores the negative perception in relation to the key concepts of the political sphere "politics" and "politics" in society. In the work, the author raises questions of semantics, how politicians use metaphors, metonymy, analogues in political discourse, how it affects political culture as a whole. The study, devoted to the study of the language of professional politicians, describes in great detail the election campaigns of politicians at the language level, as well as analyses the political speeches and oratory of politicians, the answers of politicians during interviews in the media and in parliament.

J. Joseph in his work "Language and Politics" solves the issues of censorship, gender policy, propaganda, choice of language means. Speech that denigrates members of society on racial, gender, and ethnic grounds is studied, and a characterization of ethnic and national identity in the language is given [12].

**Conclusion.** In general, it is worth noting the multifaceted study of political language in foreign linguistics. The main attention is paid to the study of the formation of political language and its influencing and pragmatic functions, ideology and propaganda in political discourse, the interaction of language and society, political metaphors, political rhetoric, critical analysis of political discourse.

So, I.V. Tokareva refers lexical units from the field of politics and economics to socio-political vocabulary [13], I.F. Protchenko - concepts and realities from "the field of politics, economics, philosophy, history, social science, law, philosophy, political



economy, literature, art, diplomacy, military-defence and cultural and educational spheres".[14]

Analyzing the definitions of the socio-political vocabulary and its composition, some scientists emphasize that if the concepts from the above areas function in scientific texts and are used by specialists in a certain field, then such lexical units do not belong to the socio-political vocabulary, but to the socio-political terminology.

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**UDC: 811** 

## LINGUO-CULTURAL ASPECTS OF MEDICAL PERIPHRASES

Kobilova Aziza Baxriddinovna Senior Lecturer, Department of English Linguistics, Bukhara state university kobilovaaziza@gmail.com

Annotatsiya: Ushbu maqolada ingliz va o'zbek tillari tibbiy perifrazalarining lingvomadaniy jiharlari xususida fikr yuritilgan. Perifrazalar nafaqat nutqning ifodaliligini oshirish vositasi balki ilmiy atamalarga boy tibbiy nutqni soha egasi bo'lmagan yoki tibbiyot sohasidan yiroqroq bo'lgan o'quvchi yoki tinglovchi uchun tushunarli tarzda tuzilishini ta'minlashga ham xizmat qila olish xususiyatiga ega ekanligi tahlil etilgan.

Kalit so'zlar: perifraza, lingvomadaniy jihatlar, til, milliy madaniyat, milliy ma'naviyat, tibbiyot tili.

Аннотация: В данной статье рассматриваются лингвокультурологические медицинских перифраз на английском И узбекском Проанализирована перифраза как средство не только повышения выразительности речи, но и служащее для того, чтобы научная речь, богатая научными терминами, была построена таким образом, чтобы она была понятна читателю или слушателю, не являющемуся владельцем медицинской сфере.

**Ключевые слова:** перифразы, лингвокультурные аспекты, язык национальная культура, национальная духовность, язык медицины.

**Abstract:** This article discusses the linguocultural aspects of medical periphrases in English and Uzbek languages. Periphrasis has been analyzed to be not only a means of enhancing speech expressiveness but also to serve to ensure that scientific speech rich in scientific terms is structured in a way that is understandable to the reader or listener who is not a field owner or far from the medical field.

**Keywords:** periphrasis, linguo-cultural aspects, language, national culture, national spirituality, the language of medicine.

**Introduction.** Language is not only all being, materiality but also concepts, views, thoughts, opinions about space, time, the universe, the earth, as well as the character, manners, way of life, beliefs of living beings on the planet, including humanity, customs. traditions and values associated with this belief, national identity, regional and general culture, education, political views, subconscious considerations - all this materially and intangibly is a mirror that is reflected.

As E.Vereshchagin, V.Kostomarov, R.Robins point out, language is a treasure, a box, a complex of culture. It is an invaluable treasure trove of the lexicon, grammar, phrases, proverbs and sayings, folklore, fiction and non-fiction, and cultural values in oral and written speech [1, 27]. According to E. Sapir, language as a "set of socially inherited skills and ideas that characterize our way of life" is closely linked with the nation's spirituality and culture [2, 185].



If there is not a single representative of the national culture and national spirituality, there will not be unity in speech. Language is the interpreter of culture and spirituality, and they are the main criterian that show what the language of a nation is. After all, just as a nation, the culture and spirituality of this nation are not brought to perfection without the possibilities of language, and language loses its significance without national culture, national spirituality.

The national language is a priceless treasure of a nation, is a tool of spirituality, and carries the universal culture of the people, the private culture of the society, and the way of life of that nation, and inherits it from ancestors to generations. It is also a factor that performs the task of forming and developing the language owner. From this point of view, language and culture are not the same notions but dialectical concepts that lose their meaning in isolation from each other.

Periphrases, including medical periphrases, are separate units belonging to the linguo-culture of each nation.

We know that periphrases, as a methodological tool are based on the requirements of social development, and give the speech a lift, imagery, enrich the vocabulary. It allows for repetition and repetition in the speech process, encourages the speaker to eloquence and the listener to philosophical observation [4, 2]. In addition to the general features listed above, medical paraphrases also serve to provide a level of understanding of the information transmitted by the informant (usually the physician) to the recipient (usually the patient or his relatives) [3,1].

**Discussion.** That is, it can also serve to ensure that medical speech, rich in scientific terms (not available without scientific terms), is structured in a way that is understandable to the reader or listener (receiver) who is not a field owner or far from the medical field. For example: Biz klinikamizga kardiolog, allergolog, ozonoterapevt, onkolog, nefrolog hamda neyroxirurgni chaqirtirib konsilium qilamiz. Hozir sizni skrining, dopping, kardiogramma uchun tayyorlashadi. — Biz davo maskanimizga shifo ahlini chaqirtirib dardga malham qidiramiz. Hozir sizni shifo tekshiruvlari uchun tayyorlashadi.

The first sentence uses terms that are vague for the average patient, such as *kardiolog, allergolog, ozonoterapevt, onkolog, nefrolog, neyroxirurg* scientific lexemes related to the medical field. As well as the names of medical examinations, such as screening, doping, cardiogram, are difficult to understand for a non-medical field representative.

In the second sentence *davo maskani* was used instead of the clinic; *shifo ahli* was used instead of *cardiologist*, *allergist*, *ozone therapist*, *oncologist*, *nephrologists*, *neurosurgeon*; *dardga malham qidirmoq* was used instead of consulting; *shifo tekshiruvlari* was used instead of screening, doping, cardiogram, which were able to make medical speech understandable to the patient or to simplify the language of medicine, to bring it closer to ordinary folk speech. The peripheral language also keeps the patient from becoming overly excited or frustrated.

As medicine develops in our society, new terms are emerging. Focusing on the use of periphrases instead of these terms is very important for our social life, and this integrates linguistics into social life through speech units.



One more example: Uyingizda it va mushuklarni saqlashda ehtiyot bo'ling. Ular zooantroponozlarning tashuvchisi bo'lib, toksoplazmoz, leptospiroz, atipik pnevmoniya, laymni keltirib chiqaradi; gel`mintlar, parazit, gijjalar kasallik tashuvchisi bo'lishi mumkin. (https://kun.uz) — Uyingizda it va mushuklarni saqlashda ehtiyot bo'ling. Ular hayvonlarning o'ziga xos kasalliklarining tashuvchisi bo'lib, asorati og'ir xastaliklarni keltirib chiqaradi; insonsevmas viruslar kasallik tashuvchisi bo'lishi mumkin.

A small text with periphrasis urges people not infected with certain diseases from pets. Periphrases such as *hayvonlarning o'ziga xos kasalliklari*, *asorati og'ir xastaliklar*, *insonsevmas viruslar* have been used instead of *zooantroponozlar*, *toksoplazmoz*, *leptospiroz*, *atipik pnevmoniya*, *gel'mintlar*, *parazit gijjalar* to give people both figurative and intelligible names of diseases that can only be transmitted through animals.

Literature review and methodology. There are many similar examples in English. Compare the following sentences: 1) Conjunctivitis can be allergic, viral, or bacterial. It is easy to get from dirty hands, washcloths, cosmetics or towels that have the *Staphylococcus aureus*, *Streptococcus pneumonia*, and *Haemophilus influenza*. 2) *Pink eye* can be allergic, viral, or bacterial. It is easy to get from dirty hands, washcloths, cosmetics, or towels that have *bacteria*, or *viruses* attached to them.

In the first sentence, industry-related scientific terms such as conjunctivitis, Staphylococcus aureus, Streptococcus pneumonia, Haemophilus influenza were used, which are unclear to the average patient and are difficult for anyone not to understand. In the next sentence, *the pink eye* was used instead of *conjunctivitis; Staphylococcus aureus, Streptococcus pneumonia, Haemophilus influenza* were replaced by *bacteria*, *virus* periphrases, which were able to make medical speech understandable to the patient or to simplify the language of medicine, bringing it closer to ordinary folk speech.

It should be noted that in both analyzed languages, medical periphrases can occur directly in connection with the medical speech of the owners of the field depending on the nature of their formation:

It is worthwhile to give the following examples of periphrases (in the framework of Covid-2019) that occur in the Uzbek speech in direct connection with the medical language of the owners of the field:

XXI asrning uchinchi o'n yilligi boshida butun insoniyat **ko'zga ko'rinmas yov**ga ro'para bo'ldi. **Tojdor virus** pandemiyasiga qarshi kurash do'stu dushmanni bir xilda arosatga soldi (kun.uz).

AQShdagi ilk tadqiqotlarga ko'ra, **insoniyatni ilojsiz qoldirgan virus** mutatsiyalari orasida D614G yetakchilik qilmoqda. D614G — tojdor virusning toji. Aynan shu mutatsiya koronavirusning yuquvchanligini oshirib, kasallikning og'ir kechishiga yo'l ochishi mumkin (https://www.bbc.com).

Xavfli yov hamon ostonamizda turibdi (https://www.facebook.com).

Bugungi kunning asosiy va eng muhim mavzusi shubhasida **tojli dushman** – koronavirus mavzusi bo'lib qoldi. Chunki ushbu virusga qarshi dunyo hamjamiyati yoppasiga oyoqqa turgan bo'lsa-da, bu **ko'zga ko'rinmas mitti ofat**ni hayotimizdan



yo'qota olmayapti. Aksincha, Jahon sog'liqni saqlash tashkiloti ogohlantirganidek, virus yangi va o'ta xavfli bosqichiga kirmoqda (https://www. гулнора вахобова).

Toj kiygan virusning iqtisodiy ko'lami, ayniqsa, yuqori bo'lmoqda. Hozircha dunyo iqtisodini yemiruvchi kasallikning zarari 25 trillion dollarga baholanmoqda. BMTning "Inqirozni baholash, qayta tiklanishni rejalashtirish» dasturida aytilishicha, inson salomatligining kushandasi, chekinmayotgan yov, pandemiya sharoiti inson taraqqiyotining ayrim jabhalarida 40 yildan buyon ko'rilmagan yo'qotishlarga sabab bo'lmoqda (https://www.facebook.com).

Ommaviy axborot vositalari xodimlari ishtirokida kechgan davra suhbatini Yunisef jamoatchilik bilan aloqalar bo'limining boshlig'i Sitsi Sneze ochib berdi. Sitsi xonim bugun dunyo hamjamiyatiga katta xavf solgan va solayotgan, insonlarning tibbiy va ruhiy salomatligini yemirayotgan virusning oqibatlari, davlatlarning ijtimoiy, sotsial hayotidagi evrilishlar haqida to'xtalab ekan, bu borada jurnalistlarning olib borgan jonbozligini, fidoyiligini ham ta'kidlab o'tdi (https://mudofaa.uz).

In English: *This is a global war, and we are the soldiers. The world is united against a common enemy* – *invisible, but deadly* (The New York Times, April 6, 2020);

President Donald Trump has called the coronavirus an "invisible enemy" that's "brilliant" and "tough and smart", adding that we are "tougher and smarter" (The Conversation, May 22, 2020);

Several approaches are being utilized to control the outbreak of this *fatal viral disease* (Expert Review of Anti-infective Therapy, Volume 19, 2021, page: 137);

The relapse into crisis also harmed Biden's credibility as the President who was elected to put the pandemic in the past, since he declared on July Fourth the nation was emerging from a "year of pain, fear and heartbreaking loss" and left a clear impression that the worst was over (CNN Politics, September 9, 2021);

When governments face a public emergency that "threatens the life of the nation", and they cannot achieve their public health or other public policy objectives by imposing only these restrictions (Human Rights Watch, February 11, 2021);

The obligation of governments to protect the public from this **deadly pandemic** is not a carte blanche for placing a chokehold on information and suppressing dissent (Human Rights Watch, February 11, 2021).

**Result.** In the examples given, we observe that more than a dozen periphrastic units, such as the *ko'zga ko'rinmas yov, tojdor virus, insoniyatni ilojsiz qoldirgan virus, tojdor virusning toji, xavfli yov, tojli dushman, ko'zga ko'rinmas mitti ofat, toj kiygan virus, dunyo iqtisodini yemiruvchi kasallik, inson salomatligining kushandasi, chekinmayotgan yov, dunyo hamjamiyatiga katta xavf solgan virus, dunyo hamjamiyatiga katta xavf solayotgan virus, insonlarning tibbiy salomatligini yemirayotgan virus, insonlarning ruhiy salomatligini yemirayotgan virus; a common enemy, invisible enemy, viral disease, year of pain, fear and heartbreaking loss, threatens the life of the nation, deadly pandemic have been used in Uzbek and English in connection with coronavirus, which are directly related to medical speech.* 

Conclusion. To conclude, in both Uzbek and English, different types of medical paraphrases were used, which have a special significance in speech as units that carry

the lingua-cultural aspects of this nation, the culture of this nation. Through such periphrases, the study and analysis of the specific traditions and values of Eastern and Western cultures from a lingua-cultural point of view allow for a deeper study of the mentality, culture, and values of the nation.

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# **ACTUAL PROBLEMS OF NATURAL SCIENCES**

**UDC: 910.4** 

# NATIONAL CUISINES ARE A KEY FACTOR IN THE DEVELOPMENT OF FOOD TOURISM IN UZBEKISTAN

Matchanova Aybibi Erkinovna Senior Lecturer of the Department of Geodesy, Cartography, Geography Urgench State University

aybibi\_79@mail.ru

**Аннотация.** Ушбу мақолада миллий таомлар Ўзбекистонда гастрономик туризмнинг асосий омили эканлиги, ўзбек ошхонаси қадимий ва чуқур илдизларга эга эканлиги, шунингдек, ўзининг анъанавий таъмини, мамлакатимизнинг турли худудларида минтақавий ошхона хусусиятларини сақлаб қолганлиги таҳлил қилинади. Миллий таомларнинг келиб чиқиши, миллий ошхона тушунчаси ёритиб берилган.

**Калит сўзлар:** туризм, миллий таомлар, ўзбек ошхонаси, гастрономик район, овкатланиш маданияти, географик жойлашуви, соғлом турмуш тарзи, меҳмондўстлик, социологик тадкикот.

**Аннотация.**В данной статье анализируется тот факт, что национальная кухня является ключевым фактором развития гастрономического туризма в Узбекистане, узбекская кухня имеет древние и глубокие корни, а также сохраняет свой традиционный вкус, а также региональные особенности кухни в разных регионах страны. Освещается происхождение национальных блюд, понятие национальной кухни.

**Ключевые слова:** туризм, национальная кухня, узбекская кухня, гастрономи- ческий район, культура питания, географическое положение, здоровый образ жизни, гостеприимство, социологические исследования.

**Abstract.**This article analyzes the fact that national cuisine is a key factor in the development of gastronomic tourism in Uzbekistan. The Uzbek cuisine has ancient and deep roots and also retains its traditional taste, as well as regional cuisine features in different regions of the country. The origin of national dishes, the concept of national cuisine is highlighted.

**Keywords:** tourism, national cuisine, Uzbek cuisine, gastronomic region, food culture, geographical location, healthy lifestyle, hospitality, sociological research.

**Introduction.** Each Uzbek cuisine with a deep history is closely related to culture and traditions, which has had a significant impact on the diversity and uniqueness of Uzbek cuisine, which, unlike their geographical neighbours, is historically characterized by both sedentary and nomadic lifestyles. At the same time, culinary traditions, ancestral culture have been preserved, and interactions with neighbouring nations have had a major impact on the diversity and richness of cuisine. The origin of the dishes has deep roots while maintaining its traditional look and taste.

Literature review: The concept of "national cuisine" refers to a set of features of all technological methods and other culinary skills, as well as the composition of



food products, which are specific to a particular nation and historically formed over the centuries of development. It follows that the author (the author of the dishes) did not include any national cuisine the assimilation, modification, and repetition of other foods, even if they were tied and rooted among this or that people. It can be called national in the first place in terms of its origin, long-term use, distribution, and the propensity of this or that people to belong to any national cuisine [4].

During the acceleration of reforms, it is natural that several problems will arise in the field of tourism, as in all areas. The comprehensive formation of local types of tourism depends on the solution of these problems. The sociological survey method plays an important role in the comprehensive study of topical issues. Therefore, to study the characteristics of the cuisine of the Republic of Uzbekistan, the author divided into four regions: northern (Khorezm), central (Samarkand), southern (Surkhandarya), eastern (Andijan), ie conditional gastronomic regions. For two months (December 2021, January 2022), a sociological survey was conducted in selected regions. In these regions, which differ from each other in terms of natural, ecological conditions, demographic situation, geographical location, economy, and the types of food eaten by the daily customs of the people living in these countries a total of 200 respondents participated.

**Research Methodology.** Khiva was selected from the northern gastronomic region, Boysun district from the southern gastronomic region and Samarkand from the central gastronomic region, and Asaka from the eastern gastronomic region. Khiva is famous for its historical, dietary and medicinal cuisine, Boysun district is famous for its high-calorie dishes made of mountain meat, Samarkand is famous for its long-awaited bread, Asaka is famous for its delicious dishes, tea pilaf [11.12].

The analysis shows that in recent years, in some parts of the country, the number of historical, national dishes cooked by our grandmothers has been declining, but the demand for our national dishes has been growing. Taking into account this process, the survey was conducted in some areas of these regions.

Analysis and results. Analysis and results. In this study, out of 12 questions in the sociological questionnaire, it was found necessary to cover 4 questions in this article that are directly related to the research topic.

1. First of all, the questionnaire was used to determine which region, city or district the respondents were from, their age and gender. The results of the table show that in each of the four regions, the age of the respondents was different.

Table 1
Age and gender of respondents
(as a percentage of the total number of respondents)

T.r.	Cities	1945-1965		1966-1975		1976-1985		1986-1995	
		Male	Female	Male	Female	Male	Female	Male	Female
1.	Khiva	+					+		
2.	Samarkand					+			+
3.	Boysun		+	+					
4.	Asaka				+			+	



\* The table is based on the results of a sociological survey.

When analyzing the age and gender of the respondents in the survey, the men in Khiva were men aged from 56 to 75 years, and women aged from 35 to 46 years. In Samarkand, the majority of respondents were women aged from 26 to 35 and men aged 35 to 46. In Boysun district, men aged 46 to 55 were interviewed by women aged 56 to 75 years. In Asaka, men between the ages of 26 and 35 and women between the ages of 46 and 55 wrote their opinions. The survey was also conducted in cities where the tourism industry is developing, which attracts tourists in the first place, while Boysun district was selected because it has already managed to provide tourists with ancient national dishes.

The study was conducted on older people, older adults, middle-aged people and adolescents living in the above the cities. Most of them are chefs in central restaurants and cafeterias. Since the main purpose of the study was to determine what foods are most consumed in the regions and the development of gastronomic tourism in the country, the following questions are related to this.

2. "What foods do people in your area eat the most?" In Khiva, 21% of respondents preferred to eat more dough (egg barak, blue barak, ushok barak, un oshi, shivit oshi) and rice dishes in their regions. 37%, 30% ate more beef and fish and fish products. they stressed. The remaining 12 per cent of respondents admitted that liquid foods, mainly made from a variety of vegetables and legumes, were common.

In a survey of Samarkand residents, the majority of those surveyed, about 28 per cent, said they ate more flaxseed soup, pea soup, dumplings, as well as 17 per cent beer and other vegetable liquids. The questionnaires, completed by 26 per cent of respondents, included more pastries.

The rest of the answers show forgotten dishes that are almost not prepared in other regions and districts of the country.

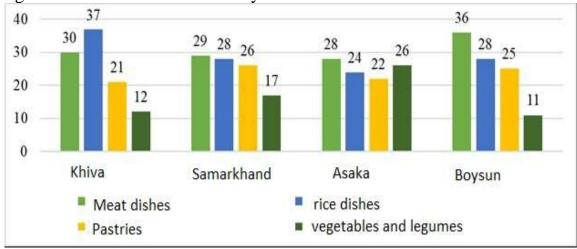


Figure 1. Foods most consumed in the regions (in%.).

Source: Based on the results of a sociological survey.

According to a survey conducted in Asaka, 24% of the population prefers devzira rice soup. He also expressed his opinion that they love to eat pastries and hot peppers.



This is because the humidity in this area is higher than in other places, which leads to the consumption of spicy foods. Some of the answers, which account for the lowest percentage, focused mainly on meat, as well as vegetables.

In Boysun district, the majority of respondents said that 36% ate tandoori, pastries, stews, stews, 28% ate a lot of wedding soup, 25% ate manti, somsa, gilmindi, thin, umoch soup and 11% vegetables and legumes, expressed a preference for easily digestible foods.

3. It is known that a person should consume healthy foods that has possitive effect on their health. To that end, "What foods do you think are good for your health?" when this question was asked, respondents responded as follows. In Samarkand, many people consider vegetables rich in vitamins to be the most useful for human health. The answer that dairy and fish products are recognized in Khiva was recognized by the majority of respondents.

Response sheets obtained in Boysun district mentioned fish and vegetable dishes. In Asaka, it has been reported that eating foods prepared in the spring, such as vegetables, sumalak, halim and blue somsa, is beneficial to health.

4. The questionnaire included "What kind of food does your family cook or does it depend on your income?" The population responded to the question in almost the same way in all relative regions, that is, the diet in families is related to income, but no matter how high or low the income, they expressed the opinion that a healthy lifestyle should be followed in nutrition.

In different parts of the country, there are also delicious national dishes prepared based on special recipes passed down from ancestors to generations. In particular, special preparations are made for the preparation of products for folk ceremonies, such as layered, halim, sumalak, karma, toy oshi, boiled, stewed, moshava, mohara, and the quantitative dimensions of the recipe are strictly observed.

Table 2
Territorial composition of national dishes
(as a percentage of total)

T.r	Cities	Common dishes in the area					
		Above 50%	In the range of 30-50%	30% each			
1.	Khiva	Soup, gumma, shivit oshi	Fish and fish	Kurtik, boiled			
		barak, blue barak, ushok	products	soup, mastava and			
		barak, egg flour oshi.		khakozo.			
2.	Samarkand	Jiz, boiled meat, soup,	Shashlik, mastava,	Gilmindi, a thin,			
		boiled soup	manti	sliced soup.			
3.	Boysun	Soft meat, "Shepherd",	Shashlik, somsa,	Gilmindi, thin,			
		Tandoori meat, "Baking"	manti. Boiling	umoch soup, belt			
			soup, rice	soup, cut soup.			
4.	Asaka	Soup, lagmon, manti,	Shashlik, fried	Iron, chicken			
		boiled, Uyghur lagmon,	lagmon, oatmeal				
			soup				

<sup>\*</sup>The table is based on the results of a sociological survey.

In the Republic of Karakalpakstan and Khorezm, special dishes such as gumma, egg barak, kok barak, ushok barak, un oshi, shivit oshi, kurtik, ijjon are prepared. in



some areas the pilaf carrots are filtered without stirring. In Surkhandarya, dishes are prepared in special ways, such as soft meat, shepherd's meat, tandoor meat, baked goods, gilmindi.

In today's globalized world, in many cities there are foreign traditions of Uzbek cuisine, such as "lavash", "shoverma", "cheeseburger", "hot dog". Perhaps, for foreign tourists, these offers are appropriate in order to meet their needs. However, it is unfortunate that over the centuries the supply of dishes that are unique to the Uzbek nation has been declining [5,6].

The names of many dishes even go beyond the Uzbek lexicon. For example, talqan is used in the work of Mahmud Kashgari as talqan [3], in the dictionary of Navoi's works it is used in the form of talqon: ... and talqon is also said in Turkish [2].

In Zahiriddin Muhammad Babur's "Boburnoma" it is given in the form of a wave:... Мулло Рафе ясогон сафуфни кайфият учун толқон била чолиб ичтук[3].

It is well known that the word "sausage", a meat product that entered Uzbek cuisine in the 20th century, is a variant of the Turkish word "kolbosti" or a dairy product "yogurt" in Mahmud Kashgari's work.

Conclusion: While the French are proud to make their wines from grapes only in their own way, the Italians say they can't make their own spaghetti the way other nations do, while the Dutch say no other nation can make cheese like them and are proud to keep it in natural caves jar. Therefore, whole nation or people should value and glorify their dishes with historical roots and their methods of preparation as intangible wealth. In preparing these dishes, people of other nationalities need to understand that they "cannot stand in front of them." The energy drinks that are entering the table of today's generation, the task of scientists in the field to re-examine and scientifically substantiate the benefits of national cuisine for the return of national dishes instead of undercooked dishes. Based on this, the following suggestions and conclusions can be made:

- -organization of "gastronomic city", "gastronomic village", "gastronomic market" in the regions, development of gastronomic programs and routes for tourists;
- Development of textbooks, electronic manuals and encyclopedias on national cuisine, national cuisine;
- use of international experience in training and retraining of personnel in the field.

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## CHEMICAL COMPOSITION OF BARBERRY FRUITS

Asqarov Ibroxim Rahmonovich professor, Andijan state university

Razzakov Nabijon Alijonovich assistant, Andijan state medical institute

**Annotasiya:** Ushbu maqola zirk mevasidan olingan ekstraktning kimyoviy tarkibini oʻrganish uchun olib borilgan miqdoriy va sifat taxlil usullari hamda undan tibbiyotda qoʻllanish oʻrni haqida.

**Kalit soʻzlar:** ekstrakt, vitamin S, alkaloid,yupqa qatlamli xromatografiya, Bertran reaktivi,olma kislota,limon kislota,anemiya.

**Аннотация** В данной статье представлена информация о методах количественного и качественного анализа, проведенных для изучения химического состава экстракта барбариса, а также о его применении в медицине.

**Ключевые слова**: экстракт, витамин С, алкалоид, тонкослойная хроматография, реактив Бертрана, яблочная кислота, лимонная кислота.

**Abstract:** This article is about the methods of quantitative and qualitative analysis carried out to study the chemical composition of the barberry extract, as well as its application in medicine.

**Key words:** extract, vitamin C, alkaloid, thin layer chromatography, Bertran reagent, apple acid, citric acid

**Introduction:** Chemical composition of barberry fruit. It is known that the effectiveness of therapeutic food additives, of course, depends on their chemical composition. Biological properties are explained on the basis of the chemical composition of the organs of medicinal plants.



One of the current topical problems is the invention of new types of healing food additives made from natural biologically active substances based on medicinal plants based on scientific achievements [1].

Belonging to the main tasks of the science of folk medicine is the scientific analysis and implementation of natural methods of treatment, which have been used for many years in folk medicine on a scientific, chemical and pharmacological basis [2].

It is known that barberry has long been used in folk medicine, on the basis of which this medicinal plant is rich in organogenic, biogenic elements. So we set out to study the chemical composition of barberry fruit. If we pay attention to the solubility of biologically active substances in medicinal plants, it was found that they are usually soluble in water as well as in ethyl alcohol. We used water and alcohol to select the optimal extractant and extracted them in solutions of different concentrations.

Natural preparations in some cases have a greater therapeutic breadth (the boundaries between therapeutic and toxic activity) and other advantages over synthetic preparations, in connection with which many of them have been successfully competing with preparations based on synthesis for many decades. All the results of the use of medicinal plants are conveniently traced by both the doctor and the patient, which actively psychologically affects the treatment process [3].

In Ancient Greece and Ancient Rome, these properties of barberry were not known, and in Europe, interest in it as a medicinal plant arose only in the Middle Ages due to Arab influence. In the sixteenth and seventeenth centuries, it began to be introduced into culture in many European countries [4].

**Research methodology:** This research has provided by chemical methods of learning medicinal plants and their compounds especially different kinds of extracts of barberry fruit.

**Analyses and results:** Extraction of barberry fruits was carried out in solutions made in the ratio of water, alcohol-water 30-70, alcohol-water 50-50 and alcohol 70-30, quantitative and qualitative evacuation studies were carried out to study their chemical composition.

**Quantitative analysis.** Ascorbic acid in four different extracts obtained. The amount of acid was determined. For this, 5% of the iodine is in ethanol. The solution was titrated using iodometry using starch [5].

The following table shows the results of the analysis:

№		Vitamin C
	Types of extract	content mg%
		(Per 100g of extract)
1	Extract №1 aqueous	14,2
2	Extract № 2 Alcohol: water (30:70)	17,4
3	Extract № 3 Alcohol: water (50:50)	21,6
4	Extract № 4 Alcohol: water (70:30)	28,8

Quality analysis. In this analysis, qualitative analyzes of alkaloids, bioflavonoids, vitamins and organic acids in barberry extracts were performed.

To maintain normal life in the cell, a balance of oxidation and reduction processes must be observed. This fully applies to the question of the need for a balanced



content of antioxidants and ROS agents in the body. The literature often discusses issues related to excessive production of ROS, leading to the so-called oxidative stress, which is proposed to be "combated" by increasing the concentration of antioxidants [5].

In animal and human cells, flavonoids are not synthesized, and the presence of flavonoids in tissues depends entirely on the consumption of plant foods [6].

Qualitative analysis of flavonoids was performed with a 1% FeCl<sub>3</sub> solution, which confirmed the formation of a complex with a bright blue color [7].

All types of barberry are considered alkaloid holders of the last century It has been studied at the Institute of Plant Chemistry of the Academy of Sciences of the Republic of Uzbekistan since the 70s. In total, more than 20 alkaloids have been isolated, including berberine, palmitin, yatrorizine, columbamine, oxyacantin, and other alkaloids [8].

A qualitative reaction specific to alkaloids was made using Bertrand's reagent. To do this, first a few drops of extract were first taken, then 2-3 drops of  $10\%~H_2SO_4$  solution were added and mixed with a glass rod. The alkaloids then pass from the base state to the salt state, and when a few drops of 10% silicon tungsten acid

(H<sub>4</sub> [Si (W<sub>3</sub>O<sub>10</sub>)  $_4$ ] x nH<sub>2</sub>O) are added, a white amorphous precipitate characteristic of the alkaloids is formed. [9]

To determine the content of ascorbic, malic, citric and oxalic acids in the extract, a 2% aqueous solution of pure samples was prepared. An aqueous extract of acid samples was added to the starting line of the plate. The plate was dried at room temperature. The ethyl acetate: acetic acid: formic acid: water was then placed in a chromatographic chamber filled with a mixture of solvents 100: 11: 11: 25 and saturated with their vapors. high-layer chromatographic analysis showed that their Rf values were measured and compared with each other according to the distribution of samples over the adsorbent. Oxalic acid was found to have Rf = 0.13, citric acid Rf = 0.29 and malic acid Rf = 0.67. Barberry fruit extract has been proven to contain oxalates, citric and malic acids.

The result of a qualitative analysis:

№	Types of extracts	The result of a qualitative analysis specific to the flavonoids	The result of a qualitative analysis specific to the alkaloids	The result of a qualitative analysis specific to the apple acid	The result of a qualitative analysis specific to the citric acid
1	Extracts № 1	+	+	+	+
2	Extracts № 2	+	+	+	+
3	Extracts № 3	+	+	+	+
4	Extracts № 4	+	+	+	+

*Conclusion.* The results of the study showed that the fruit of the black barberry plant is very rich in biologically active substances and if food additives are created from it, we have no doubt about their naturalness, healing and of course effectiveness. Another feature of the extract, especially from the barberry plant, is that it is very fragrant and gives a wonderful taste and aroma to the prepared food supplement.



Based on research on the chemical composition of barberry, in collaboration with SINO FARM MED GROUP LLC developed a new plant as a means of strengthening immunity, combating hypovitaminosis, an important metabolite for the synthesis of red blood cells in anemia, anemia and anorexia. We have developed a food supplement called VITOON. This product is sold in pharmacies of our country as a practical application, as well as the opportunity to sell abroad.

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## ACTUAL PROBLEMS OF HISTORY, PHILOSOPHY AND SOCIOLOGY

#### **UDK 575.6**

# THE ROLE OF NATIONAL GAMES IN THE SPIRITUAL EDUCATION OF THE YOUNG GENERATION

(Using the example of the game "Tsar-Minister" Khorezm oasis)

Niyozmatov Anvar Bahodirovich An independent researcher of Urgench State University

www.insonxush@gmail.ru

**Annotasiya:** Mazkur maqolada milliy xalq oʻyinlarining oʻsib kelayotgan yosh avlod ma'naviy-axloqiy tarbiyasidagi oʻrni va ahamiyati Xorazm vohasining "Podshoh-vazir" oʻyini misolida tahlil etilib, shu asosda tegishli taklif va tavsiyalar berilgan.

**Kalit soʻzlar:** yosh avlod, ma'naviy tarbiya, xalq milliy oʻyinlari, Xorazm vohasi oʻyinlari, "Podshoh-vazir" oʻyini.

**Аннотация:** в данной статье анализируется роль и значение национальных народных игр в духовно-нравственном воспитании подрастающего подрастающего поколения на примере игры "Царь-министр" Хорезмского оазиса, на этой основе даются соответствующие предложения и рекомендации.

**Ключевые слова:** подрастающее поколение, духовное воспитание, народные национальные игры, игры Хорезмского оазиса, игра "Царь-министр".

**Abstract:** This article analyzes the role and significance of national folk games in the spiritual and moral education of the young generation on the example of the game "Tsar-Minister" The Khorezm oasis, on this basis, relevant proposals and recommendations are given.

**Key words:** the younger generation, spiritual education, folk national games, games of the Khorezm oasis, the game "Tsar-Minister".

**Introduction.** The Uzbek national games are an invaluable example of our spiritual wealth and values, which have a long and a rich history, passed down from ancestors to new generations. At the same time, along with the wise teachings of our ancestors, the role of the national games of the people, invented by them, is invaluable in the spiritual and moral upbringing of the younger generation.

Such games have been popular for thousands of years, developed on the basis of the social life of the people, their way of life, and have come down to us. Especially at Navruz, sumalak festivals are difficult to imagine without folk games. And they can't be counted, they can't be counted.

People's national games at all stages of development embodied the life, lifestyle, working conditions, nationality, religion and other characteristics of the people of their time and served to cultivate in the participants the qualities of agility, endurance, creativity, enthusiasm, strength.

In children's games, as well as light humor, competition, team-oriented qualities are more noticeable. Uzbek folk dances can be classified differently. For example, the game is related to the age of the participants (children, teenagers, adults), gender (boys



and girls or men and women), season (spring, winter, summer, autumn), place to play (field, water, room), relative to the profession (farmer, artisan, herdsman, etc.), relative to the region (northern, southern, eastern or northern).

Literature Review. High spirituality and mature culture are formed, developed and perfected in the process of science and education. As noted by President Shavkat Mirziyoyev, "both the milestone of the development and the force that makes the country strong and the nation great is science, education" [1]. In turn, one of the specific stages of education is physical education. Along with various exercises of physical education, sports, travel, nature's healing factors (sun, water, air, hygienic requirements), movement games also have a strong place.

After all, the natural movements of people are nurtured through special exercises and national movement games, which serve their development and improvement.

The Uzbek national games, which are a unique form of movement, have a long history and have played an important role in raising children to be both physically healthy and strong, as well as spiritually mature.

At the same time, the national games of the people, according to their characteristics, direction, rules and opportunities of the game, have allowed to educate the younger generation to be intelligent, physically healthy, energetic, alert, intelligent and morally pure. Therefore, today it is advisable to use the national games of the people in preschool organizations, secondary schools, vocational and higher education National games, as a unique example of the national-spiritual heritage of our people, which has been polished for centuries, play an important role in the development of the spirituality of the people, the nation. As the first President of Uzbekistan Islam Karimov noted in his book "High spirituality is an invincible force", the spirituality of any people or nation can not be imagined without its history, unique customs and traditions, life values. In this regard, of course, the spiritual heritage, cultural riches, ancient historical monuments serve as an impor Given the role of the Uzbek national games in educating a healthy generation, we must teach children to take care of their health, preserve universal values and respect our friendship, friendship and national traditions. Today, the first task of educators should be brought up our children on the basis of national means of education, to raise their spiritually alert, ready for a strong deferestoration and development of folk games is not only the work of educators, but also the attention of everyone who considers himself as an Uzbek, the whole public. One of the important tasks facing us today is to collect and study the wealth of oral art created by our people for thousands of years, to use this treasure to educate the younger generation in a spiritually rich, morally pure, physically fit.

Folk national games, like folk dances and national sports, have their own inexhaustible source of knowledge and experience. Therefore, it is important to study the national games of the people, to study them on the basis of the general public, to study them in the educational process of students.

It should be noted that there are specific aspects of the organization and carrying out national games. Therefore, knowing the finer points of the game is important in this regard [4].



However, the history of the practice of inculcating the national idea in the younger generation through national games has not been sufficiently studied. These ideas further enhance the importance and relevance of studying the history of folk games of our people.

**Research Methodology.** Taking into account these aspects, we would like to dwell on the long-standing game of "King-Minister" in Khor the Khorezm oasis also has many interesting national folk games, which have been played for a long time and passed down from generation to generation. One such game is the King-Minister game. This game is played at weddings and banquets, in the circle of young men, by taking turns throwing (throwing).

The next two legs of the lamb slaughtered and carpal bone (Oshiq) were separated from the knee joint. The four sides of the carpal bone (oshiq) have their own names, the upper side of which is "olchi-podshohh", the lower flat side is "tawwawazir", the side of the side bubble is "pikka-sufi (innocent)", and the opposite side is "chikka sinner".

In this game, the man to the right of the boys 'circle started the game by throwing the carpal bone (Oshiq). Then, alternately, carpal bone throwing is continued, turning the circle over and over again. During the game oshiq, the culprits were not counted until the king and minister were identified. The king and the minister were chosen from the participants of the round by throwing the carpal [3]

The minister takes the durra, which is made like a whip, and goes to the man whose carpal bone has fallen, and wraps him in a turban as a royal crown. Then a conversation begins between the two of them (both sitting down):

Minister: Assalamu alaykum, my king, we have come to your service (they shake hands and greet).

King: Are you fit for our service? Minister: Your service knows. King: Call the crowd to order.

Minister: All right (in the same way as the king sat the minister in the circle

forces to sit.)

Minister: Your Majesty, the people are peaceful. Allow the blanket \* to run.

King: Run the blanket.

The person who comes next throws the oshiq. When the oshiq falls into a trance, the lover passes to the next person. If the lover falls to the ground, the Minister: Podshohyim, dod.

King: Tell me your price. Minister: I caught a thief.

King: What \* thief?

Minister: I caught it while stealing an apple.

King: Hit the apple-picking hand with five pairs of lashes.

Guilty: My lord, I have money. King: Guilty, tell me your value.

Defendant: I have a partner.

King: Try your partner, too. minister immediately appeals to the king.



Again the next person throws oshiq. When his oshiq is at his peak, the culprit and the two stand up and bow to the king, saying, "Slave me, my king." If he falls to the ground, the king orders both culprits to be beaten with five pairs of whips. The verdict is executed by the minister or a person in the circle on his behalf. In this case, the culprits, along with the executor of the sentence, bow to the king as "slave, my king." With the king's permission, they take their seats. The minister, on the other hand, gets permission from the king to continue the game. During the game, whoever throws the lover to the limit, the minister will impose one of the different charges on each of them.

At the king's command, the horse thief rode in a circle and was saddled like a horse. They beat the goat thief. The donkey thief snorts and rides like a donkey. The minister sometimes said to the king, "I was bringing a dancer to you, and this man stole it." The king asked her to play one of the melodies "Lazgi" or "Norim-norim" and "Orazibon" as a dancer. The culprit, dressed as a woman, played tunes played by fellow musicians. The perpetrators were also forced to sing, make jokes, and tell tales, legends, and anecdotes.

Analysis and Results. During the game, the king and minister change frequently. When the king changed, the minister put the crown off the previous king on the new king and renew the staff. If the previous king reigned until the game turned four or five rounds, when a new king was elected, those in the circle demanded that the circle overthrow him. At this point, the minister, with the help of two men, raises the former king to his feet. One of them passes over his back and acts as a throne with both hands on the ground. A man pushes the old king back with a blow. As a result, the king wraps himself around the acting throne and falls backward. A strong laugh begins in the circle. They all sit in place. The minister, on the other hand, continues the game, asking permission from the new king as before.

During the game, those in the circle are strictly subordinate to the king and his minister. The game round lasted three to four hours. The game was stopped only at the request of the majority or by order of the person playing the role of the king.

What attracts the viewer's attention is the presence of characters in the game, i.e. the king, the minister, the Sufi, and the culprit, as well as the appearance of various scenes in the circle based on a strong fantasy between them certainly, ensured a rich and interesting spectacle.

**Conclusion.** In conclusion, the game "King-Minister" differs from other games with its antiquity and fun, especially the richness of theatrical elements.

The game has evolved over the centuries. Therefore, the game has become not only a simple game, but also has a social significance, as it serves to develop the creativity and speech skills of the people. Of course, the fact that the game has a scenic look has attracted any audience. That is why the game is loved and played among many peoples.

However, during our research, it became clear that this game is known only to some older people, and the majority of today's younger generation, unfortunately, have no idea about this game. This definitely made us a little worried.



This means that one of the ancient games of the ancient Khorezm oasis, which has attracted the audience for centuries - the popular game "King-Minister" - is widely disseminated among our people, especially among the younger generation, reviving them, promoting a number of forgotten national games. One of our urgent tasks today is to promote the healthy lifestyle of our youth, to remember once again the national games of the ancient people, which, together with their intellectual potential, serve to grow physically fit.

In this way, we will not only preserve the rich material and spiritual treasures of our great ancestors, which have survived to this day, but also fulfill our responsibility to pass them on to the next generation.

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# SOME ISSUES RELATED TO THE HISTORICAL COOPERATION ROOTS OF KHOREZM WITH FOREIGN COUNTRIES

Xudoyberganov San`at Sanjarovich An independent researcher of Urgench State University

www.insonxush@gmail.ru

Annatosiya: Ushbu maqolada Xorazmning xorijiy mamlakatlari bilan aloqasi, hamkorligi keng yoritilib berilgan. Shuningdek, Xorazmda savdo aloqalarining kengayishi , xunarmandchilikning keng rivojlanishi hududga katta qiziqish uygʻotgan. Bu esa maqolada Xorazm vohasi va uning atrofidagi hududlarda turli manzilgohlarni tadqiq qilinganligi aytib oʻtilgan. Bundan tashqari tarixiy ildizlarimizni yoritib beruvchi manbalardan keng foydalangan. Xorazm vohasini xorijiy mamlakatlar bilan oʻzaro aloqalarining tarixiy ildizlariga doir masalalar qal'alar misolida keng yoritilib oʻtilgan.

Kalit soʻzlari: Xorazm kulolchiligi, Quyi Amudaryo, Oqchadaryo havzasi, Yonboshqal'a, Levshin, Tozabogʻyob madaniyati, Amirobod madaniyati, "Dashti Qipchoq", "Buyuk ipak yoʻli", iqtisodiy aloqalar, Xiva va Rossiya savdo alaoqalar.



Аннотация: В данной статье освещаются отношения и сотрудничество Хорезма с зарубежными странами. Расширение торговых связей и развитие ремесел в Хорезме также вызвало большой интерес к региону. В статье говорится, что были изучены различные поселения в Хорезмском оазисе и его окрестностях. Кроме того, широко используются источники, освещающие наши исторические корни. На примере замков широко освещены вопросы, связанные с историческими корнями отношений Хорезмского оазиса с зарубежными странами.

**Ключевые слова**: Хорезмская керамика, Куйская Амударья, бассейн Акчадарьи, Ёнбошкала, Левшин, тозабогобская культура, амирабадская культура, «Дашти Кипчак», «Великий шелковый путь», экономические отношения, торговые отношения Хивы и России.

**Annotation:** This article covers Khorezm's relations and cooperation with foreign countries. The expansion of trade relations in Khorezm and the development of handicrafts have also aroused great interest to the region. According to the article, various settlements in the Khorezm oasis and surrounding areas have been studied. It has also made extensive use of sources that shed light on our historical roots. Issues related to the historical roots of the Khorezm oasis in its relations with foreign countries are widely covered on the example of fortresses.

**Key words:** Khorezm pottery, Lower Amudarya, Akchadarya basin, Yanboshkala, Levshin, Tozabogyob culture, Amirabad culture, Dashti Kipchak, Great Silk Road, economic relations, Khiva and Russia trade relations.

**Introduction.** The conclusions based on the theoretical and comparative analysis of historical data recorded in the literature of the 20th century play an important role in illuminating the cultural ties of the population of our country with neighboring regions.

In the mid-30s of the XX century, the Khorezm archeological expedition led by S.P Tolstov conducted archeological excavations in the settlements left in the Lower Amudarya basin. The first sources on the history of the Neolithic period of the Khorezm oasis are taken from the cultural strata of the settlement Yonbosh-4, built by seed communities in the form of a semi-basement on the side of the Yonboshkala plateau in the Akchadarya basin. [1.61-66]

According to historical data, from the end of the IV millennium BC, the material possessions of the seed communities, which carried out agricultural activities at the settlement of Yanbosh-4, led a way of life in Southern Siberia.

Afanasev settlements are derived from the cultural stratum [2.72-76]. A.I. Schmidt and N.A. Prokoshev note that the stone tools and pottery were excavated near the Kama River and in the lower reaches of the Chusovoy River at Levshin settlements were similar to the Yonbosh-4 pottery [3.20-39]. As a result of archeological excavations carried out by I.R. Chernetsov in the Neolithic settlements around the Lower Basin of the Ob River, the Kaltaminorians were able to obtain objects that give them features related to pottery. [4.18-19]

Pottery from Yanbosh-4 is also found in Neolithic settlements around Lake Baikal. [5.15-32] Indeed, in the Akchadarya basin, the cultural traces of Neolithic tribal



communities surround Southern Siberia, the Ob, the Kama, and the Chusovoy rivers. Of course, cultural ties continued during the Eneolithic (mid-fourth millennium to the first half of the third millennium). Archaelogical excavations along the Volga, in Kazakhstan, and in the Mintsin region have uncovered pottery and pottery from the population of Burgutkala and Norinjonkala in the Akchadarya basin, similar to the pottery used by the Yogochband and Andronova tribes. (ornaments triangular handmade ceramic dishes). Thus, the Yagochband culture of the Volga region, the Andronova (village) culture, which spread to the steppes of the Southern Urals, Siberia and Kazakhstan, began in the middle of the second millennium BC with the formation of an ethnic zone south of the Akchadarya basin. The term Tozabogyob culture is mentioned in the historical literature on the economy of the migrating cattle-breeding tribes. [6.174-175]. Thus, the population of Khorezm was in contact with the herdsmen who made pottery in the Urals, and this process became more active in the Bronze Age (mid-third millennium - second millennium). .[7.186-189] According to the Greek historian Arrian, in the late 20s of the 4th century BC, the Khorezmian king Farazman went to Alexander with 1,500 cavalry and offered that his administration would cover the geography of the Caucasus and he would assist in the conquest of the Pontic kingdom, which was operated in the Black Sea. These data prove that the territory of the Khorezm state was connected with the Caucasus by economic and cultural ties.

Literature Review. In the 10th and 8th BC centuries, the tribes that created the Amirabad culture as a result of the merger of the local population and the Tozabogyabs in the Akchadarya basin carried out an ethnic process. [9.107-129]. Thus came and was a new ethnic stratum that took place in society as a result of the assimilation of the settled population. According to historical data, In the IX-VIII BC centuries in the Surkhan oasis from the north a group of peasants settled in the area adjacent to the left bank of the middle reaches of the Amu Darya, that's why cultural communication center was established. [10. 527-528]. It can be concluded that the population of the center expanded the geography of cultural ties through the Akchadarya basin to the Bukhara oasis and the lower and middle regions of the Syrdarya. Khorezm took part in actively in the construction of the Great Silk Road from China through Byzantium.

The fact that Khorezm actively cooperated with the Bulgarian state on the Volga in the VIII-X centuries is surprisingly noted in the works of Arab tourists. Al-Mukaddas, who came to Khorezm in the second half of the 10th century, wrote: 'From Bulgaria to Khorezm across Volga the things which White Suvar, Savsar, Fox, Rabbit and goat fur, candles, bows and arrows, white poplar bark, squirrel telpak, fish glue, fish teeth, horse skin, honey, walnut kernels, swords and shields, helmets, Slavic slaves, sheep and cows were sent. He noted that locks and bows were removed from Khorezm [11, 202]. This means that economic cooperation was carried out from Khorezm to Bulgaria with weapons, locks, saddles and horseshoes.

Khorezm traders were the leaders in the domestic and foreign markets of the Bulgarian state, and there were trade facilities. This, in turn, led the Bulgarians to accept Islam. The priest was a representative of Khorezm. Khorezm traders actively cooperated with the Caspian kingdom, the second state on the Volga. Like the Bulgarian city, Itil also had shopping malls. While the Khorezmians dominated



domestic and foreign trade in the Khazar state, the ministers and guards of the Khazar Khaganate were young men from Khorezm. The role of Khorezmians in the Caspian state was so high that there were colonies of 20,000 people in the region. Thus, the Khorezmians made a worthy contribution to the rapid development of industry and culture of the Bulgar and Caspian states.

In the XI-XII centuries, the relations of Khorezm with the middle and Lower Volga began in the Dnieper, and the term "Dashti Kipchak" is mentioned in the historical literature of the northern regions of the Volga and the Aral Sea. The Kipchaks settled in this area and were engaged in cattle-breeding. [12.17]. The caravan route through Dashti Kipchak had two directions. The first route from Bulgar to Central Asia, the Caucasus, Iran and the Far East via the Volga, and the second route through Dashti Kipchak to Crimea, Trapezund in Asia Minor, and then to Constantinople. To serve these trade routes, the Mongol rulers established the Golden Horde state on the Volga, which was built near the Botu Palace (near Astrakhan) and the Berka Palace (near Volgagrad) and served as the capital and trade center. Khorezmian masters used their practical experience in the construction of Botusaray and Berkasaray.

Research Methodology. According to historical data, in the second half of the XIII century and the beginning of the XIV century Russian traders also came to Urgench with branded goods [13. 51-52]. In 1464, the Russian state was greeted by Abu Said, a descendant of Timur, in Herat, in order to establish diplomatic relations with the Timurid state.14. 30-31]. According to the Russian Researcher S.M Solovev, in 1490 the ruler of Khorasan Hussein Baykaro sent an ambassador to Moscow [15. 113]. It is known that in 1532, on behalf of Babur, an envoy was sent to Russia under the leadership of Hussein, which was to conduct trade relations between the two countries and to inform about the existence of the Timurid state in India [16.5-6]. From the second half of the 16th century, the Astrakhan, Kazan, and Siberian khanates were annexed by Russia to the middle and large juz territories.

In the 17th century, the Russian state conducted trade relations with the Khiva Khanate through the city of Astrakhan. According to Russian chronicles, trade ambassadors arrived in Astrakhan from Urgench in 1557 [17.284]. During the 17th century, the Kalmyk invasion hindered the development of trade relations between the Khiva Khanate and the Russian state. Ambassadors were sent under the leadership of Khiva khan Isfandiyar Amin Bahodir, who described the situation. Thus, it is noteworthy that Amin Bahodir focused on eliminating the remnants that seriously damaged the Russian state's trade relations.

It is known that the cold relations between Bukhara and Khiva, which arose in the territory of Uzbekistan in the XVI century, intensified in the first half of the XVIII century (between them was the object of mutual struggle of the Mary oasis).

Until the beginning of the 18th century, the existing economic cooperation between the Russian state and the people of Khorezm served the interests on an equal footing. But from the beginning of the XVIII century, economic relations with the Khiva khanate began to serve the interests of the Russian state.



This is due to the fact that the governor of Astrakhan Somonov of the Turkmen people's representative Khoja Nafas was in the presence of the king with Khoja Namas in order to convey the famous message to Peter-I. said to help.

In 1713, the ambassador of Khiva Ashurbek also confirmed the opinion of Khoja Nafas that the Amudarya once carried water to the Caspian Sea. In addition to trade relations with the Khiva Khanate, Peter I issued a decree allowing two expeditions to operate in order to serve the interests of natural resources, to obtain extensive information. According to the decree, the expedition led by Ivan Buchgolts was sent to East Turkestan, and the Bekovich-Cherkassky expedition was sent to Khiva. In addition to gold prospecting, Buchholz was tasked with identifying opportunities for trade through Lake Yamishev, which was unfortunately not carried out due to the Dzungar invasion. Knyaz Bekovich-Cherkassky's task was to search for gold, to subdue Khiva, to build fortresses on the Caspian coast, to divide the Amu Darya by the old way to the Caspian Sea, to open the waterway to Central Asia via the Astrakhan-Caspian Sea, but the work of members of the expedition was completed by Shergazi, the khan of Khiva. After the death of Peter I, he continued to maintain trade and diplomatic relations with the Khiva khanate. From the 1840s, ambassadors were sent to Khiva under the leadership of G.I Danilevsky. The expedition established diplomatic relations with the Khiva khanate, trade relations.

Analyses and Results. In 1839-1840, V.A. Under Perovsky's leadership, the first steps were taken to occupy Khiva with a military offensive, but to no avail [19. 1-2]. The Kungrad dynasty, which ruled the Khiva khanate from the 19th century, maintained economic relations with Russia, Bukhara, Kokand, Afghanistan, Iran, China, India, and Turkey after gaining economic and military stability [20.26-27]. In general, in the early XIX-early 70s, economic cooperation between Khiva and Russia was carried out in the following areas:

- 1 route: North New Urgench-Amudarya left bank- Ustyurt chinki-Mangishlak North Caspian Sea-Astrakhan
- 2 route: -Karakum desert-Shemaha in the Caucasus to the cities of Russia Route
- 3- route: East Chorjoi-Bukhara-Samarkand-Tashkent-Astrakhan-Orenburg-Nizhny Novgorod-Petersburg [21. 88-161].

After the invasion of Russia by the Khiva Khanate in 1873, the 18 articles mentioned in the Gandhimiyon peace treaty between them defined the legal basis for economic cooperation between the two states.

**Conclusion.** Thus, the above considerations allowed us to come to the following final conclusions.

- -Economic relations of Khorezm with the northern, north-eastern regions were carried out in the Neolithic and Eneolithic ages.
- -From the middle of the 2nd millennium BC, nomadic tribes from the Volga region, the Southern Urals and the north-east of Khorezm migrated to Khorezm and raised their cultural ties to a higher level.
- Khorezm served as a base for the Great Silk Road International Caravan Road, which began in China in the 2nd century BC.



-In the VII-X centuries the Khorezm population actively traded with the Bulgar and Caspian states. Trade fairs of Khorezm traders prevailed in the cities of Bulgar and Itil.

-During the Mamuns and the Golden Ages, Khorezm connected 3 branches of the international caravan route.

-During the reign of Timur and the Temurids, when the Mongols ruled, the international caravan route continued through Khorezm.

From the 16th century, the Khorezm state (during the Shaybanid period) established trade relations with Russia on an equal footing. From the beginning of the XVIII century, the balance of economic relations between Russia and Khiva was decided in favor of Russia.

From the 1920s, Russia began to send expeditions to Khiva under the leadership of traders of various names, military specialists, whose goal was to subdue the Khiva khanate, the efficient use of natural resources.

In 1873, the legal basis for cooperation in the colonial policy of the Khiva Khanate in connection with the Russian military invasion lasted until the 17th century.

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## **UDC: 101**

## PHILOSOPHICAL ANALYSIS OF THE DEVELOPMENT OF SOCIETY

Baykabilova Pariozod Amanbayevna Senior Lecturer, Department of Philosophy and National Idea, Tashkent State Technical University, pariozodbaykabikova@gmail.com

Annotatsiya: Ushbu maqolada jamiyat falsafasiga taalluqli bo'lgan jamiyatning rivojlanish xususiyatlari haqida so'z boradi. Shuningdek, jamiyat konspeti, uning rivojlanish tendensiyalri, jamiyatning kelib chiqishi, shaxsning falsafiy ongining jamiyat rivojlanishiga ta'siri kabi omillar ham muhokama qilinadi.

Kalit so'zlar: jamiyat, falsafa, tadqiqot, rivojlanish, falsafiy tahlil

**Аннотация**: В данной статье рассматриваются особенности развития общества, актуальные для философии общества. Также обсуждаются такие факторы, как понятие общества, тенденции его развития, происхождение общества, влияние философского сознания личности на развитие общества.

**Ключевые слова**: общество, философия, исследование, развитие, философский анализ.

**Abstract**: This article discusses the developmental characteristics of a society related to the philosophy of society. Factors such as the concept of society, its development trends, the origin of society, the impact of individual philosophical consciousness on the development of society are also discussed.

**Key words**: society, philosophy, research, development, philosophical analysis **Introduction.** *The concept of society*. Society has been the subject of research by scientists and philosophers for centuries. It is studied in a variety of disciplines, including sociology, history, political science, law, ethnography, economic theory, and others. Unlike certain disciplines, the task of philosophy is to study general aspects of the historical process. While philosophy does not set itself the task of finding an answer to the question of what causes certain phenomena, it does provide a methodological basis for the science of history, answering the question of how to approach the identification of these causes.

The task of philosophy is to determine the basic foundations of social life, the factors that make up its system. There are various definitions of society as a part of



nature, that is, a social being, a special form of human association, a collection of many relationships between people.

Literature Review. Society has been studied by scientists and philosophers for centuries. In particular, Aristotle (384-322 BC) is arguably the founder of both science and philosophy of science. He wrote extensively about the topics we now call physics, astronomy, psychology, biology, and chemistry, as well as logic, mathematics, and epistemology. Francis Bacon (1561-1626) promoted a scientific method in which scientists gather many facts from observations and experiments, and then make inductive inferences about patterns in nature. Rene Descartes (1596-1650) is a mathematician, scientist, and philosopher who promoted a scientific method that emphasized deduction from first principles. These ideas, as well as his mathematics, influenced Newton and other figures of the Scientific Revolution. Piere Duhem (1861-1916) is a physicist and philosopher who defended an extreme form of empiricism. He argued that we cannot draw conclusions about the existence of unobservable entities conjectured by our theories such as atoms and molecules. Carl Hempel (1905-1997) developed influential theories of scientific explanation and theory confirmation. He argued that a phenomenon is "explained" when we can see that it is the logical consequence of a law of nature. He championed a hypothetico-deductive account of confirmation, similar to the way we characterize "making a scientific argument" in this website. Karl Popper (1924-1994) argued that falsifiability is both the hallmark of scientific theories and the proper methodology for scientists to employ. He believed that scientists should always regard their theories with a skeptical eye, seeking every opportunity to try to falsify them.

**Research Methodology.** In explaining the social content of its categories, philosophy analyzes certain historical processes based on this. One of the problems of the philosophy of history is the problem of the unity of this historical process and the definition of the principles of the chronology of history. We used descriptive, inductive, deductive, statistical and comparative analysis methods in this study.

Analysis and Results. Society is a complex system that is constantly evolving and improving. In each new era, there is a need to know the essence of society. Society is a union of material and spiritual factors. Until now, material and spiritual life in literature have been very different. More emphasis is placed on the study of material life. However, the essence of society is inextricably linked with the essence of the human being who makes it up. Just as the human body is inseparable from its soul, so it is illogical to separate the material and spiritual aspects of society from one another and to give priority to one over the other. The combination of material and spiritual interests of society is the basis of social development.

Economic development can only be achieved by raising human morale. That is why today a lot of attention is paid to raising the morale of the population, the formation of the foundations of national ideas and ideology. That is why our country pays great attention to ensuring economic prosperity by raising the morale of the people. The question of why the formation of society forced people to unite as a family and as a community has long attracted the attention of famous thinkers.



According to secular views, people are accustomed to live together as a community to meet their material and spiritual needs. Because of their life experience, intelligence, and thinking, people have come to understand the convenience, preference, and necessity of living as a society. In the process, those who have entered into a relationship have attained spiritual maturity by improving and further developing that relationship. It brought people closer together and allowed them to meet their material and spiritual needs. In the process of social relations, historical forms of organizing people - the family, the state, the community (village, city) - have emerged.

The moral, religious, scientific, philosophical, legal, economic, and ideological relations that exist between people are all called social relations. Social associations help people to meet their material and spiritual needs. They are, in essence, a necessary condition for the existence of man and society. For example, without the values of family, state, education, neighborhood, homeland, man and society lose their essence. The material life of a society includes:

- the economic conditions necessary for people to live and develop as individuals;
  - food, clothing, housing, fuel, communications;
  - production, distribution, exchange and consumption of material goods;
  - a set of economic relations between people in the process of production;
  - material wealth, natural resources.

Various political institutions (government, political parties, organizations, various associations) play an important role in managing the material and spiritual life of society, regulating relations between people. The political right to govern society's difficult aspects are also important. The deepening of political and legal knowledge by the people is important for the sustainable survival and development of society.

Theories of social development. In the history of philosophical thought, there are various theories about the nature and development of society. In particular, the German philosopher Hegel linked the causes of the formation and development of society with the development of the absolute spirit, L. Feuerbach with religion, and sought the causes of social development in the development of religious consciousness. The French Thinker O. Comte explained the reasons for the development of society with three stages of human spiritual development (theological, metaphysical, positive stages). K. Marx linked the causes of the development of society with class struggle and revolutionary change, explaining all social phenomena and processes from a class point of view. He artificially generalized social contradictions and proposed a social revolution and the abolition of the property class as the main means of resolving conflicts. Social practice has shown that such a theory is both biased and erroneous. The idea that the development of society is a multi-stage process was put forward by the American Philosopher O. Toffler. According to this view, the development of societies is divided into agrarian society, industrial society, and post-industrial society.

The literature promotes a civilized approach to the development of society. According to this approach, each nation creates its own model of social development through the creative use of the experiences of other peoples, while maintaining its own unique, original and appropriate way of life. The concept of value and its general



description. Since ancient times, philosophers have been interested in the problem of values. But at that time, value was identified with existence, and the characteristics of value were included in its content. For example, for Zoroaster, Mony, Socrates, and Plato, values such as goodness and justice were the main criteria for real existence. Moreover, ancient philosophers tried to classify values. In particular, Mony believes that there is a world of darkness and enlightenment, in the first world there is injustice, oppression, violence, and in the second there are eternal, invincible permanent values. Different philosophical epochs and the philosophical schools that existed in them contributed to the formation of the concept of values. In the Middle Ages, for example, values in both the West and the East were religious in nature and associated with the divine.

*Philosophy and everyday consciousness*. Unless one thinks that such a society, it seems that this concept for him is well known. In the ordinary consciousness of the people society — it's all the surrounding people with whom we deal and those who are far from us, but are also members of a single society. In the society in which we live, depends on the quality of our lives. Modern society in the philosophy — this notion, which was formed approximately in XVII-XVIII centuries thanks to the development of European culture. And the etymological significance of society in most languages — is the word characterizing the isolated person, but a kind of United a collection of individuals.

**Conclusion.** As a science, philosophy has always focused on the scientific knowledge of the world, but at the same time it represents the interests of certain classes and social actors. This science, as an integral system of ideas about the world, and includes the ideology and politics of class societies. As a result of increased confrontation between different areas of philosophy. Since the role of philosophy in society affects his ideology, it is an important part of learning in the system of knowledge in political science.

A significant part of philosophical knowledge is aesthetics. Creating a philosophical picture of the world, its creators must be endowed with a sense of beauty and harmony. Philosophical science related to the art, as evidenced by the works of Camus, Roerich, Ciurlionis, Tagore, Goethe, and other authors.

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