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ANALYSIS OF THE PRODUCTION AND PROPERTIES OF WOOD-POLYMER COMPOSITE MATERIALS

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ABSTRACT: *Wood-polymer composite materials are one of the main directions in the social life of mankind and have great prospects in the world, Due to the fact that they show the best and highest performance in terms of physical and mechanical properties of wood and polymer. Initially, the study of composite materials based on wood and wood filler began by German scientists in the 1930s, and by 1941, it was introduced into industrial production. Phenol-formaldehyde and urea-formaldehyde resins were mainly used as binders in these composite materials. Later, after it was determined that these resins were partially harmful to human health, scientists conducted research on other types of binders in the production of wood shavings, wood fiber and wood filler-based products and materials. In the*

production of such composite materials, only the brand of urea-formaldehyde resin (LT), the brand of low toxicity, has been preserved, but it is also harmful to human health. Research has shown that polymers (polyvinyl chloride, polyolefins) can be used as binders in the production of wood filler-based compositions, and on this basis, the production of composite materials began. These materials and products came to be known as wood-polymer composite materials. Another peculiarity of this production technology is that the modes of operation of the processes in the production and technology vary depending on the place of production, the climatic conditions of the region. Therefore, the countries producing wood-polymer composite materials in the world will develop technology depending on their climate and weather conditions. The main difference in these technologies is observed in two processes:

- Preparation of raw materials and chemicals for production*
- Temperature regimes in the production process*

It is these two aspects that play a major role in the production of a quality product. The most important process in this production is the preparation of wood filler for production, because we know that the wood structure is porous and has the property of absorbing moisture from the air. We know that wood is divided into two types: deciduous and pine. Due to its structure of hardwood than softwood, the optimal wood wool for production should be above $8 \pm 10\%$. In the production of materials, pine is used as a raw material. In this regard, in this work, we used local poplar wood and assume the technological feasibility of composites consisting of wood and a thermoplastic matrix for use in thermoforming at four mass fractions in the composition of wood fillers. For this purpose, an analysis of the viscoelastic, thermomechanical and thermophysical properties of a composite consisting of polyvinyl chloride was carried out.

Key words: *poplar, primary polyvinyl chloride, components of composites, technology, tensile strength.*

INTRODUCTION: Wood has been a necessary material for human existence since primitive times due to its prevalence, renewability and environmental friendliness, relative ease of processing and excellent mechanical properties. With the development of technology, wood began to be used as a raw material for fuel, tools, boats, vehicles, bridges, furniture, engineering materials, weapons and even energy. Now the tree is widely used in various parts of human life. Wood has a porous structure composed of various cell walls, mainly composed of biopolymers, i.e. carbohydrate polymers of cellulose and hemicellulose, and phenolic polymers of lignin. The dense structure of wood provides it with high specific strength. Therefore, some high quality wood can be used as a building material. However, wood components are easily destroyed by microorganisms and are susceptible to fire damage. In addition, since the most functional group in the cell walls of wood is the hydroxyl group, the hygroscopic properties of these groups can lead to poor dimensional stability of the wood. In other words, wood shrinks when it dries and swells when wet. All these shortcomings limit the use of wood as a high quality material.

In addition, with the development of society, wood consumption is growing rapidly year by year. However, on the contrary, the production of high-quality wood has declined sharply. The apparent contradiction has prompted researchers to look for alternative low-quality resources for value-added applications. To achieve these goals, appropriate technologies are needed to improve the properties of low-quality resources (especially certain wood qualities) (eg, mechanical properties, dimensional stability, chipping resistance, and heat resistance) to meet end-use requirements. The aforementioned unfavorable behavior of wood is mainly due to the presence of many hydroxyl groups in the main components of wood and various cell cavities within the wood (the main pathways for moisture movement), blocking these reaction areas or closing the gaps not only makes the wood more resistant to moisture resistance and can improve the physical and biological properties of decomposition. Therefore, the treatment to change the structure of wood and thereby improve its physical and

mechanical properties, as well as durability, is carried out by chemical modification, chemical impregnation, pressing with heating and heating at high temperatures.

One of the methods for improving the properties of wood, which has received much attention in recent decades, is the production of wood-polymer composites by forming polymers from unsaturated monomers inside wood holes (vessels). The resulting polymer simultaneously enhances the mechanical properties of wood and can delay or prevent the impact of water or microorganisms on the wood matrix. This multifunctional treatment helps prevent possible environmental damage from preservatives washed off the chemically treated wood.

Poplar has been widely used and used in Uzbekistan since ancient times, and it has a special role in the life of the population in construction as wood products. Therefore, the cultivation of poplar has always been at a high level. Since the main raw materials for the woodworking industry are imported from other countries such as Russia, Kazakhstan, China, etc. These wood composite materials (chipboard, MDF, plywood, etc.). In connection with this and taking into account the need for wood and furniture products, plantations with a total area of up to 11,000 hectares have been created in several regions of Uzbekistan since 2018 to create a raw material base based on poplar. Most of this will be in the Tashkent region and the Ferghana Valley. Because of the climatic conditions in Central Asia, the range of tree species is not so great.

Poplar (*Populus*): density 400-455 kg/m³

Belongs to the type of coniferous trees with a scattered tuberous tree. Poplar - a tree that has a core, around the core is wide, white; the core is light brown and yellowish brown, and these colors do not differ from each other. Annual layers are rarely distinguished, tubes and small core rays are not visible. Poplar is soft, light, dries a little and warps a little. It has industrial and economic species: black poplar (black poplar) and white poplar (silver).

Wood-polymer composite materials are currently widely used by a number of developed countries in Europe and Asia in the field of construction and furniture

production using raw materials based on innovative technologies. The basis of these raw materials and materials are high-molecular compounds - polymers. The advantages of these materials:

- These materials are produced entirely on the basis of automated innovative technology

- The physical and mechanical properties of these polymer-based materials are very high, so the service life and operation are higher than other materials.

- The main advantages of these materials are that they are 100% moisture and water-resistant products and they will never change their facial and surface textures, do not change color.

- This production is 100% considered without waste

Including these advantages, these products are widely used in the fields of construction in the production of furniture and wood products, in the decoration of train cars and the decoration of building facades. In production, 4 types of polymers are mainly used. Polyvinyl chloride, polyethylene, polypropylene, polystyrene.

We offer and study technological parameters and use for the production of composite materials from these polyvinyl chloride polymers. Products that we offer are made on the basis of recycled polyvinyl chloride. Currently, insulating corrugations for cables, pipes and fittings, linoleum, polyvinyl chloride (PVC) lamination, etc. are produced on the basis of primary PVC.

Based on the above modifications of wood and the development of research on wood-polymer composites, this article provides an overview of the production, physical and mechanical properties, performance and application of wood-polymer composites.

METHODS AND MATERIALS:

Wood-polymer composite (WPC) materials (Fig. 1) are manufactured at a plant that produces WPC based on polyolefins and pine wood waste (Khamkor-R, Tashkent region, Uzbekistan) like many other WPC materials. But pine is a tree

which is an imported raw material. Therefore, in this research work, our goal, taking into account the wood raw material base in our region, is to develop the technology of WPC materials based on local raw materials, that is, the localization of raw materials and chemicals for the production of a new type of material in Uzbekistan.



Figure 1: There samples of WPC product and poplars waste

Raw materials and chemical additives:

Wood fillers used in this work, poplar tree waste, from the Tashkent region to local sawmills serving institutions (Uzbekistan). Polyvinyl chloride suspension grade S-6346-M (SG-5) was purchased from the “NavaiAzot” chemical complex. Calcium carbonate (CaCO_3) was purchased from Kashkadarya region. Other used chemical additives: modifiers, heat stabilizers, foaming agents and lubricants were purchased from Shandong Donglin New Materials Co. Ltd (Shandong, China). All chemicals were used without further purification.

Composite mix preparation:

The preparation of a wood-polymer composite mixture requires a special technology. We prepared a composite mixture and samples were taken by formulating four different mass fractions of wood filler 1 (5.46%), 2 (7.96%), 3 (10.46%), 4 (12.96%). The percentage composition was calculated based on the weight of the polymer. To obtain samples each time, the following series of technological processes were used. First, a wood filler is made from the first poplar

sawdust, using a mill, we grind it into flour, then dry it with air drying until the moisture content of the flour drops to 8%. In our study, we used wood flour in the 500-800 grade, which means a wood flour fraction of 500-800 microns. In an air dryer, wood flour is dried with hot air at a pressure of 6 MPa at a temperature of 105-110 °C for 3-5 minutes at high speed. Then the dried wood flour in place with other chemicals and fillers is loaded onto a high-speed mixer to mix and make a composite mixture. In this process, the composite is mixed at a temperature of 125-130 °C at a speed of 3000 rpm. The process lasts 20-25 minutes in this process, the pressure will also be 6 MPa. The next process is kneading the finished mixture. For this process, the mixture is fed into the storage hopper using a pipeline and mixed for 8 or 10 hours. Then it enters through the pipeline into the dosing hopper, and from there it goes to the extruder. With a laboratory extruder, we received samples with a width of 40 mm, a thickness of 10 mm, and since this production is molded in length, we selected the physical and mechanical properties according to the standards that we will test.

RESULTS AND DISCUSSION:

The tensile strength of wood-polymer composite materials was carried out according to the method of GOST 11262-2017. For this purpose, samples were prepared in accordance with GOST 26277. That is, the dimensions are 120x4x15 mm. In addition, the speed of the device is set at 0.5% in accordance with this GOST. In preparation for testing, the samples were air-conditioned for 16 hours in accordance with GOST 12423-66. We calculated the tensile strength by applying the test results and showing them in the following table.

Table 1

Composition effect of samples on the strength of stretching

No	Samples		Consistency in stretching, MPa	Maximum elongation, mm	Average modulus of tensile strength, MPa
1	1 st recipe with wood fillers (5,46%)	A	4,8	2,08	4,908
		B	5,016	1,83	
2	2 nd recipe with wood fillers (7,96%)	A	6,63	2,326	6,11
		B	7,25	2,513	
		C	4,45	1,529	
3	3 rd recipe with wood fillers (10,46%)	A	8,15	2,995	6,925
		B	6,36	3,356	
		C	6,26	2,558	
4	4 th recipe with wood fillers (12,96%)	A	12,06	4,185	12,097
		B	10,2	3,747	
		C	14,03	4,101	

From the above results, in the table, we can see that an increase in the mass fraction of wood filler in the formulation of the composition led to an increase in tensile strength.

To test the bending strength of wood-polymer composite materials, samples were prepared in accordance with GOST 4648-71 by cutting in sizes 80x10x5 mm. This parameter was also determined in the test as the force velocity affected by the deformation (1.0 ± 0.5)%. The samples were air-conditioned for 16 hours in accordance with GOST 12423-66. The test results are summarized and expressed in the following table.

Table 2

Composition effect of samples on the strength of bending

№	Samples		Bending strength, MPa	Maximum bend, mm	Average bending strength, MPa
1	1 st recipe with wood fillers (5,46%)	A	7,82	1,845	6,273
		B	5,16	0,985	
		C	5,84	1,839	
2	2 nd recipe with wood fillers (7,96%)	A	7,62	2,966	7,586
		B	6,84	3,241	
		C	8,3	3,623	
3	3 rd recipe with wood fillers (10,46%)	A	8,74	1,871	8,406
		B	8,38	2,379	
		C	8,1	2,325	
4	4 th recipe with wood fillers (12,96%)	A	10,3	6,324	12,513
		B	13,4	5,669	
		C	13,84	4,942	

From the above results, in the table, we can see that an increase in the mass fraction of wood filler in the composition formulation led to an increase in the flexural strength.

In testing the above properties i.e. resistance to elongation, compression and bending, we used China Jinan Marxtest Technology Co. We carried out on the test equipment of the model ETM-10 of LTD.

CONCLUSIONS:

The comparisons between the materials obtained from PVC can be processed with materials obtained on the basis of wood belonging to various estimates showed a significant increase in all physical and mechanical properties associated with impregnated samples. The dimensional stability of the composite was increased compared to unprocessed wood, which made it impenetrable to absorb and retain

moisture. Two types of impregnation led to a significant improvement in the hardness of wood, parallel and perpendicular to the grains, while the average percentage increase exceeds 400% and 300%, respectively, which makes the composition very suitable for, for example, for the floor.

Given the cultivation of poplar throughout the regions and the territory of Uzbekistan, new production. The WPC of materials from local poplar and polyvinyl chloride is an interesting opportunity for the national forestry, construction and furniture washing sector. This possibility is especially valuable, given the availability of wood resources and, probably, creation of local supplies with limited environmental impact. Currently poplar the range is mainly used as building material for economic purposes, but they are not particularly suitable for this is use, given their high observation. WPC production can increase the value of the grounds of the poplar, both from an economic point of view and from the point of view of a longer service life with the possibility of further processing. It would be corresponds to the cascading use of wood encouraged by Central Asia. Products can also be interesting

In the supply chains of other Asian countries, where the plantations of the poplar are abundant. This study shows that WPC materials from poplar and PVC can be implemented using a process similar it is currently used to produce WPC from poplar and, apparently, requires only minor modifications some parameters. The properties of the WPC materials of the poplar produced on an industrial scale were actually found in accordance with the requirements of construction for supporting structures in dry conditions. Specific adjustments in the process could apparently bring this commission to fulfill the requirements use under load in wet conditions because these materials are not afraid of moisture. From this point of view, the use of special fasteners and connectors, for example, stainless steel, should be provided in order to avoid corrosion due to tannins and low pH of poplar wood and polyvinyl chloride. You should also study the analysis of costs and feedback with the market. In order to compare the slabs of sweet chestnut with WPC materials from different breeds and evaluate them suitability for established or innovative types of use. For this purpose,

the durability of the product will be assessed by authors as another property useful for evaluating possible new applications.

Based on these results, we can conclude that the predominance of all physical and mechanical properties in the materials obtained on the basis of poplar wood is significant.

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***Annotatsiya:** Badiiy asar kitobxon qalbidan chuqur o‘rin egallashi uchun muallifning tilning obrazli vositalaridan “xasisona” foydalanishi muhimdir. Ushbu maqolada yozuvchi Isajon Sulton badiiy asarlarida qo‘llangan ba’zi metaforalarning ko‘rinishlari hamda metaforik mazmunli matnlarning diskursiv mohiyati tahlillar asosida yoritilgan.*

***Kalit so‘zlar:** badiiy matn, badiiy diskurs, yozuvchi tili va uslubi, lingvistik va badiiy metafora*

ON SOME METAPHORS USED IN THE ARTISTIC DISCOURSE OF ISAJAN SULTAN

***Abstract:** In order for the literary work to take a deep place in the heart of the reader, it is important for the author to use the figurative means of the language "specially". In this article, the appearance of metaphors used in the artistic works of the writer Isajon Sultan and the discursive essence of metaphorical texts are highlighted based on the analysis.*

***Key words:** artistic text, artistic discourse, writer’s language and style, linguistic and artistic metaphor*

KIRISH

“Yozuvchi uchun so‘z ham qurol, ham bo‘yoq, ham soz, ham tovush, ham mo‘yqalam vazifasini bajaradi, ya’ni so‘z mohir yozuvchilar qo‘lida obrazli fikrlash, go‘zal poetik manzaralar chizish uchun ajib vosita bo‘lib xizmat qiladi” [1;161]. O‘z asarlarida so‘z orqali butun borlig‘ini, samimiy va chuqur his tuyg‘ularini kitobxon bilan bo‘lishgan ana shunday mohir yozuvchi Isajon Sulton badiiy matnining o‘ziga xos jihatlari tadqiqotchi-filologlarimiz diqqat e’tiborini tortayotgani hech kimga sir emas. Fikrini maqsadli yetkazish uchun ko‘chma ma’nolarning barchasidan, ayniqsa, metaforalardan millatning o‘ziga xos milliy, ijtimoiy, siyosiy, diniy, tibbiy, madaniy va h. tasavvurini tasvirlash va tuchuntirish vositasi hamda uning umuminsoniy qiyofasini yaratish jarayonlarini tushunishning asosiy manbayi sifatida unumli foydalangan. Metafora badiiy matnda tez-tez ishlatiladigan ifoda vositasi, badiiy nutqning eng keng tarqalgan shakllaridan biridir. Bu so‘z ijodkoriga o‘z fikrini obrazli ifodalash, asarni turli hissiy tuslar bilan to‘ldirish imkonini beradi. “Tilshunoslik terminlarining izohli lug‘ati”da: “Metafora – (yun. metaphora – ko‘chirish) bir predmetning nomini boshqa predmetga biror tomondan o‘xshashligini e’tiborga olib ko‘chirish”, – deb ta’rif berilgan [2;63]. Metafora yangi ma’nolar hosil qilish va badiiy obrazlar yaratishning asosiy usullaridan biridir. Har bir yangilanish, har bir taraqqiyot bevosita va bilvosita til birliklariga ham ta’sir etadi. Metaforani o‘rganishga qiziqishning o‘sishi uning turli sohalarda qo‘llanishining kengayishi e’tibordan chetda qolmadi. Olimlar, san’atshunoslar, faylasuflar, tilshunoslar unga katta qiziqish bilan murojaat qilishdi.

ADABIYOTLAR TAHLILI VA METODOLOGIYA

Metafora inson ong-u tafakkuri hamda bilishning eng sermahsul hodisasi ekanligi bilan ajralib turadi. XX asr boshlariga kelib, kognitiv tilshunoslikning shakllanishi va jadal rivojlanishi bilan metaforaning ko‘p qirrali, nihoyatda murakkab hodisa ekanligi tan olinib, fundamental bilish faoliyatining namoyon bo‘lishi sifatidagi mohiyati ochib berildi. Metafora, uning tahlili va talqinlari haqida

tilshunoslik tarixida juda ko‘p va xo‘p aytilgan. Metaforaning o‘rganish tarixi juda uzoq davrlarga borib taqaladi. Aristotel zamonidan buyon u ritorika, psixologiya, falsafa, uslubiyat, adabiyotshunoslik kabi bir qancha fanlar doirasida tahlil etib kelindi. “Poetika” asarida metafora(to‘g‘rirog‘i epifora) tushunchasiga ta‘rif berilgandan buyon bu hodisaga qiziqish kuchaydi. O‘tgan davr mobaynida metaforaga ko‘plab ta‘riflar berilgan bo‘lib, shu soha bilan shug‘ullanganlarning hammasi, albatta, Aristotel ta‘rifi [3] ni bir eslab o‘tadilar [4;122]. Metaforani nom va ma‘no ko‘chirlari orasidan alohida ajratib olib, yangi yo‘nalishlarda o‘rganish ikkinchi ming yillikning boshlariga to‘g‘ri keladi. Bu davrda o‘zbek tilshunosligining ko‘zga ko‘ringan vakillari tomonidan metaforani nutqiy hosila emas, tafakkur hodisasi sifatida tekshirishga oid progressiv ahamiyatli qarashlar ilgari surila boshladi.[5;122] Dastlab tilshunoslikda metaforalar grammatik, leksik va semantik jihatdan o‘rganilgan bo‘lsa, zamonaviy tilshunoslik metaforaning tafakkur bilan bog‘liq tomonini diqqat markaziga qo‘ydi, ya‘ni antroposentrik tahlilga asoslandi. Bu jihatdan tilshunos D.Xudoyberganova [6], Sh. Maxmaraimova[7], G. Qobuljonova [8], G.Nasrullayeva[9] larning monografik tadqiqot ishlari, shuningdek N.Mahmudovning ilmiy ishlari[10] diqqatga sazovor. Metaforani o‘rganishda kognitiv yondashuv vakillari J. Lakoff va M. Jonson insonning atrofdagi voqelikni metaforik idrok etishga moyilligini ta‘kidlaydilar. G.N. Sklyarevskaya lingvistik va badiiy metaforani ajratadi va ularning farqiga e‘tibor qaratadi.[11] XX asrga kelib, kognitiv tilshunoslikning paydo bo‘lishi bilan metaforaga qarash butunlay o‘zgardi. N. Mahmudovning ta‘kidlashicha, metafora mohiyatidagi ikki yoqlamalikka ko‘ra, bu hodisaning ikki asosiy turi farqlanadi, ya‘ni lisoniy metafora va poetik (badiiy) metafora. Kognitiv metafora insonning o‘z bilimlarini namoyon qilish va konseptuallashtirish usullaridan biri bo‘lib, bir obyektни boshqa bir obyekt vositasida tushuntirish va tushunishdan iboratdir, deyiladi. Lisoniy metafora o‘xshashlik asosidagi nomlashni qayd etsa, “nolisoniy” metafora (kognitiv) lisoniy metafora yuzaga kelishini tashkil etadi. Lisoniy metafora kognitiv metaforasiz yuzaga kela olmaydi. Ular o‘z qonuniyatlaridan kelib chiqib, biri ikkinchisini taqozo etadi [12].

Ko'p o'lchovli hodisa bo'lgan metaforani o'rganish bir qator bilim sohalari va bo'limlarni qamrab oladi. Troplarning ma'lum bir turi sifatida metafora poetikada, so'zlarning yangi ma'nolari manbai sifatida - leksikologiyada, nutqni qo'llashning maxsus turi sifatida - pragmatikada, assotsiativ mexanizm hamda nutqni talqin qilish va idrok etish obyekti sifatida psixolingvistika va psixologiyada, fikrlash va voqelikni bilish usuli sifatida - mantiq, falsafa (gnoseologiya) va kognitiv lingvistikada, tushuncha yoki hukmni konseptuallashtirish usuli sifatida lingvokonseptologiyada o'rganiladi. Badiiy matnda esa metaforalar o'zining haqiqiy va tabiiy o'rnini topadi, bunda u tilning estetik vazifasini oqilona bajaradi.

MUHOKAMA VA NATIJALAR

Isajon Sulton badiiy nasri ham lingvistik, ham badiiy, ham mualliflik metaforalariga boyligi bilan o'ziga xosdir. Asar muallifining ongli estetik izlanishlari samarasi o'laroq metaforalar tuzilish jihatdan so'z, so'z birikmasi, jumla, ibora, mikro va makro matn ko'rinishida uchraydi. Voqea-hodisalar, xatti- harakatlar, belgi-xususiyatlar va predmetlar o'rtasida o'xshashlik yaratish, antropomorfik, zoomorfik, fitomorfik, teomorfik, tabiat hodisalarini bilan bog'liq metaforalarni qo'llash, umuman, so'z ma'nosiga katta ahamiyat berish yozuvchining alohida uslubi sanaladi. Isajon Sulton badiiyatida tabiat hodisalariga, umuman turfa mavjudotlarga ma'no yuklash orqali insonni, uning taqdir yo'lini tasvirlash ustunlik qiladi. "Tasavvur va tafakkur romani" (adabiyotshunos I.Yoqubov) deya ta'riflangan "Ozod" romanida asar qahramoni Ozod tabiat hodisalarining botinini ko'rib ong-u shuurida taftish qiladi, atrofida ro'y berayotgan hodisalar aslida o'y-xayolining aksi ekanligini ko'radi. Yozuvchi bu jarayonni tilning ifoda tasvir vositalarida ajoyib qo'llaydi hamda tilimizning yangi-yangi imkoniyatlarini ochib beradi. Yozuvchi badiiy diskursidagi metaforalarni shartli ravishda dastlab quyidagi katta guruhlarga bo'lib o'rganish mumkin.

1. Jonlantirishga asoslangan metaforalar.
2. O'xshatishga asoslangan metaforalar

- a) joylashish o‘rniga ko‘ra
- b) belgi-xususiyatiga ko‘ra
- s) harakat o‘xshashligiga ko‘ra

Yozuvchi matnida esa bu metaforalar aksariyat aralash holda keladi, ba’zan uch-to‘rt abzas to‘lig‘icha metaforik mazmun kasb etadi. Jonlantirishga asoslangan metaforalar esa eng ko‘p qo‘llanilgani sanaladi. Tabiat hodisalari bilan bog‘liq jarayonlarni (shamol esishi, yomg‘ir yog‘ishi, quyosh va oy chiqishi, chaqmoq chaqishi, bulutlarning holati va h.) obrazli tasvirlashda aynan shu usulga murojaat qilgan. Ayniqsa, shamol yozuvchining tuganmas badiiy imkoniyati, tug‘ilajak fikrlar moyasi, voqealarning bayon usuli, ularni bog‘lash vositasi, kelajak xabarchisi. Ijodkor shamolni bir necha sinonimlikda, shuningdek birikmali holda navbat bilan qo‘llaydiki, kitobxon ham bevosita shamol bilan suhbatlashadi. Yozuvchi nazdida shamol hamma voqea-hodisalar darakchisi. Yozuvchi uni **suv shabadasi, mitti epkin, qudratli shamol, sarsari shamol, xabarchi shamol, haybat shamollari, ko‘klarning shamoli, ozod-ozod shamollar, umrzoq shamol, beqaror shamol, bahaybat shamol** kabi so‘z birikmasi shaklidagi metaforalarda aniqlovchisi bilan tafakkurda jonlantiradi. Misollarga e’tibor qilsak:

Dasht shamoli shiddat uradi, kulrang yulg‘unlarni **chayqatadi... Yukli bulutlar pastlay boshlaydi, tevarak junbushga keladi**. Iliq tomchilar **yuzga uradi** [13;81]. ..Uni Ozod yaxshi tanir edi – og‘och barglarining orasida yoki maysalarning ostida **yashirinib yotib**, goho kichkina quyunchalar hosil qiladigan, bolakaylarning ko‘zlariga **qum-to‘zon sohib o‘ynashni** yoqtiradigan **beqaror shamol** edi u....[13;151] ...Darhaqiqat, u **bahaybat shamol** edi, **ovozi** yuksaklarda ham **eshitilardi**...[13;152]. Yozuvchi yomg‘ir yog‘ishini **yukli bulutlar** birikma-metaforasida tasvirlab, pragmatik maqsadni amalga oshiradi. Obrazli manzara paydo qilish niyatida esa shamolni jonlantiradi, uning xususiyatini insonga xos xarakterga muqoyasalab, antropomorfik metaforani yuzaga keltiradi. Umuman, Isajon Sulton matnidagi shamol ramzi badiiy konseptlarning ifodachisi sifatida namoyon bo‘ladi.

Pushaymon va afsus yomon narsa. U hech nimani o'zgartirmaydi. **Ko'zni yoshlantiradi, dilni achchiqqa to'ldiradi...**[13;204] Pushaymon va afsus mavhum otlarida inson ko'nglini xira qiladigan xususiyat-belgi bor, o'xshatish amali metaforik mazmun kasb etishga olib kelgan. **...quyun oyog'im ostida o'ralashdi. (199-b) Tuproq ko'pchib-jo'shib, sanoqsiz xazinalarni bag'ridan chiqarib yuborar...**[13;197] Ushbu misollarda esa, antropomorfik metaforalar harakat o'xshashligi asosida hosil qilingan.

Mana shu yerda Ozod **begona** bir **isni** tuydi. Bu – **quyuq**, achimsiq, **turg'un**, yer bag'irlab turib qolgan, hali -veri ko'tariladiganga o'xshamaydigan **og'ir hid** edi. Yigitcha is bo'ylab boraverdi... Ha, qaydandir **ingichka**, chiziqsimon qon oqib kelgan, u hali **yangi** edi. ...u yerda yana bir **buloq ko'z ochgan**, yer qa'ridan otilib chiqqan bu kichkina mo'jizada nima uchundir qon ta'mi bor edi.[13;162-163]

Begona is, quyuq is, turg'un is, og'ir hid, ingichka qon, yangi qon kabi birikma-metaforalar matn tarkibida kelib, belgi-xususiyat o'xshashligi asosida ma'no ko'chishini hosil qilgan bo'lsa, buloq ko'z ochgan jumla-metaforasi harakat o'xshashligi asosida ko'chma ma'noni ifodalagan.

Menga buvimning namozi ko'proq yoqardi. Kichkinagina bo'lib qunishib, **musichaday** bo'lib namoz o'qirdi. ...Bobomning namozida **haybat** bor, buvimniki **xokisor** edi... [13;186]. Musicha beozor qush, o'zbek lingvomadaniyatida musichaday beozor o'xshatishi ko'plab ishlatiladi. Matnda musicha o'zbek oilasidagi buvilarning xarakterini berishda etalon vazifasini o'tagan. Musulmonchilikda erkaklar namoz o'qiganda salobat sezilishi, ayol kishining esa tortinibgina, iymanib, ovoz chiqarmay o'qishi ham farz ham sunnat hisoblanadi. Yozuvchi haybat va xokisor so'zlariga metaforik ma'no yuklaydi, shu orqali ham gender xoslikni ham islom tamali sanalgan namozning xususiyatini birgalikda ifodalaydi, ya'ni namoz bu – haybat, namoz bu – xokisorlik.

– Dunyo– ulkan ko'zgu dir, o'z holicha senga yomonlik ham, yaxshilik ham keltirmaydi. Tegrangda ro'y berayotgan hamma narsa aslida o'z fikrlaring, his-

tuygʻularing, istak va tutumlaringning aksidir. Aslida dunyo sobit, oʻzgarmas va hatto, qiymatsiz bir narsa, muhimi–uning sendagi akslaridir....

- Hamma insonlar koʻzgudir va turli -tumandir, – dedi u.– Masalan, ilm va soʻz ahli botiq oynadir. Ularning aytganlari – kichikdan kattaga, kamdan koʻpga olib boruvchi yoʻllarning ishoratlaridir.[13;145] “Ozod” falsafiy romanidagi bu koʻrinishdagi matn-metaforalarning ichki semantikasiga diqqat qilsak, yozuvchi boshqa bir mazmunga ishora qilganligi seziladi. Insonning botini qanday boʻlsa zohiridagi oqibatlar botiniy akslanish. Ijodkor falsafiy mushohadaga keng oʻrin beradi, dialektik qarama-qarshilikni koʻrsatadi, imkoniyatsiz voqelik, sababsiz oqibat, mohiyatsiz hodisa kelib chiqmasligini dunyo va insonlarni koʻzguga oʻxshatib, koʻzgu ramzi orqali badiiy konseptni amalga oshiradi.

XULOSA

Metafora til doirasi bilan cheklanib qolmaydi, chunki inson fikrlash jarayonlarining oʻzi metafora. [14] ekan, inson har doim oʻz tafakkurida oʻzi bilan gaplashadi, u lisoniy shakllar, badiiy obrazlar va afsonaviy timsollarga shunchalik shoʻngʻib ketadiki, u faqat mana shu sunʻiy muhit yordamida hech narsani koʻra olmaydi va oʻrgana olmaydi, sunʻiy muhit esa oʻz-oʻzidan obrazlilikni yaratuvchi metaforalarga asoslanadi. Shuning uchun aynan tilshunoslik yoʻnalishlari asosiy diqqatini ushbu obrazlilikning taʼsir usulini aniqlashga qaratgan. Biz ushbu maqolada Isajon Sulton qoʻllagan obrazlilikning bir tomchisini tahlil qildik xolos. Umuman, Isajon Sulton badiiy diskursidagi metaforalar cheksiz ummon, har biri mushohada va mantiqqa boy. Baʼzan butun matn metaforik maʼno tashiydi, kitobxon uni sezgilari orqali idrok qilib jonli tasvirlab oladi, tafakkurida tahlil qilib, xulosa chiqaradi. Albatta, keyingi ishlarimizda yozuvchi badiiyatidagi metaforalarning boshqa turlariga ham urgʻu beramiz.

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INGLIZ VA O‘ZBEK TILLARIDAGI GIPOTAKSEMIK QO‘SHMA GAP TURLARI CHOG‘ISHTIRMA TAHLILI

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ANNOTATSIYA

Ushbu maqolada jahon tilshunosligining sintaksis bo‘limida muhim ahamiyatga ega bo‘lgan gipotaksemik qo‘shma gaplar mavzusi bo‘yicha tahlil olib boriladi. Ingliz hamda o‘zbek tillaridagi ergashgan qo‘shma gap turlari chog‘ishtirma tahlil ostiga olinib, ikki tildagi ushbu gap turlarining o‘xshash va farqli jihatlari muhokama qilinadi. Tahlil jarayonida turli darslik, mashhur tilshunos olimlar maqolalaridan hamda badiiy adabiyotlardan foydalaniladi.

Kalit so‘zlar: gipotaksemik qo‘shma gap, ergash gap, bosh gap, bog‘lovchi vosita, subordinativ bog‘lanish, allomorfik jihat, ega ergash gapli qo‘shma gap, hol ergash gapli qo‘shma gap, to‘ldiruvchi ergash gapli qo‘shma gap.

ABSTRACT

This article analyzes the subject of hypotaxemic compound sentences, which are important in the syntax department of world linguistics. The types of complex sentences in English and Uzbek are compared. Furthermore, similar and different aspects of these types of sentences in both languages are discussed. Various textbooks, articles by famous linguists and literary works are used in the course of analysis.

Keywords: hypotaxemic compound sentences, the subordinate clause, the principal clause, complex sentence, allomorphic aspect, subject clauses, adverbial clauses, object clauses.

KIRISH

Fanlar taraqqiyotiga nazar tashlasak, u go‘yo to‘lqinlar silsilasidan tashkil topgandek ko‘rinadi. U yoki bu fan muayyan rivojlanish bosqichlariga ega bo‘lib, har bir bosqichda o‘rganilgan obyektga turli nuqtai nazardan yondashilganligining guvohi bo‘lamiz[1;196]. Darhaqiqat, har qanday soha bo‘lsin turli olimlar tomonidan asrlar o‘tgan sari turlicha yondashiladi: ko‘plab tadqiqotlar olib boriladi, yangi fikr-g‘oyalar ilgari suriladi, tegishli davr holatidan kelib chiqib o‘ziga xos ayrim o‘zgartirishlar kiritiladi. Shu kabi o‘zbek tilshunosligimiz ham asrlar davomida shakllanib, rivojlanib kelmoqda. Shunga qaramay bu sohaning turli aspektlarida hali ham dolzarbligini saqlab qolgan va yana-da kengroq o‘rganilishi talab qilinadigan mavzular bisyor. Jumladan, qo‘shma gaplar mavzusi ham ana shunday til unsurlaridan biri hisoblanadi. O‘zbek tilshunosligida qo‘shma gap sintaksisi muammosi 60- yillardan buyon o‘rganib kelinadi[1;199]. Ko‘plab tilshunos olimlarimiz o‘z tadqiqotlari, asarlari orqali bu soha rivojiga hissa qo‘shdilar va qo‘shib kelmoqdalar. Keling, ushbu maqolamizda qo‘shma gaplardan ergashgan qo‘shma gap turlari haqida so‘z yuritamiz, ingliz tili va o‘zbek tilidagi gipotakseмик qo‘shma gaplarning o‘ziga xos ayrim jihatlarini tahlil qilamiz.

ADABIYOTLAR TAHLILI VA METODOLOGIYA

Ma‘lumki, ergashgan qo‘shma gaplarni turlarga ajratishda qaysidir mezonlarga tayaniladi. N.Mahmudov o‘zbek tilidagi ergash gapli qo‘shma gaplarni valentlik nazariyasi asosida tahlil qilar ekan, bosh gap predikati valentligini ikki turga - kuchli va kuchsiz valentliklarga ajratadi. Predikat valentliklarini bunday turlarga ajratish ergash gapli qo‘shma gaplarni ikki turga - havola bo‘lakli va havola bo‘laksiz gaplarga bo‘lishga imkon beradi[1;203]. O‘zbek tilida ergash gap bosh gapga nisbatan qanday funksiyani bajarishligiga ko‘ra ega ergash gapli qo‘shma gaplar, kesim ergash gapli qo‘shma gaplar, aniqllovchi ergash gapli qo‘shma gaplar,

to'ldiruvchi ergash gapli qo'shma gaplar va hol ergash gapli qo'shma gaplarga bo'linadi. Ingliz tilida ham ergashgan qo'shma gaplar shunday turlarga ajratiladi: "According to their grammatical function subordinate clauses are divided into subject, predicative, attributive, object, and adverbial clauses[2;282]". Endi bu qo'shma gap turlarini misollar bilan ko'rib chiqsak.

Subject clauses perform the function of subject to the predicate of the principal clause[2;282]. Demak, ingliz tilida ham, o'zbek tilida ham bosh gap kesimiga nisbatan ega vazifasini bajargan ergash gap qatnashgan qo'shma gapga ega ergash gapli qo'shma gap deyiladi.

Ing. *All we had was Simon Finch*[3;4]. (a)

Ing. *She would quiver with pride to have a father **who** knew such things*[4;6].

O'zb. *Kim qattiq harakat qilsa, o'sha g'alaba qozonadi.*

O'zb. *Shu aniqki, dunyoda hech kim abadiy qolmaydi.*

E'tibor beradigan bo'lsak, ingliz tilida ham(who, what, that, whether,etc.), o'zbek tilida ham(kim-o'sha, shu va b.) ega ergash gapni bosh gapga bog'lashda ba'zi ko'rsatish olmoshlari, nisbiy so'z kabilardan foydalanilgan.

Predicative clauses perform the function of a predicative[2;283]. Bosh gap tarkibidagi kesim vazifasida qo'llangan ko'rsatish olmoshining ma'nosini izohlab keluvchi ergash gapga kesim ergash gapli qo'shma gap deyiladi.

Ing. *This is **what** it means to be a woman in this world*[4;7].

Ing. *The truth is, he didn't even hold you until you were a month old*[4;10].

O'zb. *Bu vaziyatda eng to'g'ri yo'l **shuki**, sen bor haqiqatni unga aytishing kerak.*

Object clauses perform the function of an object to the predicate-verb of the principal clause[2;284]. Bosh gapdagi olmosh bilan ifodalangan yoki ifodalanmagan to'ldiruvchining mazmunini izohlab, konkretlashtirib keluvchi gaplar to'ldiruvchi ergash gap deyiladi.

Ing. *She did not know **what** this word meant*[4;5].

Ing. *The wives demanded **that** he throw her out*[4;7]

O‘zb. *Asta- sekin amin bo‘ldikki, qiziqarli va kutilmagan fikrlarga, ajoyib xayollarga boy bo‘lgan Dill sehrigar Merlinga o‘xshab ketar ekan*[5;12].

Attributive clauses serve as an attributive to a noun(pronoun) in the principal clause[2;286]. Bosh gapdagi olmosh bilan ifodalangan aniqlovchini izohlab, to‘ldirib keluvchi ergash gap aniqlovchi ergash gap deyiladi.

Ing. *He owned a cinema, **which** Mariam had never seen, but at her insistence Jalil had described it to her*[4;6].

O‘zb. *U **shunday** ayol ediki, mahalladagi barcha insonlar havas qilardi.*

Adverbial clauses perform the function of an adverbial modifier. It can modify a verb, an adjective or an adverb in the principal clause [2;289]. Bosh gap tarkibida hol vazifasida qo‘llangan ko‘rsatish olmoshining ma’nosini izohlab keluvchi yoki bosh gap orqali ifodalangan mazmunning sababi, maqsadi, payti, holati, miqdor-darajasi kabilarni anglatuvchi gaplarga hol ergash gapli qo‘shma gap deyiladi. Ergash gapning bu turi boshqalariga qaraganda ancha keng qamrovlidir. Hol ergash gapli qo‘shma gaplarni o‘z ichida ham bir qancha turlarga ajratish mumkin.

Adverbial clauses of time(Payt munosabatidagi hol ergash gapli qo‘shma gap):

Ing. *Nana smiled demurely **when** he said this*[4;6].

Ing. *As Nana told the story, Mariam sat on her lap*[4;9].

O‘zb. *Hamma mehmonlar yetib **kelgach**, uy egalari taom tortishdi.*

Adverbial clauses of place(O‘rin-joy munosabatidagi hol ergash gapli qo‘shma gap):

Ing. ***Wherever** you go, you will encounter kind people in Uzbekistan.*

O‘zb. *Akang **qayerda** bo‘lsa, sen ham **o‘sha** joyga borasan.*

Adverbial clauses of cause(Sabab munosabatidagi hol ergash gapli qo‘shma gap):

Ing. *We have brought you here **because** we have some very good news to give you*[4;31].

O‘zb. *Shimol va Janub o‘rtasidagi nizo Saymonning tepa sochini tikka qilgan bo‘lar edi, **negaki** urush uning avlodlarini yerdan tashqari boridan mahrum qilgandi*[5;5].

Adverbial clauses of purpose(Maqsad munosabatidagi hol ergash gapli qo'shma gap):

Ing. *I crouched against the wall of the gallery **so that** I should not be seen*[2;293].

O'zb. *Har bir ishni ehtiyotkorlik bilan bajaring, **toki** ortiqcha muammo tug'ilmasin.*

Adverbial clauses of condition(Shart munosabatidagi hol ergash gapli qo'shma gap):

Ing. ***If** you want to avoid the risks of passive smoking, you can take some simple precautions*[6;100].

O'zb. ***Agar** hodisaning tagiga yetmoqchi bo'lsak, hammasi Endryu Jeksondan boshlangan dedim men*[5;3].

Adverbial clauses of concession(to'siqsiz ergash gapli qo'shma gap):

Ing. ***Though** she would live the first fifteen years of her life within walking distance of Herat, Mariam would never see this storied tree*[4;6].

O'zb. *Yordam bersam ham, ishni tugata olmadi*[7;221].

Adverbial clauses of result(Natija munosabatidagi hol ergash gapli qo'shma gap):

Ing. *The load was so heavy, **that** he could not lift it*[7;219].

O'zb. *Bizning onamiz ikki yoshligimda olamdan ko'z yumgandi, **shuning uchun** men judolikni his qilmaganman*[5;8].

Adverbial clauses of manner(Ravish ergash gapli qo'shma gap):

Ing. *She never dared say to Nana **how much** she disliked her talking this way about Jalil*[4;6].

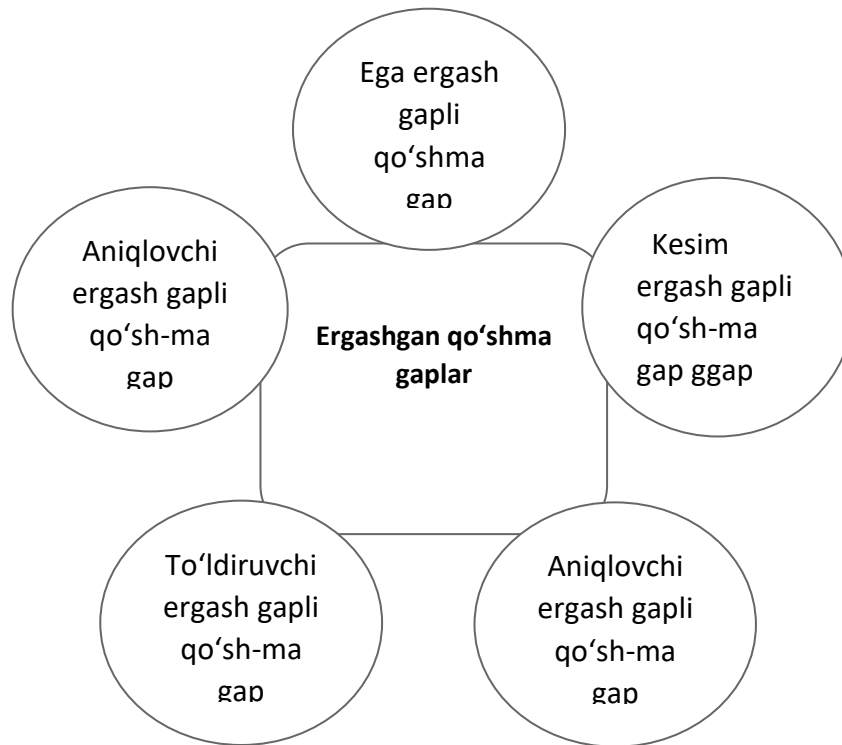
O'zb. *U **shu darajada** to'g'ri va rostgo'y inson ekanki, xudodan boshqa hech kimning so'ziga quloq solmas ekan*[5;18].

Adverbial clauses of comparison(Qiyos ergash gapli qo'shma gap):

Ing. *He was white and jaded, **as if** he hadn't slept for many nights*[7;294].

O'zb. *U juda ham xotirjam edi, **go'yoki** hech nima sodir bo'lmagandi.*

NATIJARLAR



MUHOKAMA

Biz yuqorida gipotakseмик qo'shma gap turlarini ko'rib chiqdik va guvohi bo'lganimizdek, ingliz va o'zbek tillarida gap turlari o'xshash, balki bir xil desak ham xato bo'lmas. Biroq ular o'rtasida ayrim allomorfik jihatlar ham mavjud. Misol uchun, ingliz tilida ergash va bosh gap o'zaro asyndetic bog'lanishi, ya'ni hech qanday bog'lovchi vositalarsiz bog'lanishi mumkin(a). Biroq o'zbek tilida hech qanday bog'lovchi vositasiz ergash gapni bosh gapga bog'lash mumkin emas, chunki hech bo'lmaganda kesim ma'lum bir grammatik shaklda bo'lishi talab qilinadi. Bundan tashqari bu ikki til o'rtasida farqli jihatlar mavjudligini shunda ham ko'ramizki, doim ham bir turdagi gipotakseмик qo'shma gaplarni ayni tuzilishda, ya'ni politaksema ko'rinishida tarjima qila olmaymiz. Masalan, "I know the man **who** wrote this article" gapini o'zbek tiliga "Men bu maqolani yozgan kishini bilaman"

holida tarjima qilinadi va bunda qo'shma gapni monotaksemaga aylanganini ko'ramiz. Yana yuqorida chog'ishtirish maqsadida hol ergash gapli qo'shma gaplarni ayrim turlarga bo'lib, ikki tilda ham misollar bilan berdik. Bunda to'siqsiz ergash gapli qo'shma gap deb nomlangan qo'shma gap turi manbalar asosida taqdim etildi, biroq bu atamani o'zbek tilidagi gipotaksemik qo'shma gap turi sifatida odatda uchratmaymiz.

XULOSA

Xulosa qiladigan bo'lsak, ingliz va o'zbek tillarida gipotaksemik qo'shma gaplarni turlarga ajratishda bir xil mezonlarga tayanilar ekan. Ya'nikim, ergash gapning bosh gapga yoki uning biror bo'lagiga nisbatan bajargan vazifasidan kelib chiqib, ergashgan qo'shma gaplarni ega, kesim, aniqlovchi, hol, to'ldiruvchi ergash gapli qo'shma gaplarga ajratish mumkin. Bu turlarga ajratishda bosh gap qismida qatnashgan ko'rsatish olmoshlari, nisbiy so'zlarning gapdagi vazifasini aniqlash ham muhim ekan.

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ÓSIMLIK DÚNYASÍN QORGAW HÁM ONNAN PAYDALANÍW TARAWÍDA MÁMLEKETLIK BASQARÍW HÁM BAQLAW

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***Annotaciya:** Búgingi kúnde jer júzindegi xalq sanı artıwı menen olardıń mútájligi de artıp barmaqta hám usı mútájliklerdi qandırıwdıń tiykarǵı obyektı bolǵan qorshaǵan ortalıqtı qorgawda tiykarǵı máselege aylanbaqta. Maqalada usı tarawdaǵı mámleketlik basqarıw túsiniǵine toqtalıp ótilgen bolıp, ekologiyalıq tarawdaǵı mámleketlik basqarıw hám baqlaw túsiniǵine keń toqtalıp ótilgen.*

***Gilt sózler:** ekologiyalıq siyasat, mámleketlik basqarıw, tábiyyıy resurslar, ósimlik dúnyası, ulıwma wákillikli mámleket uyımları.*

***Abstract:** Today, with the increasing number of people in the world, their basic needs are also increasing, and the main issue becomes the protection of the environment, which is the main object of meeting these needs. The article focuses on the concept of public administration in this sphere, and also discusses in detail the concept of public administration and control in the field of environmental protection.*

***Keywords:** environmental policy, public administration, natural resources, plant life, representative state organizations.*

KIRISIW.

Ózbekstan Respublikasında ósimlikler dúnyasın qorgaw hám onnan paydalanıw tarawındaǵı mámleketlik basqarıw hámde baqlawı úlken áhmiyetke iye bolıp, ósimlik dúnyasın qorgaw hám olardan aqılǵa uǵras paydalanıwdı támiyinleydı. Ekonomikalıq

jáne social rawajlanıwdıń maqset hám wazıypaları olardıń turaqlılıǵındı esapqa alǵan halda, barlıq rawajlanǵan hám rawajlanıp atırǵan mámleketlerde ekologiyalıq talaplarǵa muwapıq belgileniwi kerek.[1] Bazar ekonomikası sharayatında ekonomikalıq tikleniwdi ekologiyalıq turaqlılıq penen múnasıp halda alıp barıw mámleketiń ekologiya tarawındaǵı basqarıw wákilliginiń keńeytiriliwi hám hákimshilik-huqıqıy jol menen ámelge asırılıwın payda etedi.

ÁDEBIYATLAR ANALIZI HÁM METODOLOGIYA.

Ózbekstan Respublikasınıń ekologiya tarawında mámleketlik basqarıw máseleleri keńirek jarıtılǵan bolıp, olarda ekologiya tarawında mámleketlik basqarıw hám baqlawınıń mámleket ekologiyalıq sıyasatında áhmiyetli orın tutıwı aytıp ótilgen[2]. Tiykarınan, Sh.X.Fayziev hár qanday mámleketiń ekologiyalıq sıyasatı qorshaǵan tábiyiy ortalıq tarawındaǵı mámleketlik basqarıw hám baqlawı menen tıǵız baylanıslıǵın hámde ekologiyalıq sıyasat ekologiya tarawındaǵı mámleketlik basqarıw hám baqlawınıń sistemalı kórinisi ekenligin aytıp ótedi[3]. M.K.Najimov sózi menen aytqanda, “Basqarıw óz ara tıǵız baylanıslıqta bolǵan elementlerden (quramlı bóleklerden) quralǵan belgili bir process. Aytıw múmkın, bul basqarıwdıń ulıwma, shólkemlestiriw-ekonomikalıq kórinisi”[4]. A.Isabaevtiń aytıwınsha “Mámleketlik basqarıw - keń mánide mámleket-basqarıw xızmetiniń sinonimi hám atqarıw hákimiyatı xızmetin ámelge asırıw forması”[5]. Mámleketlik basqarıw túsiniǵı hám mánisi ulıwma aytqanda, mámleket hákimiyatı hám basqarıwı uyımları sisteması tárepinen olardıń wákillikleri sheńberinde huqıq iskerligi quralların ámelge asırıwdı támiyinlew hám onı orınlawda kórinedi[6]. B.V.Erofeevtiń aytıwınsha, “ekonomikalıq hám ekologiyalıq sistemalarǵa qarata mámleketiń tártipke salıw xızmetindeǵı o‘zine iyelikler olardıń tábiyattaǵı áhmiyetli parqlardan kelip shıǵadı: ekonomikalıq sistemada keshetuǵın obyektiv processlerge tereń aralasıw mu‘mkın, biraq ekologiyalıq sistemada ámel etetuǵın tábiyat nızamlarına ulıwma aralasıp bolmaydı”[7]. N.B.Muhitdinov bolsa, izertlewlerinde ekologiya hám qorshaǵan ortalıqtı qorǵaw qatnasıqları tarawındaǵı mámleket basqarıwınıń tábiyat

obyektlerinen paydalanıw hámde olardı qorǵawdı rejelestiriw, mámleket kadastrların esaplaw hám ju'ritiw, tábiyat obyektlerin bo'listiriw hám qayta bo'listiriw, tábiyat obyektlerinen paydalanıw hám olardı qorǵawdı baqlap barıw, tábiyat obyektlerinen paydalanıw máseleleri boyınsha júzege kelgen dawlardı sheshiw kibi funkciyaların ajratıp kórsetedi[8].

NÁTIYJELER:

Ulıwma alganda, basqarıw – shólkemlestiriw sistemalar funktsiyası bolıp, olardıń belgili bir dúziliste saqlanıwın támiynleydi, xızmet rejimin qollap-quwatlaydı, olardıń dástur hám máqsetlerin parqlaydı[9]. Soǵan kóre, “ekologiya hám qorshaǵan ortalıqtı qorǵaw hám tábiyiy resurslardan paydalanıw tarawındaǵı mámleketlik basqarıw degende, wákillikli mámleket uyımlarınıń normativ-huqıqiy hújjetler menen tártıpkе salınǵan insanniń qolay qorshaǵan tábiyiy ortalıq sharayatlarına ıye bolıwın támiynlew máqsetinde tábiyiy ekologiyalıq sistemalar hám tábiyiy resurslardı saqlap qalıwdı huqıqiy sananı ekologızatsıyalaw hám huqıq jolı menen tártıpkе salıwǵa qaratılǵ an xızmeti”[10]. Demek, ósimlik dúnyası obyektlerin qorǵaw tarawında mámleketlik basqarıw degende, wákillikli mámleket basqarıw uyımlarınıń normativ-huqıqiy hújjetler menen belgilengen ósimlik dúnyası obyektlerin saqlap qalıw, qorǵaw hám olardan aqılǵa muwapıq paydalanıwdı támiynlewge qaratılǵan xızmetin túsınemiz.

DODALAW:

Ekologiya salasında mámleket basqarıwı arqalı mámleket tábiyiy resurslarınıń mal-múلكli retinde tábiyiy resurslardan paydalanıwdı shólkemlestiriw maqsetinde olardı tassarruf etiw huqıqın ámelge asırıwadı.[11] Ósimlik dúnyası obyektlerin qorǵaw tarawında mámleketlik basqarıwdı ulıwma hám arnawlı wákillikli mámleket uyımları ámelge asıradı.[12] Ekologiya tarawındaǵı ulıwma wákillikli mámleket uyımları usı tarawda ámelge asıratuǵın wazıypaları hám ózgesheliklerine qarap basqa mámleket uyımlarınan ajralıp turadı.

JUWMAQLAW:

Juwmaq etip aytqanda, ósimlik dúnyası obyektlerin qorǵaw tarawında mámleketlik basqarıw hám baqlawı usı ósimlik dúnyası obyektlerinen aqılǵa muwariq paydalanıwdı hámde olardı qorǵawdı támiyinlewde áhmiyetli orın tutadı hámde ósimlik dúnyası tarawındaǵı basqarıw hám baqlawdıń quramli bólimin payda etedi.

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JINOYAT-PROTSESSUAL QONUNCHILIKDA “AYBLILIK TO‘G‘RISIDAGI MASALANI HAL QILMAY TURIB JINOYAT ISHINI TUGATISH” MASALASI

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***Annotatsiya:** Ushbu maqolada Jinoyat va jinoyat-protsessual qonunchiligini takomillashtirishning ustuvor yo‘nalishlarini ishlab chiqish va amalga oshirish maqsadida O‘zbekiston Respublikasi Prezidentining 2018-yil 14-maydagi PQ–3723-son qarori bilan tasdiqlangan O‘zbekiston Respublikasining Jinoyat va jinoyat-protsessual qonunchiligini takomillashtirish konsepsiyasi qabul qilindi hamda mazkur konsepsiyada asosida jinoyat va jinoyat-protsessidagi ayrim institutlarni takomillashtirish vazifasiga doir masalalar yoritilgan.*

***Kalit so‘zlar:** O‘zbekiston Respublikasi, jinoyat, jinoyat ishi, qonunchilik, jinoyat protsessi, ayblilik masalasi, rehabilitatsiya.*

Kirish

So‘ngi yillarda jinoyat-protsessual qonunchiligini liberallashtirish hamda takomillashtirish, sud-huquq islohotlarini amalga oshirish jarayonida ustuvor vazifalardan biri hisoblanadi. Jinoyat va jinoyat-protsessual qonunchiligini takomillashtirishning ustuvor yo‘nalishlarini ishlab chiqish va amalga oshirish maqsadida O‘zbekiston Respublikasi Prezidentining 2018-yil 14-maydagi PQ–3723-son qarori bilan tasdiqlangan O‘zbekiston Respublikasining Jinoyat va jinoyat-protsessual qonunchiligini takomillashtirish konsepsiyasi qabul qilindi. Mazkur konsepsiyada asosida jinoyat va jinoyat-protsessidagi ayrim institutlarni takomillashtirish vazifasi belgilangan edi.

Xususan, jinoyat-protsessida “ayblilik to‘g‘risidagi masalani hal qilmay turib jinoyat ishini tugatish” institutini tadqiq etish hamda ularning o‘ziga xos xususiyatlarini hisobga olgan holda mazkur institutni takomillashtirishning yangicha metodologik asoslarini yaratish muhim ahamiyatga ega.

Material va metodlar

Jinoyat ishini tugatish masalasi qonunchilikda belgilangan bo‘lsa-da, ushbu institut tushunchasi hamda prokuratura organlari va boshqa huquqni muhofaza qiluvchi organlar tomonidan o‘rganish jarayonida amaliyotda yuzaga kelayotgan muammolar sababli ushbu tadqiqot ishida asosan qiyosiy-huquqiy tahlil, shuningdek, kuzatish, umumlashtirish, induksiya va deduksiya metodlaridan foydalanildi.

Tadqiqot natijalari

Hozirgi yurisprudensiya talablari asosida “Ayblilik to‘g‘risidagi masalani hal qilmay turib jinoyat ishini tugatish” institutini takomillashtirishda bir nechta vazifalar oldimizda turibdi. Mazkur vazifalarga quyida ko‘rishimiz mumkin:

- 1) jinoyat-protsessual qonunchiligiga ilg‘or xorijiy tajribani implementatsiya qilish orqali “Ayblilik to‘g‘risidagi masalani hal qilmay turib jinoyat ishini tugatish” holatlarini qayta tahlil etish hamda mazkur holatlarni qo‘llash bilan bog‘liq muammolarni o‘rganish;
- 2) zamonaviy yurisprudensiya talablari asosida “ayblilik to‘g‘risidagi masalani hal qilmay turib jinoyat ishini tugatish” holatlarining ayrim turlarini takomillashtirish.

Jinoyat ishini tugatish asoslarini tasniflash nafaqat bir-biriga o‘xshash holatlarni tartibga solishga, balki huquqni muhofaza qiluvchi organ xodimlariga ish bo‘yicha qonuniy, asosli va adolatli qaror qabul qilish uchun har bir asosning protsessual mohiyatini aniqlashga yordam berishga qaratilgan.

Jinoyat ishini tugatish asoslari Jinoyat protsessual kodeksining 83- va 84-moddalarida belgilangan bo‘lib, bunda jinoyat ishini tugatishning 16 ta asosi keltirib

o‘tilgan. Mazkur 16 ta asos qaysidir mezonlarga ko‘ra muayyan tasniflarga bo‘linadi¹ [1, 65–66-b.].

Yuridik adabiyotlarda jinoyat ishini tugatish institutini u yoki bu mezonlarga asosan tasniflash bo‘yicha turli xil qarashlar mavjud. Bu esa bugungi kunga kelib ham jinoyat-protsessual huquqi nazariyasida ushbu institutni tasniflashda yagona to‘xtamga kelishga to‘siq bo‘lmoqda. Zamonaviy yuridik adabiyotlarda jinoyat ishini tugatish asoslari rehabilitatsiya² [2, 88–90-b.] va rehabilitatsiya qilinmaydigan (noreabilitatsiya) [3, 80–85] mezonlarga ko‘ra tasniflashni taklif etadi³.

Jinoyat ishi rehabilitatsiya asoslariga ko‘ra tugatilgan taqdirda surishtiruvchi, tergovchi, prokuror tomonidan shaxsning jinoyat sodir etishdan oldingi huquqlari, halol nomi, obro‘si sud yoki ma‘muriy tartibda tiklanishi uchun zarur choralar ko‘riladi, jinoyat natijasida unga yetkazilgan zarar qoplab beriladi⁴ [4, 159-b.].

Shu bilan birga, shuni qayd etish joizki, jinoyat ishini rehabilitatsiya asoslariga ko‘ra tugatish vakolati surishtiruvchi, tergovchi, prokurordan tashqari sudda ham mavjud⁵ [5, 20–22-b.].

Shuningdek, jinoyat ishini tugatishda rehabilitatsiya asoslaridan farqli ravishda rehabilitatsiya qilinmaydigan asoslarda ijtimoiy xavfli qilmish sodir etilishi natijasida shaxsga (gumon qilinuvchi, ayblanuvchi, sudlanuvchi) yetkazilgan zarar (moddiy, mulkiy, ma‘naviy va boshqa) qoplab berilmaydi, mehnat qilish, nafaqa olish, uy-joydan foydalanish va boshqa shunga o‘xshash huquqlari tiklanmaydi.

¹ Makhmudov S. Termination of criminal proceedings in criminal procedure. Proceedings of the Conferences, 2021, vol. 1, no. 1, pp. 65–71.

² Lavnov M. Institut prekrashcheniya ugolovno delo v sisteme ugolovno-protsessualnogo prava i pravoprimeritelnoy praktiki [The institute of termination of a criminal case in the system of criminal procedure law and law enforcement practice]. PhD thesis. Saratov, 2015, pp. 88–90.

³ Smir A. Modernizatsiya osnovaniy prekrashcheniya ugolovno delo i ugolovno presledovaniya v zakonodatel'stve Rossiyskoy Federatsii i Respubliki Abkhaziya [Modernization of the grounds for the termination of a criminal case and criminal prosecution in the legislation of the Russian Federation and the Republic of Abkhazia]. PhD thesis. Volgograd, 2019, pp. 80–85.

⁴ Khabarova Ye.A. Prekrashcheniye ugolovny kodels delponereabilitiruyush chimosnovaniyam: sistema osnovaniy i garantiy prav uchastnikov protsessa [Termination of criminal cases on non-rehabilitating grounds: a system of grounds and guarantees of the rights of participants in the process]. Abstract of PhD thesis. Yekaterinburg, 2004, pp. 20–22.

⁵ O‘zbekiston Respublikasining Jinoyat-protsessual kodeksiga sharhlar [Comments on the Criminal Procedure Code of the Republic of Uzbekistan]. Resp. ed. G.A. Abdumajidov. Tashkent, TSIL, 2009, p. 159.

Ayblilik to'g'risidagi masalani hal qilmay turib jinoyat ishini tugatish holatlari hamda ularni qo'llash tartibi xorijiy davlatlarning jinoyat-protsessual qonunchiligida ham, milliy qonunchiligimizda ham belgilab qo'yilgan.

Jumladan, O'zbekiston Respublikasi Jinoyat-protsessual kodeksining 84-moddasida ayblilik to'g'risidagi masalani hal qilmay turib jinoyat ishini tugatish asoslari keltirilgan bo'lib, mazkur moddada 13 ta holat belgilab qo'yilgan.

Biroq, Jinoyat-protsessual kodeksida jinoyat ishini tugatish tushunchasining mazmun-mohiyati aniq ochib berilmagan. Shunday bo'lsa ham, bir qancha olimlar ushbu tushunchaning mazmun-mohiyatini nazariy jihatdan tushuntirishga harakat qilishgan. Xususan, O.V. Michurin va S.N. Peretokin jinoyat ishining tugatilishi tergovning yakuniy bosqichi ekanligini, unda ishning natijalari chiqarilishini, tergovchining ichki ishonchi shakllantirilishini va ishning har bir holati protsessual hujjatlarda ifodalanganini, to'plangan har bir dalil uchun bo'shliqlar va ziddiyatlar aniqlanishini qayd etishgan ⁶[6, 26-b.].

Biz ham yuqoridagi mualliflarning fikriga qo'shilgan holda shuni aytishimiz mumkinki, mazkur toifadagi ishlar yuzasidan jinoyat ishi u yoki bu sabablarga ko'ra yuqoridagi moddada nazarda tutilgan asoslar mavjud bo'lganda tugatiladi.

R.X. Yakupov jinoyat ishini tugatishning rehabilitatsiya qilmaydigan asoslarini ikki guruhga ajratishni taklif etgan:

- 1) jinoiy javobgarlikdan va jinoiy jazodan so'zsiz ozod qilishni nazarda tutuvchi rehabilitatsiya qilmaydigan asoslar;
- 2) jinoiy javobgarlikdan ozod qilish, uni boshqa javobgarlik choralari bilan almashtirishni nazarda tutuvchi asoslar⁷ [7, 322-b.].

⁶ Michurina O.V., Peretokin S.N. Obespecheniye zakonnosti i obosnovannosti prekrashcheniya ugolovnogo dela [Ensuring the legality and validity of the termination of the criminal case]. *Russian Investigator*, 2016, no. 7, p. 26.

⁷ Yakupov R.Kh. *Ugolovnyy protsess* [Criminal process]. Moscow, 1998, p. 322.

Tadqiqot natijalari tahlili

Shuningdek, ayblilik to'g'risidagi masalani hal qilmay turib jinoyat ishini tugatish institutining jinoyat-protsessida muhimligi bilan bir qatorda sud-tergov amaliyotida ularni qo'llash bilan bog'liq ayrim muammolar ham yo'q emas.

Quyida mazkur institut bilan bog'liq bo'lgan muammolarni tahlil etishga harakat qilamiz.

Birinchidan, O'zbekiston Respublikasi Jinoyat-protsessual kodeksi 84-moddasi birinchi qismining 1–3- va 8-bandlarida nazarda tutilgan asoslar bo'yicha jinoyat ish tugatiladigan bo'lsa, jabrlanuvchi yoki fuqaroviy da'vogarning mulkiy huquqlari buzilish holatlarini amaliyotda ko'rishimiz mumkin. Fikrimizni quyida asoslashga harakat qilamiz.

Misol uchun, shaxsni javobgarlikka tortish muddati o'tgan bo'lsa, agar ayblanuvchi yoki sudlanuvchi (ayrim holatlarda ularning yaqin qarindoshlari) ariza bilan murojaat qilmas ekan, tergov yoki sud tomonidan shaxsning ayblilik masalasi hal qilinmasdan turib jinoyat ishini tugatish to'g'risida qaror yoki ajrim chiqariladi.

Ushbu holatda fuqaroviy da'vogar yoki jabrlanuvchining mulkiy huquqlari buziladi. Vaholanki, jinoyat ishini tugatish qarorida jabrlanuvchi va fuqaroviy da'vogarga mulkiy huquqlari bo'yicha fuqarolik sudiga murojaat qilish huquqi tushuntirib o'tiladi.

Shaxsga nisbatan jinoyat ishi JPK 84-moddasi birinchi qismining 1–8-bandlari, beshinchi qismining 1-, 3-bandlariga muvofiq tugatilgan holda unga nisbatan fuqaroviy da'vo ko'rmay qoldiriladi va manfaatdor shaxslarga ularning fuqaroviy sud ishlarini yuritish tartibida da'vo qo'zg'atish huquqi tushuntiriladi. Jinoyat ishi apellyatsiya, kassatsiya yoki nazorat tartibida yuqorida ko'rsatilgan asoslarga binoan tugatilganda ham, fuqaroviy da'voga nisbatan shunday oqibatlar yuzaga keladi.

Ushbu holatda agar fuqaroviy da'vogar yoki jabrlanuvchi fuqarolik ishlari bo'yicha sudga jinoyat natijasida yetkazilgan zararni qoplashni so'rab murojaat qiladigan bo'lsa, sud tomonidan umumiy tartibda aybsizlik prezumpsiyasiga asosan (chunki surishtiruvchi, tergovchi va prokurorning jinoyat ishini tugatish to'g'risidagi

qarorida yoki sud ajrimida ayblilik masalasi hal qilinmagan bo‘ladi) da’vo talablari qanoatlantirishdan rad etiladi.

Bundan tashqari, Jinoyat-protsessual kodeksining 84-moddasi ikkinchi qismiga ko‘ra, ushbu modda birinchi qismining 1-, 2-, 3- va 8-bandlarida nazarda tutilgan hollarda agar ayblanuvchi, sudlanuvchi yoki vafot etgan ayblanuvchining, sudlanuvchining yaqin qarindoshlari talab qilsa, ishni yuritish umumiy tartibda davom ettirilishi mumkinligi belgilab qo‘yilgan. Bunday hollarda hukm qilish uchun asoslar mavjud bo‘lsa, ayblov hukmi jazo tayinlanmasdan chiqariladi.

Shu sababli ayblanuvchi yoki sudlanuvchining sud tomonidan aybdor deb topilishida fuqaroviy da’vogar yoki jabrlanuvchi ham mulkiy tomondan manfaatdorligini inobatga oladigan bo‘lsak, tergov yoki sud tergov amalda davom ettirilib, ayblanuvchi yoki sudlanuvchining aybdorlik masalasini ko‘rib chiqishda ularga ham ariza bilan murojaat qilish huquqi mavjudligining kiritilishi maqsadga muvofiq deb hisoblaymiz.

Ikkinchidan, Jinoyat-protsessual kodeksi 84-moddasi birinchi qismining 3-bandida ayblanuvchi yoki sudlanuvchi vafot etgani sababli ayblilik masalasini hal qilmasdan jinoyat ishining tugatilishi mumkinligi ko‘rsatilgan. Biroq bugungi kunda sud-tergov amaliyotida gumon qilinuvchining vafot etish holatlari ham mavjud ekanligini unutmazlik kerak.

Amaldagi Jinoyat-protsessual kodeksida surishtiruv, tergov yoki sud davomida gumon qilinuvchi vafot etgan taqdirda jinoyat ishini hal etish tartibi aniq belgilab qo‘yilmagan.

Bugungi kunda esa gumon qilinuvchi vafot etgan hollarda vakolatli organlar tomonidan unga dastlab sirdan ayb e‘lon qilinadi, keyin ushbu jinoyat ishi ayblanuvchining vafot etgani munosabati bilan ayblilik masalasi hal qilinmasdan tugatish amaliyoti qo‘llanadi.

Biroq agar jinoyat ishi qo‘zg‘atilmagan bo‘lsa, shaxs ayblanuvchi maqomida bo‘lishi mumkin emas. Bu esa Jinoyat-protsessual kodeksi 84-moddasida ko‘rsatilgan normalarga zid hisoblanadi. Shunga ko‘ra, ayblilik masalasini hal qilmasdan jinoyat

ishini tugatish uchun vafot etganligi asos bo'lgan shaxslar doirasini kengaytirish taklif qilinmoqda. Shu sababli gumon qilinuvchi vafot etganligi holatini ham ayblilik to'g'risidagi masalani hal qilmay turib jinoyat ishini tugatish asoslaridan biri sifatida Jinoyat-protsessual kodeksi 84-moddasiga kiritsak, maqsadga muvofiq bo'ladi. Bu esa, o'z navbatida, qonuniylik prinsipining amalda tatbiq etilishiga xizmat qiladi.

Xulosalar

Tahlil natijalari yuzasidan ayblilik to'g'risidagi masalani hal qilmay turib jinoyat ishini tugatishni takomillashtirish maqsadida quyidagilar taklif etiladi:

Jinoyat-protsessual kodeksida jinoyat ishini tugatishning ikki xil tartibi mavjud.

Bular:

- a) rehabilitatsiya asoslariga ko'ra jinoyat ishini tugatish asoslari (Jinoyat-protsessual kodeksining 83-moddasi);
- b) ayblilik to'g'risidagi masalani hal qilmay turib jinoyat ishini tugatish asoslari (Jinoyat-protsessual kodeksining 84-moddasi).

Qonunchiligimizda rehabilitatsiya asoslarining 3 ta, rehabilitatsiya qilinmaydigan (noreabilitatsiya) asoslarning 13 ta turi belgilab qo'yilgan.

Demak yuqoridagilarga asoslangan holda, jinoyat ishini tugatish asoslarini rehabilitatsiya va noreabilitatsiya mezonlari bo'yicha tasniflash jinoyat ishini tugatishning huquqiy oqibatlariga bog'liq. Qolaversa, O'zbekiston Respublikasi Jinoyat-protsessual kodeksi 84-moddasi birinchi qismining 1–3-, 8-bandlarida nazarda tutilgan asoslar bo'yicha jinoyat ishi tugatiladigan bo'lsa, jabrlanuvchi yoki fuqaroviy da'vogarning mulkiy huquqlari buzilish holatlarini hisobga olib, jabrlanuvchi yoki fuqaroviy da'vogarga ham (xuddi ayblanuvchi, sudlanuvchi yoki vafot etgan ayblanuvchin ing, sudlanuvchining yaqin qarindoshlari singari) ishni yuritishni umumiy tartibda davom ettirish bo'yicha ariza yoki iltimosnoma bilan murojaat qilish huquqini berish lozim.

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APPLICATION OF WASTE IN THE COMPOSITION OF MATERIALS BASED ON MINERAL FIBERS

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Abstract. *In this article, using waste paper, its chemical processing and restoration of its properties were studied. In addition, in order to expand its strength and fields of use, it was exposed to natural mineral fibers and the properties of composite materials were studied.*

Keywords: *waste paper, cardboard, organic and inorganic fibers, basalt fibers.*

Introduction. Paper waste paper is widely used in the production of many technical types of cardboard: roofing, binding, auto upholstery and others, making up the bulk of the composition. Thanks to the use of waste paper and manufacture on round-grid or Papermaking machines, these types of cardboard have a low cost, which is their main advantage.

On the contrary, such types of technical cardboard as filtering for fine and ultrafine air purification at the enterprises of the electronic and nuclear industries, modern electrical, heat and noise insulation materials are made from 50-100 % organic and inorganic fibers (basalt, cellulose from *Helianthus tuberosus*, cellulose from cotton lint, etc.). Usually manufactured in the form of canvases, mats and fabrics on special equipment, and then subjected to impregnation or other processing of special resins, mainly to impart strength. Recently, the production of such materials by paper production methods on machines of the "Packing Industries" type with an inclined

mesh table and a mass concentration at low tide of 0,01-0,05 % has been growing all over the world.

It is very important to choose the right binder, which would work in a wide temperature range from 20 to 1200 °C. As such a binder, the most interesting are cheap and accessible aluminum compounds that form complex poly-nuclear complexes, especially effective in a neutral and slightly alkaline medium.

Despite the great need of various industries in insulating materials from mineral fibers, their high penetration is hindered by high cost.

In this regard, the search for solutions aimed at reducing costs and increasing the competitiveness of paper-like materials from mineral fibers is a very urgent task.

Additional raw materials for mineral fibers are cellulosic semi-finished products. The choice of waste paper as an object of research is explained by its low cost, as well as by the absence of the need for high paper-forming properties to be presented to fibrous materials in the composition, since the strength of the material is provided by special binders.

Images of heat- and noise-insulating materials based on basalt fibers were produced on a LOA-2 sheet letter at a concentration of 0.05% (successively superimposing wet castings with a mass of 1m² -200 g), bringing the total mass to 600 g/m². Drying of the samples was carried out on the cylinder at the maximum weakened cloth, which made it possible to obtain samples with a low density (about 150 kg/m³), even in the model version I use a composition of 100 % recycled paper. As a binder, additions of sodium aluminate in an amount of 10 % by weight were used.

As a result of the hydrolysis of these compounds, complex polynuclear complexes of aluminum are formed, capable of involving surface hydroxyls of basalts and cellulose fibers in their structure. The resulting coordination bonds such as "cellulose fiber-aluminum-basalt fiber complex" contribute to a significant increase in the strength of materials. Under the influence of temperature of 150 -200 °C these bonds become not destroyed by water, passing from "al-bond" through hydroxyl in the "dioxo-bond" through oxygen. The desired pH value of 8.5-9.0 was determined with

0.1 N hydrochloric acid. The content of waste paper of grade MS-6 and MS-7 was varied in the samples from 0 to 100%. The influence of the fraction of waste paper in the composition on the heat and noise insulation properties of the samples was determined. Tests of the samples were carried out at the Architectural Institute (Tashkent) according to the special techniques developed by them.

The relative heat loss in percent at a temperature drop rate of 10 C/h and the noise reduction obtained during the testing of the samples are shown in table 1.

Table 1

Influence of the content of waste paper in basalt fiber samples on their heat and noise insulation properties

The name of indicators	Wastewater, %						
	0	5	10	15	25	50	100
Heat loss coefficient, %	0,17	0,20	0,32	0,85	2,05	13,00	22,00
Coefficient of noise absorption, %	62	59	56	53	45	22	12

Increasing the fraction of waste paper in the composition up to 100 % leads to a significant reduction in the heat and noise insulation characteristics of the samples. However, the content of waste paper to 15-25 % can be considered quite acceptable. Economic efficiency from the use of waste paper and the composition of the studied materials is unquestionable. The cost of waste paper, in comparison with mineral fibers, is so low that one can consider every percent of its increase, the percentage reduction in the cost of materials. The addition of waste paper material to the composition in the amount of 15-25% of a significant reduction in its cost price, also calling for an increase in its elasticity.

Conclusion. The expediency of using waste paper and aluminum compounds is shown to reduce the prime cost and improve the physico-chemical properties of composite materials from basalt fiber.

Thus, based on the above studies on the selection of binders, manufacturing technology and testing, consumers have demonstrated the possibility of using mineral fibers with an inorganic binder to produce composites that have the necessary insulating properties.

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PREPARATION OF NATURAL POLYMERS AND THEIR PROPERTIES

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Abstract. *As a result of the research, it was possible to obtain cellulose from the stems of several annual plants by the sodium method and to study various properties of the obtained cellulose. In addition, its areas of use were studied.*

Keywords: *paper, paperboards, annual plants, plants stalks, nitric acid, pulp.*

Introduction. Year by year, the increasing demand for paper and paper products in the world is becoming one of the important problems of many countries. To find a solution to this, many scientists are currently conducting various researches. It can be seen from the latest research that in recent years, the stems of annual plants are considered as a solution for the paper industry.

Cellulose is the basis for the production of paper and paperboards. Therefore, it is possible to obtain quality pulp for the production of quality paper. Production of cellulose from annual plants is well developed in China and India. It covers 50% of the defense needs of the People's Republic of China in one year. In Uzbekistan, thousands of tons of annual plant stalks (mainly artichoke stalks, cotton stalks, rice stalks, safflower stalks, wheat straw, etc.) are collected annually. The stems of the plants we need today have been used for a variety of purposes, including being used for livestock (other types of plants are now supported for livestock) and incinerated as waste. With this in mind, we have focused our research on extracting cellulose from annual plants and identifying and investigating the use of the resulting cellulose with the greatest potential. In this way, we will be able to solve the problems that the paper in

Uzbekistan is facing in the matter of the fetus. We selected 4 types of raw materials (artichoke, wheat straw, safflower stem, cotton stalk) to conduct the experiments. We used a natron tip, which is widely used in Uzbekistan, to remove the pulp.

Nitric acid is used to extract cellulose from one-year-old plant stems, plant stems are cut into 4-5 mm sizes, crushed in a porcelain mortar, the crushed stem is hydrolyzed in a 3% concentration of nitric acid, and then baking process is carried out using the sodium method.

In nitric acid solution, 1:20 module, 5 g of air-dry crushed plant stem was hydrolyzed. The hydrolysis process was carried out for 20 minutes at 85-95 °C. Then it was washed and boiled in 10-25% sodium alkali for 120 minutes. After cooling, it was washed again and boiled for 10 minutes in order to bleach it in a 3% H₂O₂ solution. The oxidation reaction was allowed to proceed for 24 hours at room temperature.

The separated cellulose was washed until neutral and dried at room temperature. The analysis of the obtained results is presented in the following table.

Table 1

The effect of alkali coconcentration on cellulose extraction from natural polymers and its quality indicators is presented

Raw material type	NaOH, g/l	Cellulose product, %	Ash content, %	α - cellulose, %	PD
Cellulose from the cotton stalk	10	40.0	0.96	89.8	750
	15	41.5	0.91	90.9	800
	20	42.0	0.84	90.4	850
	25	39.3	0.99	89.6	700
Cellulose from the safflower plant	10	43.1	0.90	90.7	950
	15	50.0	0.77	92.4	1050
	20	45.3	0.89	90.5	1000
	25	40.1	0.95	89.0	900
Cellulose	10	46.2	0.85	91.0	900

from straw stalks	15	49.1	0.80	91.8	1000
	20	48.2	0.79	91.2	950
	25	42.3	0.83	90.4	850
Cellulose from Jerusalem artichoke	10	18.2	1.33	-	-
	15	30.2	1.20	-	-
	20	45.4	0.89	90.4	1200
	25	42.6	0.82	90.6	1050

Conclusion. The analysis of the results showed that we can get Jerusalem artichoke as the most acceptable raw material. Firstly, this plant is grown in large quantities in the conditions of Uzbekistan, and secondly, the degree of polymerization of cellulose is important for the paper industry.

On the other hand, in the process of extracting cellulose from the Jerusalem artichoke plant, the influence of alkali concentration on cellulose quality indicators was studied. So, it will be appropriate if we apply our obtained cellulose to the paper industry.

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OBTAINING FIBER COMPOSITES

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Abstract. *In this study, MC-7 waste paper was used and its properties were studied after mechanical and chemical processing. Based on the studied raw materials and basalt fibers, the composition preparation process was developed.*

Key words: *waste paper, cellulose, composition, basalt fiber, quality indicators.*

Introduction. The widespread use of waste paper as a raw material depends on the demand for paper and paper products in the country. For example, in Russia at the beginning of the 20th century, the demand for paper and paper products per person was 3 kg, in Germany - 24 kg, in the USA - 34 kg, and at the end of the 20th century, it increased 8-10 times in Russia. By 2010, this indicator reached 41-45 kg.

It is known that the physico-mechanical properties of secondary fibers are lower than the physico-mechanical properties of primary cellulose fibers. Because during the processing of the primary fibers, their physical dimensions are reduced, as a result of the hardening of the fibers (orogovenia) during the drying process, the shrinkage is reduced by 20-40%. Therefore, in the process of processing waste paper, in addition to cleaning from dirty waste, it is necessary to try to restore the physical parameters and mechanical properties of cellulose fibers.

It is necessary to restore the physical parameters of waste paper fibers by mechanical and chemical processing, to create good conditions for regenerating the properties of water and fibril structure.

The use of mineral (basalt) fibers in the composition of paper and paper products gives them a set of unique properties that cannot be achieved in materials based on waste paper fibers. These are high thermal, chemical and biological stability insulating properties, as well as stability to the movement of various types of radiation, including very hard gamma and ultraviolet. The main interesting unique filtration properties are the combination of low aerodynamic resistance with high retention effect of submicron particles.

Traditional types of paper and paper products based on mineral fibers determine their use in various fields of technology, which are suitable or unsatisfactory due to the low stability of waste paper fibers to the aggressive effects of external factors. Examples of successful use of composites such as paper based on mineral fibers can be found in various fields of science and technology. These are aerospace engineering, engines of various names, biotechnology, construction and others. Taking into account the above considerations, we conducted this experiment on MC-7 (mixed cardboard) and basalt (3 different types) fibers.

The technology of mass production from waste paper and basalt fibers for the production of composite paper products includes the following processes:

1. Separation of waste paper into separate fragments;
2. Fragmentation;
3. Cleaning of waste paper mass in cyclones;
4. Sorting and fine cleaning;
5. Separating the secondary fiber suspension into fractions depending on their size;
6. Condensing the mass to 10...15%.

Then, taking equal amounts of each of these and mixing them, the composite material was prepared in the laboratory using the wet method. The prepared mass was diluted by 1-1.5%, and a paper sample was cast on the paper casting machine. When the cylinder of the apparatus is slowly raised together with the mesh part, the water mass at the end passes through the mesh to form a wet paper layer. The resulting paper

layer together with the mesh is removed and dehydrated in a drying cabinet at 105-110 °C to 75-80% moisture. Then it is pressed in a press until the desired thickness is formed and kept in the press for 30 minutes. At the next stage, the quality indicators of the samples, i.e. breaking length, bending resistance, ash content and water absorption were studied. The following tables show the analysis of the results.

Table 1

Quality indicators of composite paper samples obtained on the basis of basalt fiber (ultrafine) and MC-7 different papers

№	Waste paper, %	Basalt fiber, %	Quality indicators			
			Breaking length, mm	Bending strength, H	Ash content, %	Water absorption, %
1	100	-	3550	22	6.95	3.47
2	75	25	2050	13	7.11	3.38
3	50	50	875	3	8.17	2.39
4	-	100	-	-	9.84	2.25

Table 2

Quality indicators of composite paper samples obtained on the basis of basalt fiber (fine) and MC-7 different papers

№	Waste paper, %	Basalt fiber, %	Quality indicators			
			Breaking length, mm	Bending strength, H	Ash content, %	Water absorption, %
1	100	-	3550	22	6.95	3.47
5	75	25	2700	14	7.93	3.85
6	50	50	1550	7	9.67	3.69
7	-	100	-	-	10.25	3.48

Table 3

Quality indicators of composite paper samples obtained on the basis of basalt fiber (coarse) and MC-7 different papers

№	Waste paper, %	Basalt fiber, %	Quality indicators			
			Breakin g length, mm	Bending strength, H	Ash content, %	Water absorptio n, %
1	100	-	3550	22	6.95	3.47
8	75	25	1450	11	8.27	4.95
9	50	50	775	2	10.15	4.13
10	-	100	-	-	12.15	3.98

Conclusion. As can be seen from the table, three different types of basalt fiber samples and composite paper samples obtained on the basis of MC-7 different papers were studied and compared for breaking length, bending resistance, ash content and water absorbency indicators. From the results of the analysis, it can be concluded that it is appropriate to use very fine and fine types of basalt fiber, because the amount of ash and the degree of elasticity are smaller than those of coarse fiber.

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COMPOSITE RECEIPT AND APPLICATION OF AREAS OF APPLICATION

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Abstract. *This article presents the process of developing a composite using MC-6 type of waste paper and basalt fiber. A study was conducted on improving the quality indicators of waste paper based on basalt fiber and obtaining wrapping paper.*

Keywords: *composite, waste paper, cellulose, composition, basalt fiber, quality indicators.*

Introduction. Over the past 20 years, the Republic of Uzbekistan has made significant progress in pulp and paper production. It should be noted that among dozens of paper and paper products manufacturing enterprises in Uzbekistan, there is a single cardboard paper manufacturing enterprise "TECHNO PRINT" LLC, and now there are more than 10 such large enterprises producing sanitary-hygienic paper. However, the country's demand for pulp and paper is still not being met.

"TECHNO PRINT" LLC was fully operational in 2008. The enterprise is equipped with equipment imported from China. The production process of the enterprise is continuous. The enterprise specializes in the production of thick paper and box products, using MC-5B and MC-6B types of waste paper as raw materials.

It is necessary to restore the physical parameters of waste paper fibers by mechanical and chemical processing, to create good conditions for regenerating the properties of water and fibril structure.

The use of mineral (basalt) fibers in the composition of paper and paper products gives them a set of unique properties that cannot be achieved in materials

based on waste paper fibers. These are high thermal, chemical and biological stability insulating properties, as well as stability to the movement of various types of radiation, including very hard gamma and ultraviolet. The main interesting unique filtration properties are the combination of low aerodynamic resistance with high retention effect of submicron particles.

Traditional types of paper and paper products based on mineral fibers determine their use in various fields of technology, which are suitable or unsatisfactory due to the low stability of waste paper fibers to the aggressive effects of external factors. Examples of successful use of composites such as paper based on mineral fibers can be found in various fields of science and technology. Taking into account the above considerations, we conducted this experiment on MC-6 (old corrugated cardboard or scraps) and basalt (3 different types) fibers of paper.

The technology of mass production from waste paper and basalt fibers for the production of composite paper products includes the following processes:

Separation of waste paper into separate fragments, shredding of fragments, cleaning of waste paper mass in cyclones, sorting and fine cleaning, separation of secondary fiber suspension into fractions depending on size, condensing the mass to 10...15%.

Then, from each of these separately, i.e., by taking equal amounts and mixing them, a composite material was prepared in the laboratory using the wet method. The prepared mass was diluted by 1-1.5%, and a paper sample was cast on the paper casting machine. When the cylinder of the apparatus is slowly raised together with the mesh part, the water mass at the end passes through the mesh to form a wet paper layer. The resulting paper layer together with the mesh is removed and dehydrated in a drying cabinet at 105-110 °C to 75-80% moisture. Then it is pressed in a press until the desired thickness is formed and kept in the press for 30 minutes. At the next stage, the quality indicators of the samples, i.e. breaking length, bending resistance, ash content and water absorption were studied. The following tables show the analysis of the results.

Table 1

Quality indicators of composite paper samples based on basalt fiber (ultrafine) and waste paper

№	Waste paper, %	Basalt fiber, %	Quality indicators			
			Breaking length, mm	Bending strength, H	Ash content, %	Water absorption, %
1	100	-	3700	25	6.80	3.45
2	75	25	2100	15	7.10	3.36
3	50	50	900	3	8.20	2.36
4	-	100	-	-	9.80	2.20

Quality indicators of composite paper samples based on basalt fiber (fine) and waste paper

№	Waste paper, %	Basalt fiber, %	Quality indicators			
			Breaking length, mm	Bending strength, H	Ash content, %	Water absorption, %
1	100	-	3700	25	6.80	3.45
2	75	25	2800	17	7.90	3.81
3	50	50	1600	8	9.60	3.66
4	-	100	-	-	12.12	3.95

Quality indicators of composite paper samples based on basalt fiber (coarse) and pulp

№	Waste paper, %	Basalt fiber, %	Quality indicators			
			Breaking length, mm	Bending strength, H	Ash content, %	Water absorption, %
7	100	-	3700	25	6.80	3.45
8	75	25	1500	13	8.20	4.92
9	50	50	800	2	10.12	4.10
10	-	100	-	-	14.12	5.95

Conclusion. As can be seen from the tables, three different types of basalt fiber samples and MS-6 composite paper samples obtained on the basis of different waste paper were studied and compared for breaking length, bending resistance, ash content and water absorbency indicators. From the results of the analysis, it can be concluded that it is appropriate to use very fine and fine types of basalt fiber, because the amount of ash and the degree of elasticity are smaller than those of coarse fiber.

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СИСТЕМА ПОСЕЩАЕМОСТИ РАСПОЗНАВАНИЯ ЛИЦ С ИСПОЛЬЗОВАНИЕМ БИБЛИОТЕК PYTHON

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***Аннотация:** Данная статья представляет исследование и разработку системы распознавания лиц на основе библиотек Python для эффективного контроля посещаемости. В статье представлен подробный обзор современных методов распознавания лиц и обоснование выбора Python как основного инструмента разработки. Авторы подробно описывают архитектуру системы, включая процесс сбора и подготовки данных, алгоритмы обучения и реализацию интерфейса пользователя. Библиотеки Python, такие как OpenCV, dlib и TensorFlow, используются для обработки изображений, детекции и распознавания лиц, а также для создания моделей машинного обучения и библиотеки для создания интерфейса, как Tkinter. Особое внимание уделяется вопросам безопасности и защите данных в контексте применения системы в образовательных учреждениях и офисных средах. Результаты экспериментов и оценка производительности представлены сравнительно с другими существующими решениями. Эта статья может служить руководством для специалистов в области разработки системы контроля посещаемости на основе технологии распознавания лиц с применением библиотек Python.*

***Ключевые слова:** Python, OpenCV, dlib, TensorFlow, Tkinter, детекция, машинное обучение,*

Введение

На сегодняшний день безопасность имеет важную роль в обществе и её роль растет с каждым днём, как и эволюция технологии. Сейчас повсюду информация и данные, но среди них есть защищенные и незащищенные, а все хотят чтобы их данные были в безопасности.

Ранние методы аутентификации и идентификации с помощью PIN-кодов и паролей знатно устарели и занимали больше времени, но потом случилось прорыв в области кибербезопасности, появилась биометрическая защита данных. Которая обеспечивает уникальность, надежную защиту и экономия времени.

Язык программирования Python

Python - это высокоуровневый интерпретируемый язык программирования общего назначения, который был разработан Гвидо ван Россумом и впервые выпущен в 1991 году. Он стал популярным благодаря своей простоте, читаемости и гибкости, что делает его идеальным выбором для разнообразных задач, от веб-разработки и научных вычислений до автоматизации искусственного интеллекта[1].

Особенности Python:

1. Читаемость и простота кода
2. Широкое использования
3. Кроссплатформенность
4. Расширяемость

Благодаря расширяемости Python в нем существует много полезных и удобных библиотек. О некоторых из них мы поговорим в этой статье.

OpenCV

OpenCV (Open Source Computer Vision Library) - это библиотека программного обеспечения для компьютерного зрения и машинного обучения с открытым исходным кодом. OpenCV был создан для обеспечения общей инфраструктуры для приложений компьютерного зрения и ускорения

использования машинного восприятия в коммерческих продуктах. Являясь лицензионным продуктом Apache 2, OpenCV упрощает компаниям использование и модификацию кода.

Библиотека содержит более 2500 оптимизированных алгоритмов, которые включают в себя полный набор как классических, так и самых современных алгоритмов компьютерного зрения и машинного обучения. Эти алгоритмы могут быть использованы для обнаружения и распознавания лиц, идентификации объектов, классификации действий человека в видео, отслеживания перемещений камеры, отслеживания движущихся объектов, извлечения 3D-моделей объектов, создания 3D-облаков точек со стереокамер, объединения изображений для получения изображения всей сцены в высоком разрешении, поиска похожих изображений из база данных изображений, удаление эффекта красных глаз с изображений, сделанных с помощью вспышки, отслеживание движений глаз, распознавание пейзажа и установка маркеров для наложения на него дополненной реальности и т.д. Библиотека широко используется компаниями, исследовательскими группами и государственными органами.

Dlib

Dlib - это библиотека машинного обучения и компьютерного зрения, разработанная специально для решения задач обработки изображений, распознавания объектов и детекции лиц. Она предоставляет реализацию различных алгоритмов, таких как:

- Детекция лиц и ключевых точек лица.
- Обнаружение объектов с помощью метода "Histogram of Oriented Gradients" (HOG).
- Распознавание лиц с использованием "Deep Metric Learning" (LFW) и других методов.
- Трекинг объектов и лиц.

Dlib также включает в себя инструменты для работы с изображениями и структурами данных, что делает ее полезным инструментом для различных задач компьютерного зрения[2].

TensorFlow

TensorFlow - это мощный открытый фреймворк для машинного обучения и глубокого обучения, разработанный компанией Google. Он предоставляет множество инструментов и API для создания, обучения и развертывания различных типов нейронных сетей. TensorFlow позволяет решать разнообразные задачи машинного обучения, такие как:

- Классификация и регрессия.
- Обработка естественного языка (NLP).
- Обнаружение объектов и семантическая сегментация в изображениях.
- Генерация контента искусственным интеллектом (например, в генеративно-сопоставительных сетях - GAN).

TensorFlow предоставляет высокоуровневые абстракции для удобства работы с нейронными сетями, а также низкоуровневые возможности для тонкой настройки и оптимизации моделей. Он используется в различных областях, от исследований и образования до промышленного применения.

Tkinter

Tkinter (Tcl/Tk Interface) - это стандартная библиотека Python, предоставляющая интерфейс к библиотеке GUI (графический пользовательский интерфейс) Tk, написанной на языке программирования Tcl (Tool Command Language). Tkinter позволяет создавать простые и интуитивно понятные графические приложения с помощью различных виджетов, таких как кнопки, окна, текстовые поля, полосы прокрутки и другие элементы интерфейса.

Этот фреймворк предоставляет пользователям Python простой способ создания элементов графического интерфейса с использованием виджетов, найденных в Tk toolkit. Виджеты Tk можно использовать для создания кнопок, меню, полей данных и т.д. в приложении на Python. После создания эти графические элементы могут быть связаны с функциями, функциональностью,

методами, данными или даже другими виджетами или взаимодействовать с ними.

Сбор данных и тренировка модели

В системе присутствует камера подключенная к компьютеру. Она снимает определенную количество снимков и отправляет в базу, там эти снимки используется для тренировки модели чтобы распознать лицо пользователя и идентифицировать его.

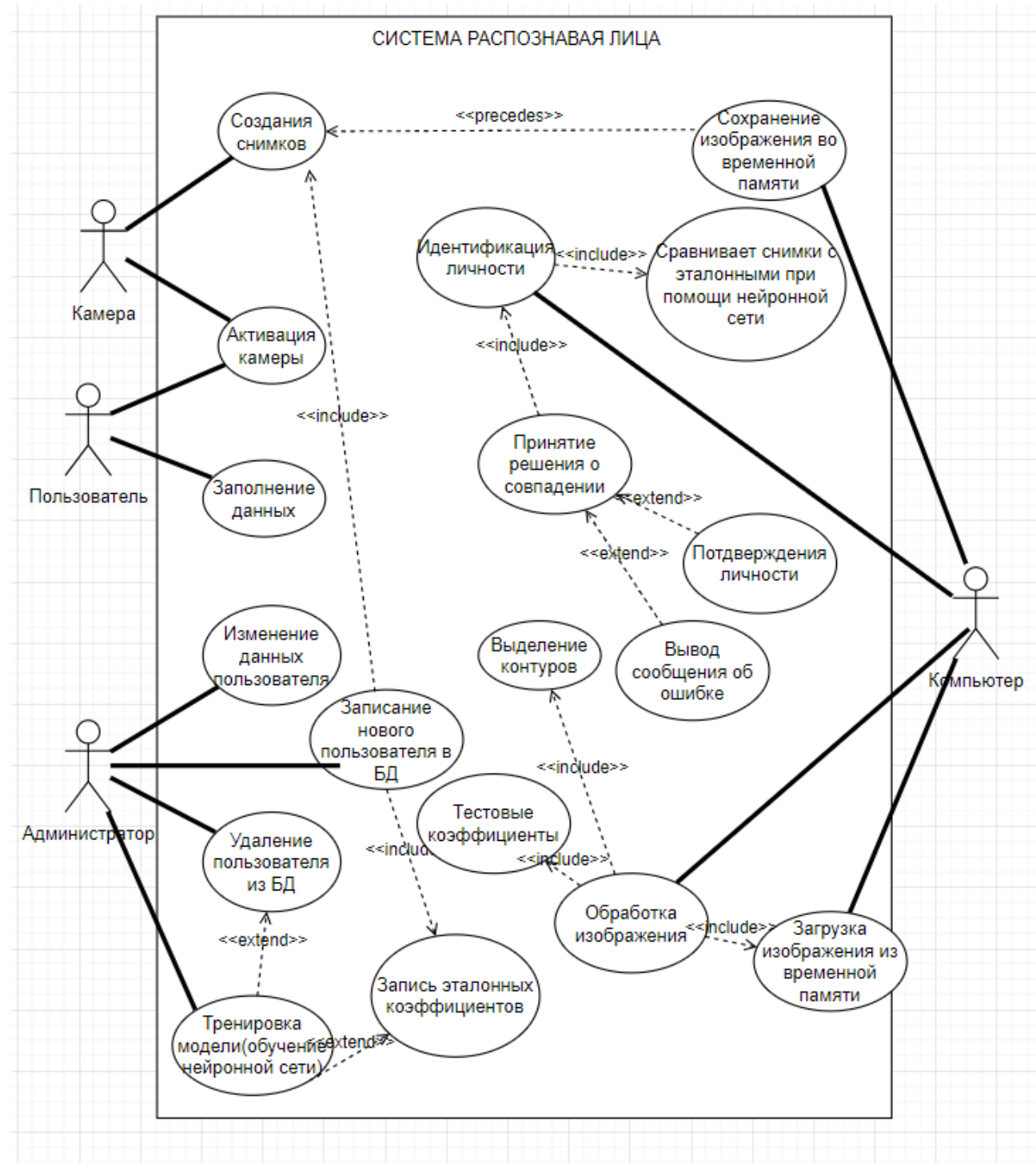


Рисунок 1 UML диаграмма работы системы

Заключение

Мы уверены, что предоставленные нами информации будут полезны в будущем. Область машинного обучения продолжает активно развиваться, и спрос на специалистов, обладающих навыками работы с ними, по-прежнему остается высоким.

Однако, мы осознаем, что наш путь в изучении машинного обучения только начинается, и нам предстоит продолжать расширять свои знания и углубляться в эту захватывающую область. Мы с нетерпением ожидаем дальнейших исследований и применения машинного обучения в реальных проектах, чтобы продолжать наше стремление к инновациям и развитию в области машинного обучения.

Источники

1. <https://habr.com/ru/articles/301096/>
2. Python и машинное обучение, Себастьян Рашка, 356 стр, ISBN 9785041961336, 5041961336

DASTURLASHNI O‘RGANUVCHILAR UCHUN ONLAYN HAKAM TIZIMI

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Dasturlash fanini o‘qitishda talabalarga algoritmlar va ularning dasturini tuzish jarayoni murakkab masalalardan biri hisoblanadi. Fanda berilgan topshiriqlarni qiyinligi talabalarning fanni o‘zlashtirish samaradorligini pasaytiradi. Bundan tashqari talabalarning mustaqil ta’lim olish jarayonini samarali tashkil qila olmasligi va mustaqil tayyorlanish vaqtini to‘g‘ri taqsimlay olmasligi talabalarda yetarlicha qiyinchilik tug‘diradi[1].

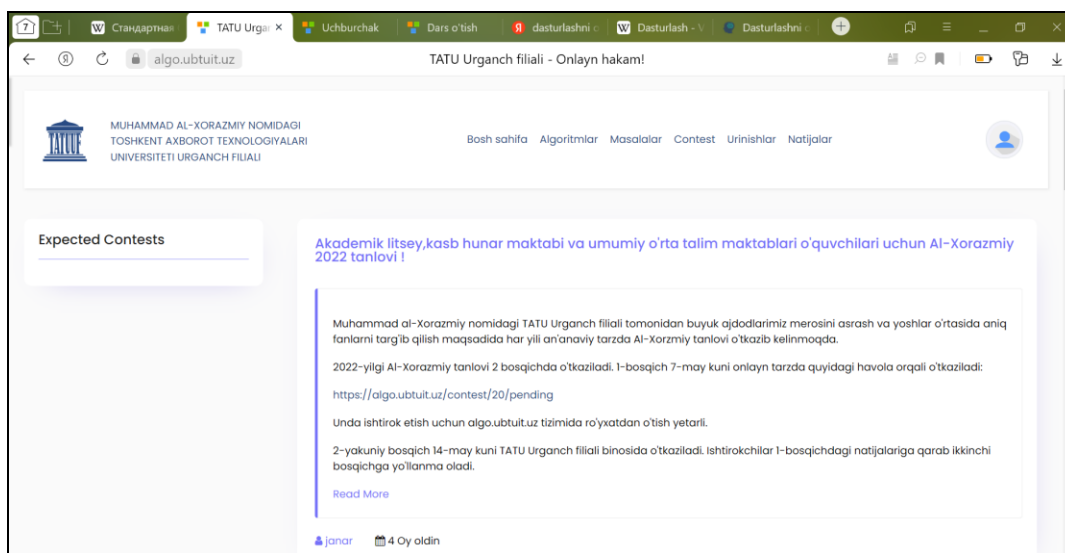
Hozirgi vaqtda ko‘p sonidagi dasturlash tillarini mavjudligi, ular yordamida katta hajmdagi masalalarni samarali yechish imkonini beradi. Biroq ixtiyoriy dasturlash tili yordamida dasturiy ta’minot yaratish algoritmlashtirish tamoyillarini yaxshi bilishni, algoritm tuzish orqali dastur ishlash jarayonini, kompyuterda ma’lumotlarni qayta ishlash jarayonini tushinishni talab qiladi[2].

Dasturlash fanini o‘rgatishdan maqsad - talabalarning ilmiy- texnikaviy dunyoqarashini shakllantirish va zamonaviy texnika vositalari bilan tanishish hamda undan foydalanishga zamin yaratishdan iborat[3]. Shuningdek, algoritm tuzish tamoyillarini o‘rganish, kursni yetarlicha o‘zlashtirishlarini ta’minlash va amaliyotga tadbiiq etish ko‘nikmalarini hosil qilish, algoritmlash usullarini amaliy masalalarni hal qilishga tadbiiq etish, algoritmlarning sifatini oshirish, ixchamlash yo‘llari va uslublarini o‘rgatishdan iboratdir[4].

Muhammad al-Xorazmiy nomidagi Toshkent axborot texnologiyalari universiteti Urganch filialida professor-o‘qituvchi va talabari tomonidan ishlab chiqilgan va hozirgi kunda tajriba-sinovdan o‘tkazilayotgan “Online hakam”

(<https://algo.ubtuit.uz/>) tizimi talabalarga dasturlashni o'rgatishda yuqori samara bermoqda[4].

Tizimning dastlabki sahifasi «Bosh sahifa», «Algoritmlar», «Masalalar», «Contest», «Urinishlar», «Natijalar bo'limlaridan iborat bo'lib, ular quyidagicha vazifalarni amalga oshirishga mo'ljallangan(1-rasm):



1-rasm. "Online hakam" (<https://algo.ubtuit.uz/>) tizimining umumiy ko'rinishi

«Bosh sahifa» bo'limida talabalar uchun dasturlash bo'yicha yangiliklar, e'lonlar beriladi. Shuningdek, bu bo'limda o'tkazilgan nazorat (musobaqa shaklida) natijalari, talabalarining dasturlash masalalarini yechish bo'yicha monitoring natijalari, har bir o'tkazilgan musobaqadan keyin muallif yechimlari berib boriladi.

«Algoritmlar» bu bo'limda dasturchilar uchun zarur bo'lgan algoritmlar beriladi. Ushbu bo'limda istalgan turdagi murakkab algoritmlarni ham izohlar va sodda misollar orqali oson tushunib olishlari mumkin bo'ladi.

«Masalalar» bo'limida talabalarga oraliq va yakuniy nazoratga mustaqil tayyorlanishlari uchun o'tilgan mavzular bo'yicha har bir fan kesimida masalalar to'plami beriladi, shuningdek olimpiadaga tayyorlanuvchi talabalar uchun ham maxsus masalalar to'plami ham ishlab chiqilgan.

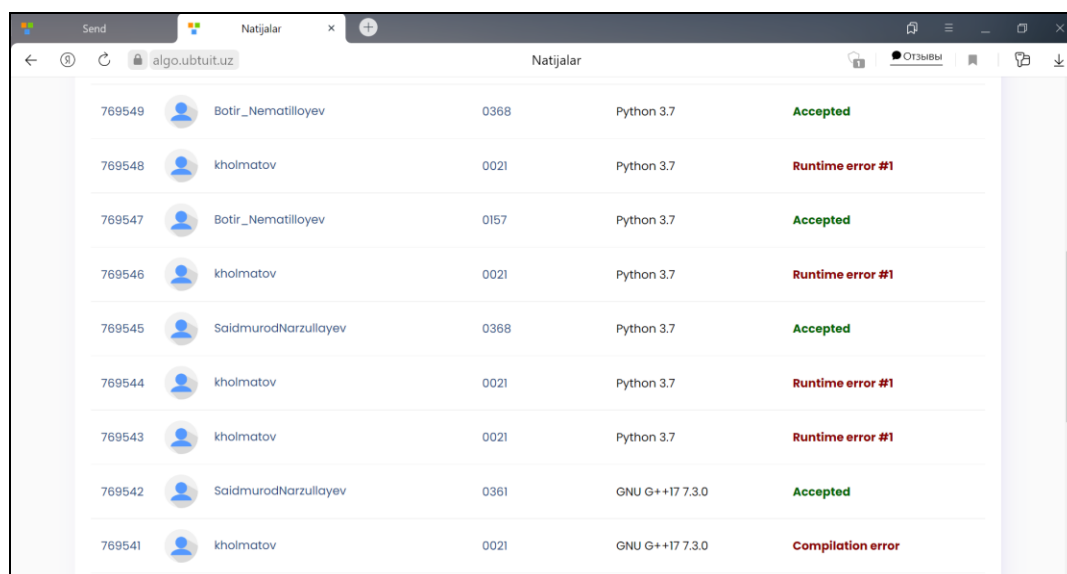
«Contest» bo'limida tizimning masalalar bazasidan foydalanib yoki yangi masalalar tuzish orqali ishtirokchilar o'rtasida musobaqa o'tkazish mumkin. Ushbu

musobaqalar ma'lum vaqt oralig'ida va belgilangan sanada onlayn tarzda o'tkaziladi, musobaqa o'tkaziladigan sanalar tizim yangiliklar bo'limida e'lon qilib boriladi.

«Urinishlar» bo'limida joriy holat, ya'ni joriy vaqtda masalalarni yechayotgan talabalar va ularni masalani to'g'ri yoki noto'g'ri yechayotganligi, urinishlari soni ko'rsatiladi (2-rasm).

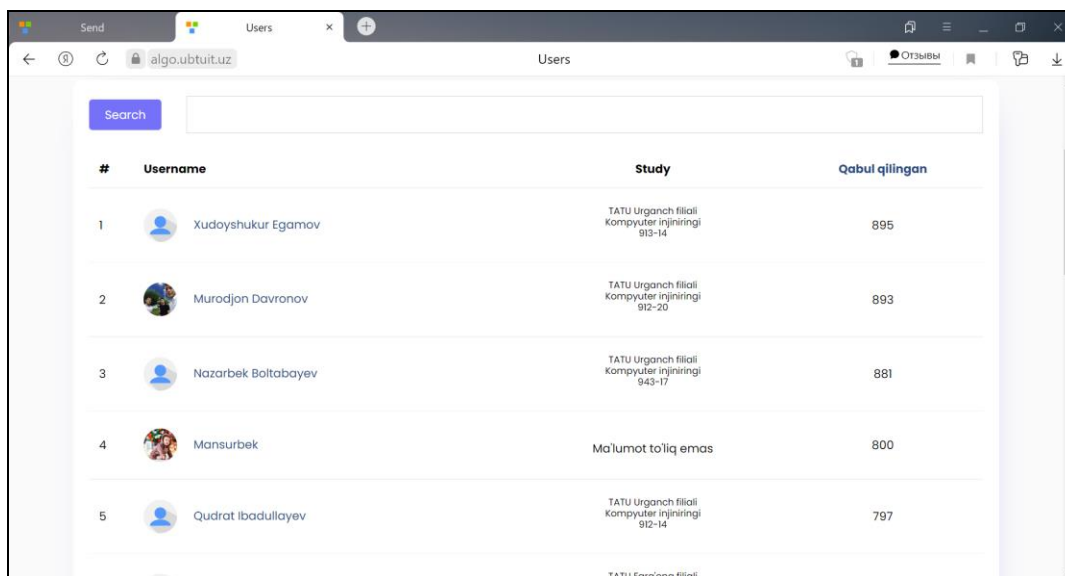
«Natijalar» bo'limida talabaning masalalarni yechish soni bo'yicha olgan o'rni belgilanadi. Bu bo'limda talabalarni familiya, ismi bo'yicha qidiruv tizimi ham mavjud. Agar siz biror guruhni tanlasangiz, faqat shu guruh talabalarining reytingi chiqadi (3-rasm).

Talabalar yechgan masalaning matnini tizimga tekshirish uchun jo'natadilar. Talaba dastlab masalaning tartib raqami tanlaydi, keyin dasturlash tillaridan (C, C++, Python) birini tanlaydi. Masalaning dastur matni tanlangan dasturlash tilida bo'lishi shart (4-rasm).



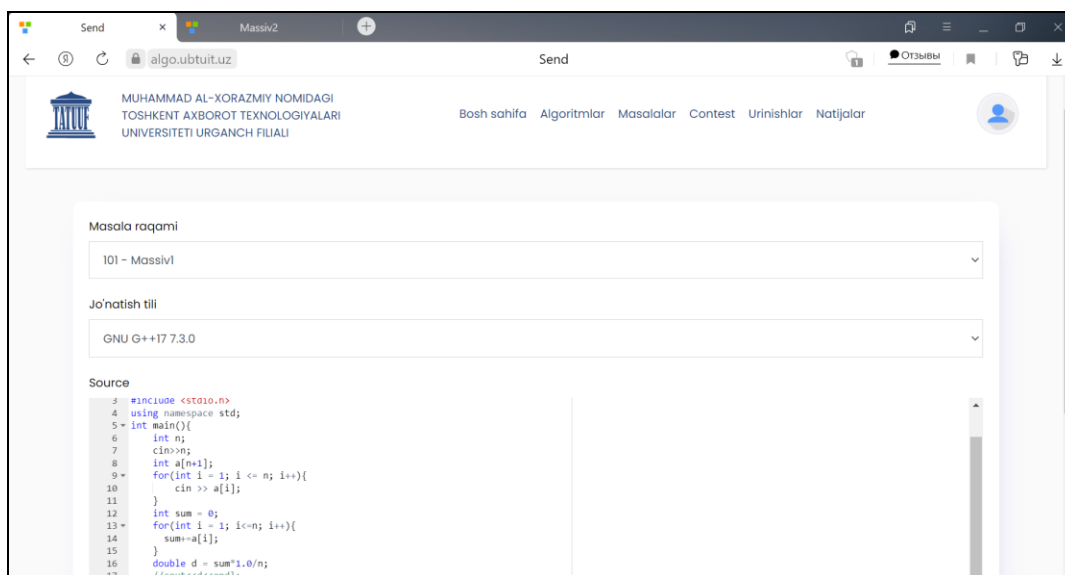
ID	Foto	Ism	Ball	Til	Rezultat
769549		Botir_Nematilloev	0368	Python 3.7	Accepted
769548		kholmatov	0021	Python 3.7	Runtime error #1
769547		Botir_Nematilloev	0157	Python 3.7	Accepted
769546		kholmatov	0021	Python 3.7	Runtime error #1
769545		SaidmurodNarzullayev	0368	Python 3.7	Accepted
769544		kholmatov	0021	Python 3.7	Runtime error #1
769543		kholmatov	0021	Python 3.7	Runtime error #1
769542		SaidmurodNarzullayev	0361	GNU G++17 7.3.0	Accepted
769541		kholmatov	0021	GNU G++17 7.3.0	Compilation error

2-rasm. «Urinishlar» bo'limi



#	Username	Study	Qabul qilingan
1	Xudayshukur Egamov	TATU Urganch filiali Kompyuter injiniringi 913-14	895
2	Muradjon Davronov	TATU Urganch filiali Kompyuter injiniringi 912-20	893
3	Nazarbek Boltabayev	TATU Urganch filiali Kompyuter injiniringi 943-17	881
4	Mansurbek	Ma'lumot to'liq emas	800
5	Qudrat Ibadullayev	TATU Urganch filiali Kompyuter injiniringi 912-14	797

3-rasm. "Natijalar" bo'limi



4-rasm. Masalani tekshirish uchun tizimga jo'natish

Tizimda talaba tomonidan dasturlashda yo'1 qo'yilgan xatoliklar quyidagi ko'rinishlarda berilishi mumkin:

1) Accepted - ma'lumot jo'natilgan dasturni barcha testlashdan muvaffaqiyatli ravishda o'tganligi haqida xabar beradi va siz jo'natgan dastur tizim tomonidan qabul qilinganligini bildiradi. 2) Wrong answer - ma'lumot jo'natilgan dasturni testlashdan o'tmaganligini anglatadi. Testlashni qaysi turidan o'tmaganligini "#" belgisidan keyin chiqadigan sondan bilish mumkin. Masalan: Wrong answer #5 degan xabar chiqsa,

dastur 5 – testlashdan o‘ta olmaganligini anglatadi. 3) Time limit exceeded - bunday ma’lumot jo‘natilgan dastur qo‘yilgan biror-bir testlashda vaqt chegarasi oshganligini bildiradi. Qaysi testlashda vaqt chegarasi oshganligini "#" belgisidan keyin chiqadigan sondan bilish mumkin. Masalan: Time Limit exceeded #5 bo‘lsa, 5 testlashda vaqt chegarasi oshganini bildiradi. 4) Compilation error - ma’lumoti jo‘natilgan dastur matni kompilyatsiya qilinganida chiqqan xatolik haqidadir. 5) Runtime error - ma’lumoti jo‘natilgan dasturning bajarilishi vaqtida uchraydigan xatolikni anglatadi, bunday xatoliklarga massiv elementlarini yo‘q indeksini chiqarish, massiv elementlari indeksini oshishi va shunga o‘xshash xatoliklar kiradi. Masalan: Runtime error #5 bo‘lsa 5 testlash bajarilishi vaqtida uchragan xatolikni bildiradi. 6) Memory limit - bunday ma’lumot jo‘natiladigan dasturga ajratilgan xotira chegarasidan oshganda ro‘y beradigan xatolik. 7) In queue - bunday ma’lumot jo‘natilgan dastur tekshirish uchun navbatga qo‘yilganligini anglatadi. 8) Running - bunday ma’lumot jo‘natilgan dastur tizim tomonidan tekshirilayotganligini anglatadi.

Xulosa

Xulosa qilib aytganda, ushbu yaratilgan “Onlayn hakam” tizimi dasturi horizgi kunda 1200 dan ortiq masalani o‘z ichiga qamrab olgan bo‘lib, qisqa muddat ichida butun respublika bo‘ylab 8000 dan ziyod dasturchi foydalanuvchilarga dasturlash va algoritmlash bo‘yicha bilimlarini yanada chuqurlashtirishlari uchun xizmat qilmoqda.

Dasturlash fanini o‘rgatishda bunday tizimlarning joriy qilinishi talabalarning fanni yaxshi o‘zlashtirishlari va ularning dasturlashga bo‘lgan qiziqishini yanada ortishida katta ahamiyat kasb etadi.

Adabiyotlar

- [1]. https://en.wikipedia.org/wiki/Competitive_programming.
- [2]. <https://en.wikipedia.org/wiki/Codeforces>
- [3]. http://code.wikia.com/wiki/Online_judge
- [4]. <http://algo.ubtuit.uz/index.php>

PLYONKA OSTIDAN SUG‘ORISH QUVURLARINI TASHLOVCHI QURILMA TAVSIFI

Maxmudova Maftuna Maxsud qizi

Qo‘chqorov Jurat Jalilovich

Qodirov Zayniddin Zaripovich

“TIQXMMI” MTU Buxoro tabiiy resurslarni boshqarish instituti

***Annotatsiya:** Maqolada bayon etilgan plyonka ostidan sug‘orish quvurlarini tashlovchi qurilma qishloq xo‘jalik ishlab chiqarilishida, qishloq xo‘jaligi ekinlarini sug‘orishda resurstejamkor qurilma ekanligi va ularning ish texnologiyasi to‘plyonka ostidan tomchilatib sug‘orish texnologiyasiga taa‘luqli.*

***Kalit so‘zlar:** qora plyonka, sug‘orish quvuri, tomchilatib sug‘orish texnologiyasi, sug‘orish, tuproq, unumdorlik, qishloq xo‘jaligi, bug‘lanish, sho‘rlanish.*

Qishloq xo‘jaligi O‘zbekiston Respublikasi iqtisodiyotining eng muhim tarmoqlaridan biri bo‘lib, mavjud ekin yerlarini meliorativ holatini yaxshilash va undan yuqori hosil olish bevosida texnika va texnologiyalarga bog‘liq. Ushbu texnikalarda samarali va to‘g‘ri foydalanish, shu bilan birga ularning yangi turlarini ishlab chiqish hozirgi kunning dolzarb ilmiy yechimini kutayotgan masalalaridan biridir.

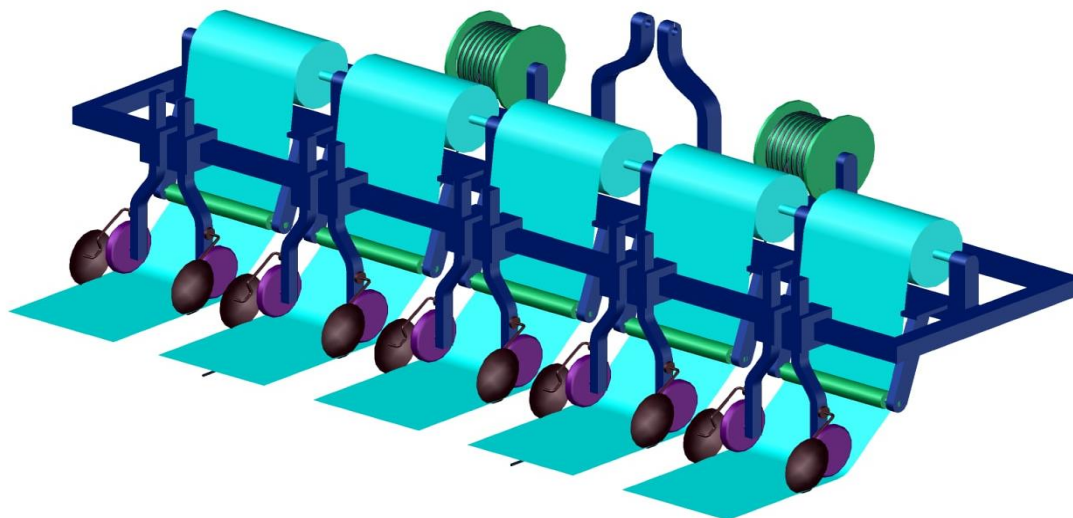
Yerlarni meliorativ holatini yaxshilash, suvni tejab foydalanish kabi ishlar tobora avj olmoqda. Shu o‘rinda aytib o‘tish joizki yana bir dolzarb muammoga aylanib borayotgan yerlarni meliorativ holati buzilishi va sho‘rlanish darajasining oshib borishidir. Bu muammoni qisman oldini olish bu sifatli tekislashga bog‘liqdir.

Mulchalash deb, ekin yoki ko‘chat atrofidagi tuproq yuzasini turli materiallar bilan berkitishga aytiladi. To‘shama to‘shashdan maqsad ekin dalasidagi tuproqning

ustki qatlamida namlik, xavo va issiqlik rejimini ma'lum miqdorda doimiy bir xilda saqlashdan iboratdir.

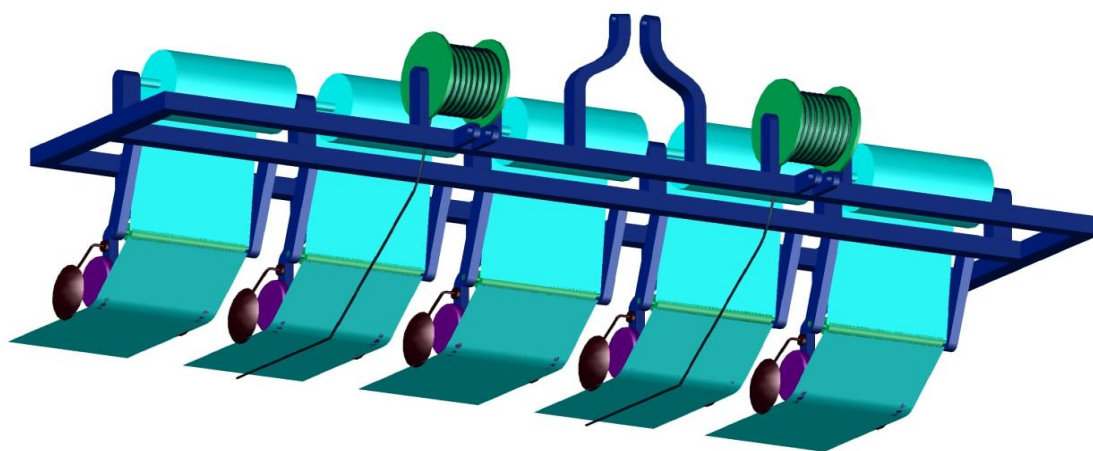
Turli xil ekinlar va tuproqlar uchun turlicha to'shama materiali yaxshi natija beradi. Har doim mulcha to'shama begona o'tlarning o'sishiga to'sqinlik qiladi, tuproqning zichlanishini kamaytiradi va tuproq yuzasidagi bo'ladigan bug'lanishini kamaytiradi.

Plyonka ostidan tomchilatib sug'orish bo'yicha (T.Usmonov va boshqalar tomonidan chop qilingan "Sug'orish mashina va uskunalari" Toshkent 2008, S.Mamatov va boshqalar tomonidan chop qilingan "Suv tejoychi sug'orish texnologiyalari asoslari" Toshkent 2022 yil) mavjudi sholi yetishtirish uchun plastik plyonkalardan foydalanib ishlatishga asoslangan (Способ возделывания риса на грядах при поверхностном капельном поливе подмулчирующей пленкой. (RU 2775557 C1), u tuproqning suv, havo va issiqlik rejimiga ta'sir etadi bundan tashqari uskuna tuproqdagi biologik jarayonlarni tezlashtirib, ekinlarni ozuqa moddalari bilan ta'minlashini yaxshilaydi. Provard natijada o'simlikni rivojlanishi va pishib yetilishi tezlashadi va hosildorlik oshadi. begona o'tlarni o'sishni oldini oladi ba'zi bir zararkunandalarga ziyon yetkazadi. Mavjud ish uskunasi turli ishlarda ishlatish imkoniyati mavjud emas.



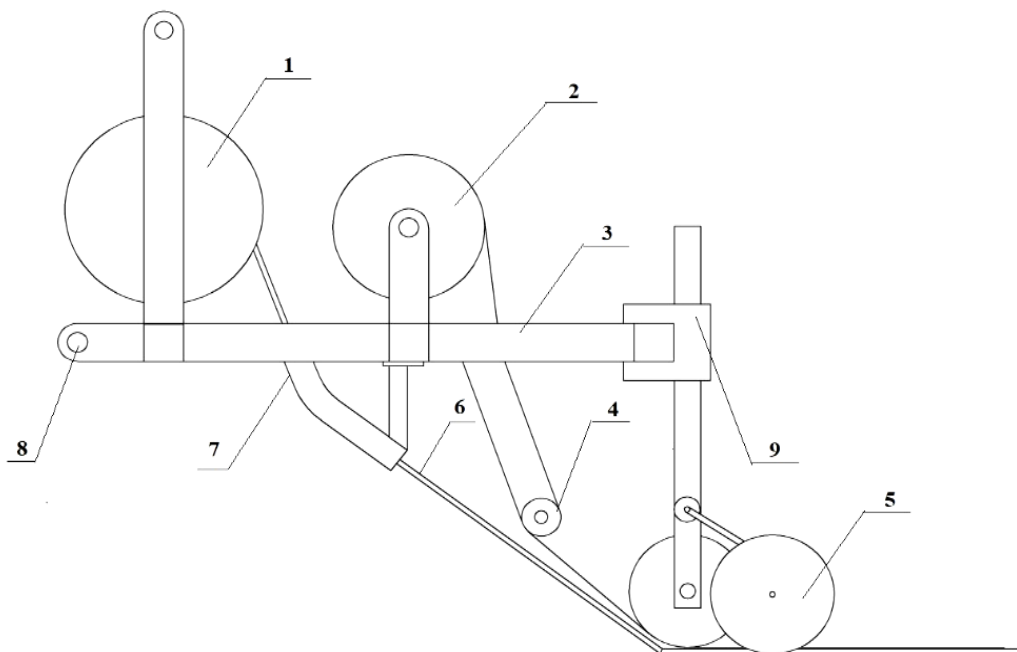
1-rasm. Plyonka ositidan sug'orish quvurlarini tashlovchi qurilmaning umumiy ko'rinishi

Qurilmaning asosiy vazifasi resurstejamkor plyonka ostidan tomchilatib sugʻorish texnologiyasini qoʻllash maqsadida, bir vaqtning oʻzida sugʻorish quvurlarini hamda sugʻorish quvurlari ustidan plyonka toʻshashga moʻljallangan. Plyonka ostidan tomchilatib sugʻorish texnologiyasini qoʻllashdan asosiy maqsad, bugʻlanishga sarf boʻlayotgan suv isrofgarchilikni keskin kamaytirish, qishloq xoʻjaligi ekinlarining suvga boʻlgan talabini vaqtida qondirish va ulardan ekologik toza hamda barqaror, sifatli mahsulotlar yetishtirishdan iborat.



2-rasm. Plyonka ostidan sugʻorish quvurlarini tashlovchi qurilmaning old tomondan koʻrinishi

Taklif etilayotgan texnik yechimning asosiy vazifasi resurstejamkor plyonka ostidan tomchilatib sugʻorish texnologiyasini qoʻllash maqsadida, bir vaqtning oʻzida sugʻorish quvurlarini hamda sugʻorish quvurlari ustidan plyonka toʻshashga moʻljallangan. Plyonka ostidan tomchilatib sugʻorish texnologiyasini qoʻllashdan asosiy maqsad, bugʻlanishga sarf boʻlayotgan suv isrofgarchilikni keskin kamaytirish, qishloq xoʻjaligi ekinlarining suvga boʻlgan talabini vaqtida qondirish va ulardan ekologik toza hamda barqaror, sifatli mahsulotlar yetishtirishdan iborat.



3-rasm. Plyonka ositidan sug'orish quvurlarini tashlovchi qurilmaning old tomondan ko'rinish sxemasi

Taklif etilayotgan plyonka ostidan tomchilatib sug'orish quvurlarini yotqizuvchi qurilma egiluvchan sug'orish quvurlari joylashgan g'altak, qora plyonka o'ralgan g'altak, asos rama, qora plyonka yo'naltirigich, sferik disklar, egiluvchan quvur, egiluvchan quvurlarni yo'naltiruvchi, ulagich, detallarni tutib turuvchi qulflardan tashkil topgan. Bu qurilma konstruksiyasi sug'orishdagi suv isrofgarchiligini keskin kamaytirish va qishloq xo'jaligi ekinlarining suvga bo'lgan ehtiyoji vaqtida qondiriladi hamda ekinlardan yuqori va barqaror hosil olishga erishiladi.

Xulosa qilib shuni aytish lozimki, sug'orilgan yerlarga suv tejoychi texnologiyalarni qo'llash ekinlarga o'z vaqtida sifatli ozuqalar borilishi va yuqori hosil olishga erishiladi. Shu bilan birgalikda sug'oriladigan suvlarni 50-60% ga tejalishiga olib keladi, bu esa o'z o'zidan ko'rinib turibdiki qishloq xo'jaligini rivojlanishiga ijobiy ta'sirini ko'rsatadi.

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MOLIYA SOHASIDA O‘ZBEKISTON RESPUBLIKASINING OLIY TA’LIM TIZIMI

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***Annotatsiya:** Maqolada O‘zbekistonda oliy ta’lim tizimini moliyalashtirishdagi islohotlar hamda ulardan kutilayotgan moliyaviy natijalar tahlil qilingan. Sovet davridagi Oliy ta’lim va mustaqillik davridan keyingi Oliy ta’limdagi o‘zgarishlar keltirilgan va xulosalar berilgan.*

***Kalit so‘zlar:** Oliy ta’lim, ta’lim sohasidagi islohotlar, stipendiyalar, ta’limni moliyalashtirish*

HIGHER EDUCATION SYSTEM IN THE FIELD OF FINANCE OF THE REPUBLIC OF UZBEKISTAN

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***Abstract:** The article analyzes the reforms in the financing of the higher education system in Uzbekistan and the financial results expected from them. Higher education in the Soviet era and changes in higher education after independence are presented and conclusions are given.*

***Keywords:** Higher education, educational reforms, scholarships, education financing*

СИСТЕМА ВЫСШЕГО ОБРАЗОВАНИЯ РЕСПУБЛИКИ УЗБЕКИСТАН В ОБЛАСТИ ФИНАНСОВ

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***Аннотация:** В статье анализируется уровень помощи в финансировании уровня образования в Узбекистане и ожидаемый от него высокий уровень. Включено в высшее образование и изменения в высшем образовании в советское время и образование после обретения независимости.*

***Ключевые слова:** Высшее образование, восстановление образования, стипендии, финансирование образования.*

Kirish

O‘zbekiston Respublikasida ta’lim sohasida amalga oshirilayotgan keng qamrovli islohotlar barcha yoshlarning ta’lim xizmatlaridan bir xilda foydalanishi, o‘qituvchilar malakasi va ta’limning yuqori sifatini ta’minlashga qaratilgan. Ta’lim sifati va samaradorligini oshirish bilan bir qatorda tizimni rejalashtirish va moliyaviy ta’minlash masalalari islohotlar markazida turadi. O‘zbekiston Respublikasining yangi qabul qilingan "Ta’lim to‘g‘risida"gi qonunida har tomonlama rivojlangan barkamol shaxs fuqaroni shakllantirish nazarda tutilgan. Bunday natijaga erishish uchun ta’lim-tarbiya jarayonining uyg‘unligini ta’minlash, boshqaruv jarayonining qonuniyatlarini chuqur o‘rganish va bugungi kun talablariga javob bera oladigan barkamol yosh avlodni tarbiyalash usullarini tadqiq qilish lozim. Jamiki o‘zgarishlar, yangilanishlar bevosita ta’lim rivoji bilan bog‘liq. Prezidentimiz Sh.Mirziyoyev ta’kidaganidek “Biz o‘z oldimizga mamlakatimizda Uchinchi Renessans poydevorini barpo etishdek ulug‘ maqsadni qo‘ygan ekanmiz, buning uchun yangi Xorazmiylar, Beruniylar, Ibn Sinolar,

Ulug'beklar, Navoiy va Boburlarni tarbiyalab beradigan muhim sharoitlarni yaratishimiz kerak. Buning uchun, avvalambor, ta'lim va tarbiyani rivojlantirish, sog'lom turmush tarzini qaror toptirish, ilm-fan va innovatsiyalarni taraqqiy ettirish milliy g'oyamizning asosiy ustunlari bo'lib xizmat qilishi lozim.

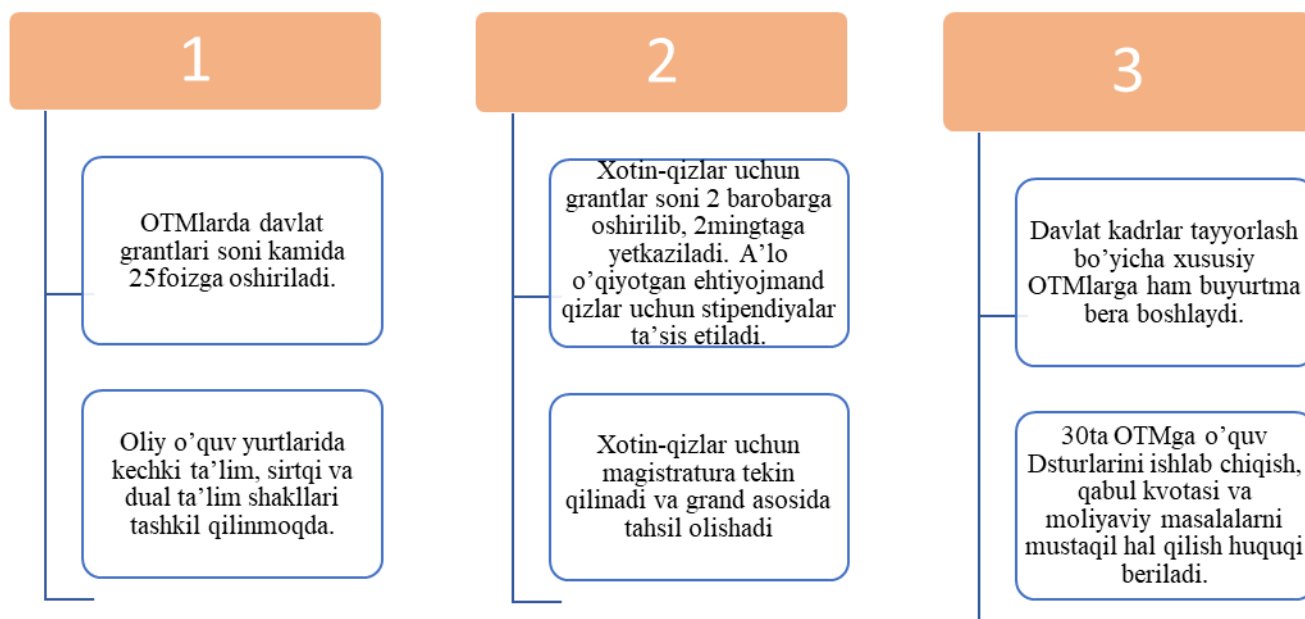
Bugungi kunda zamonaviy jamiyat o'zining tez va chuqur o'zgaruvchan tavsifiga ega bo'lib, bunday o'zgarishlar jamiyatchilik tuzilmalari, jumladan, mustaqil davlatlar, shaxs va jamiyat o'rtasidagi munosabatlar, demografik siyosat, urbanizatsiya jarayonlarida ko'zga yaqqol tashlanmoqda. Ta'lim ham global umumhamjamiyat tuzilmasining alohida tarkibiy qismi sifatida jamiyatda bo'layotgan barcha o'zgarishlarni hisobga olishi, ana shu asosda o'z tuzilishi va faoliyat mazmunini o'zgartirishi zarur.

Tahlil va natijalar

Mamlakatimizda izchillik bilan amalga oshirilayotgan ta'lim sohasidagi islohotlar zamirida Vatanimizni yanada taraqqiy ettirish, yoshlarni har jihatdan barkamol shaxs etib voyaga etkazish, sohalar uchun yuqori bilimga ega mutaxassislarni tayyorlashdek maqsadlar mujassamdir.

Oliy ta'lim tizimiga mustaqillik berish biz uchun katta o'zgarish bo'ldi desak ham bo'ladi. chunki Oliy ta'limidagi o'zgarishlar o'z-o'zini moliyalashtirishi Oliy ta'lim muassasalari bir-biridan kuchli bo'lishi uchun harakat qiladi degani.

Masalan: Har bitta Oliy ta'lim muassasalari to'lov-kontrakt asosida o'qitish qiymatini o'zi belgilashi, ta'lim jarayoniga zamonaviy pedagogic texnologiyalarni qo'llay oladigan va ilmiy izlanish olib boradigan mahalliy hamda xorijiy professor-o'qituvchi va mutaxassislarni shartnoma asosida jalb qilishi, o'z mablag'lari hisobidan talabalar uchun stipendiya va grantlar ajratishni va hokazolarni misol qilib ko'rsata olamiz. Umumta'lim tizimida juda yuqori islohatlar amalga oshirilishi rejalashtirilgan. Darhaqiqat yoshlarimizni bilimli savodli bo'lishi uchun va inson kapitaliga investitsiya kiritilayotganini ko'rishimiz mumkin.



1-rasm 2022-yilda Oliy ta'limni rivojlantirish bo'yicha ostiqbolli rejalar.

O'zbekiston ta'lim sohasida ulkan yutuqlar qo'lga kiritilmoqda. Yaqin o'tmishga nazar tashlaydigan bo'lsak, sovet mustamlakachiligi davrida O'zbekiston hududida sanoqli ta'lim muassasalari bo'lib, ularning aksariyati talab darajasida bo'lmagan. Ularda yetishib chiqqan mutaxassislar mamlakat aholisining juda oz qismini tashkil etgan. Ba'zi hollarda odamlar savodsiz hatto oralaridan umumiy 11yillik ta'limni egallamaganlari ham bor edi. Bu sovet hukumatining chuqur o'ylangan nayrangi bo'lib, o'zbek xalqi uchun yod bo'lgan kommunistik mafkura bilan millat ongini zabt etishga harakat qilgan. Ammo ularning ko'zlagan rejasi amalga oshmadi, ozodlik ruhi ostida kamol topgan xalqimiz mustaqillik uchun kurash olib bordi va uzoq kutilgan kunga erishdi.

Mustaqillikning ilk kunlaridan boshlab har bir sohaga ulkan e'tibor qaratildi shu bilan bir qatorda lim sohasida ham tub burilish yuz berdi. O'zbekiston Respublikasi Prezidentining 1992-yil, 11-martdagi "Respublika oliy o'quv yurtlarining kunduzgi bo'limlariga qabul qilishni takomillashitirish to'g'risida"gi PF-361-sonli farmoniga asosan, mamlakatimizda mavjud oliy o'quv yurtlariga qobiliyatli yoshlarni tanlab olish

tizmiga katta o'zgarishlar kiritildi. Dastlab respublikamizning 6 ta oliy ta'lim muassasasida test sinovi asosida o'qishga qabul qilish tajribadan o'tkazilgan bo'lib, oradan bir yil o'tib, bu ko'rsatkich 19 taga yetkazildi. 1994-yil 14-maydagi 258-sonli O'zbekiston Respublikasi Vazirlar Mahkamasining "O'zbekiston Respublikasi Vazirlar Mahkamasi huzurida Davlat test markazi tashkil etish to'g'risida"gi qarori bilan Oliy o'quv yurtlarining kunduzgi bo'limlariga abituriyentlar tanlash bo'yicha.

Respublika markazi O'zbekiston Respublikasi Vazirlar Mahkamasi huzuridagi Davlat test markaziga aylantirildi. Davlat test markazi (DTM) asosiy vazifasi oliy va o'rta maxsus o'quv yurtlariga test sinovlarini tashkil etish va o'tkazish hisoblanadi. Mustaqillik yillaridan boshlab hozirgi yilgacha bo'lgan vaqt orasini tahlil qiladigan bo'lsak juda katta o'zgarishlar bo'lganini ko'rib hayron qolamiz. 1991-yildan hozirgi 2022-yilgacha mamlakatimizda ta'lim sohasida tub islohatlar amalga oshirildi. Bunga misol qilib men o'zimni universitetimni keltirishim mumkin. Men Geologiya Fanlari Universiteti talabasiman. Bu universitet 2020-yilda tashkil topgan bo'lib, unda yaratilgan imkoniyatlar xorijiy oliy ta'lim muassasalaridan farq qilmaydi. Universitetimiz eng yaxshi texnika-texnologiyalar bilan jihozlangan va bu texnikalar biz yoshlar uchun chet el davlatlaridan keltirilgan. Bunday sharoitlar albatta yoshlarimizning kelajakda yetuk kadr va mutaxassis bo'lib yetishishlari uchun yaratilgan. Malakali kadrlarni tayyorlash va ularni yetuk mutaxassis kadr qilib tayyorlashda oliy o'quv yurtlarining o'rni beqiyosdir.

«O'zbekiston Respublikasi Konstitusiyasi» 41-moddasida ta'kidlanganidek, «har kim bilim olish xuquqiga ega»

O'zbekiston Respublikasi inson huquqlari va erkinliklariga rioya etilishini, jamiyatning ma'naviy yangilanishini, ijtimoiy yo'naltirilgan bozor iqtisodiyotining shakllanirishini, jahon hamjamiyatiga qo'shilishini ta'minlaydigan demokratik huquqiy davlat va ochiq (demokratik) fuqarolik jamiyati qurishni o'z oldiga maqsad qilib qo'ygan. 1997 yil 29 avgustda Prezident Islom Karimov Oliy Majlis X sessiyasida «Barkamol avlod – O'zbekiston taraqqiyotining poydevori» mavzuida nutq so'zladi. Shu sessiyada «Ta'lim to'g'risida» gi Qonun qabul qilindi. U 5 bo'lim 34

moddadan iboart. Shuningdek, sessiyada «Kadrlar tayyorlash milliy dasturi» ham qabul qilindi.

Inson, uning har tomonlama kamol topishi va farovonligi, shaxs manfaatlarini ro'yobga chiqarishning sharoitlarini va ta'sirchan mexanizmlarini yaratish, eskirgan tafakkur va ijtimoiy xulq-atvorning andozalarini o'zgartirish respublikada amalga oshirilayotgan islohotlarning asosiy maqsadi va harakatlantiruvchi kuchidir. Xalqning boy intellektual merosi va umumbashariy qadriyatlar asosida, zamonaviy madaniyat, iqtisodiyot, fan, texnika va texnologiyalarning yutuqlari asosida kadrlar tayyorlashning mukammal tizimini shakllantirish O'zbekiston taraqqiyotining muhim shartidir.

«Kadrlar tayyorlash milliy dasturi» «Ta'lim to'g'risi»dagi O'zbekiston Respublikasi qonunining qoidalariga muvofiq holda tayyorlangan bo'lib, milliy tajribaning tahlili va ta'lim tizimida jahon miqyosidagi yutuqlar asosida tayyorlangan holda yuksak umumiy va kasb-hunar madaniyatiga, ijodiy va ijtimoiy faollikka, ijtimoiy-siyosiy hayotga mustaqil ravishda mo'ljalni to'g'ri ola bilish mahoratiga ega bo'lgan, istiqbol vazifalarini ilgari surish va hal etishga qodir kadrlarning yangi avlodini shakllantirishga yo'naltirilgandir.

Dastur kadrlar tayyorlash milliy modelini ro'yobga chiqarishda har tomonlama kamol topgan, jamiyatda turmushga moslashgan, ta'lim va kasb-hunar ixtisosligini ongli ravishda tanlash va keyinchalik puxta o'zlashtirish uchun ijtimoiy-siyosiy, huquqiy, psixologik-pedagogik va boshqa tarzdagi sharoitlarni yaratishni, jamiyat, davlat va oila oldida o'z javobgarligini his etadigan fuqarolarni tarbiyalashni nazarda tutadi.

O'zbekiston Respublikasi davlat mustaqilligiga erishib, iqtisodiy va ijtimoiy rivojlanishning o'ziga xos yo'lini tanlash kadrlar tayyorlash tuzilmasi va mazmunini qayta tashkil etishni zarur qilib qo'ydi va qator chora-tadbirlar ko'rishni: «Ta'lim to'g'risi»dagi Qonunni joriy etishni; yangi o'quv rejalari, dasturlari, darsliklarni hayotga joriy etishni, zamonaviy didaktik ta'limotni ishlab chiqishni; o'quv yurtlarini

attestasiyadan o'tkazishni va akkreditasiyalashni; yangi tipdagi ta'lim muassasalarini tashkil etishni taqozo etdi.¹

Bugungi kunda birgina o'rta maxsus va kasb-hunar ta'limida turli soha va yo'nalishlar bo'yicha 840 mingga yaqin zamonaviy bilim va kasbni egallagan yuqori malakali kadrlar tayyorlanganligi bu sohada ijobiy ma'nodagi "portlash effekti" ro'y bera boshlaganidan dalolatdir. Oliy va o'rta-maxsus o'quv yurtlari hamda umumta'lim maktablari huzurida 1187 ta axborot-resurs markazlari mavjud bo'lib, ularda o'zbek, qoraqalpoq, rus va boshqa tillardagi 15mln nusxadan ortiq darslik, o'quv-uslubiy, badiiy, texnikaviy va ma'lumotnoma yo'sinidagi kitobi bo'lgan 15276 ta kutubxonani birlashtirgan.

Respublikadagi 6742 ta maktabgacha ta'lim muassasasida 610 mingga yaqin kichkintoylar ta'lim-tarbiya olmoqdalar.

Maktabgacha ta'lim sohasida uylarda tashkil etiladigan bolalar bog'chalari hamda «Bolalar bog'cha-maktab» majmui tarmog'i rivojlanib bormoqda. Bolalarga chet tillari, xoreografiya, tasviriy va musiqa san'ati, kompyuter savodxonligi asoslarini o'rgatuvchi 800 dan ortiq guruh tashkil etilgan.

Bugungi kunda respublikadagi 9672 ta umumta'lim maktablarida 6 mln.ga yaqin o'quvchi ta'lim olmoqda. Ana shu ta'lim maktablarida 450 ming nafar oliy (70-75 foiz) va o'rta maxsus (70-25 foiz) ma'lumotli o'qituvchilar ishlamoqda. 2012 yil da oliy ta'lim muassasalarini soni 64 ta bo'lib, bu ko'rsatkich bugungi kunga kelib 68 tani tashkil etadi. Unda taqsil oladigan yoshlar soni esa 261.3 ming kishini tashkil etadi. Oliy ta'lim tizimidan keyingi ta'lim tizimini rivojlantirish va o'qishga kiruvchi yoshlar sonini 5 barobarga oshirilishi ko'zda tutildi. Shuningdek 2021-yilda ilm-fan sohasida oliygohlar va ilmiy tashkilotlardagi doktorantlar soni o'tgan-yilga nisbatan 3 barobarga oshirilishi aytiladi. Bu islohotlar mamlakatimiz ta'lim tizimiga ijobiy ta'sir ko'rsatishiga ishonamiz.

2019-yil 1-dekabr kuniga qadar 2030-yilga qadar respublikadagi kamida 10 ta oliy ta'lim muassasasini xalqaro e'tirof etilgan tashkilotlar (Quacquarelli Symonds

¹ https://vaqt.ucoz.com/publ/turli_mavzular

World University Rankings, Times Nigher Education yoki Academic Ranking of World Universities) reytingining birinchi 1 000 ta o‘rindagi oliy ta’lim muassasalari ro‘yxatiga, shu jumladan O‘zbekiston Milliy universiteti va Samarqand davlat universitetini birinchi 500 ta o‘rindagi oliy ta’lim muassasalari ro‘yxatiga kiritishni, bunda mazkur oliy ta’lim muassasalarini davlat tomonidan qo‘llab-quvvatlashning zamonaviy mexanizmlarini joriy etishni nazarda tutuvchi chora-tadbirlar rejasini ishlab chiqsin va tasdiqlash uchun O‘zbekiston Respublikasi Vazirlar Mahkamasiga kiritsin;

Har yili 1-dekabrga qadar o‘tayotgan yil bo‘yicha tasdiqlangan “Yo‘l xaritasi” bajarishi yakunlarini puxta o‘rganish asosida Konsepsiyani kelgusi yilda amalga oshirish bo‘yicha “Yo‘l xaritasi” loyihasini ishlab chiqib, tasdiqlash uchun O‘zbekiston Respublikasi Vazirlar Mahkamasiga kiritsin;¹

O‘zbekiston Respublikasi Prezidentining Farmoni, 08.10.2019 yildagi PF-5847-son

Uzluksiz ta’lim tizimining faoliyat olib borishi davlat ta’lim standartlari, turli darajalardagi ta’lim dasturlarining izchilligi asosida ta’minlanadi va quyidagi ta’lim turlarini o‘z ichiga oladi: maktabgacha ta’lim; umumiy o‘rta ta’lim; o‘rta maxsus, kasb-hunar ta’limi; oliy ta’lim; oliy o‘quv yurtidan keyingi ta’lim; kadrlar malakasini oshirish va ularni qayta tayyorlash; maktabdan tashqari ta’lim.

Kadrlar tayyorlash milliy modelining asosiy tarkibiy qismlari quyidagilardan iborat:

shaxs; davlat va jamiyat; uzluksiz ta’lim; fan; ishlab chiqarish.

Ta’lim-tarbiya sohasida amalga oshirilayotgan islohotlar «Kadrlar tayyorlash milliy dasturi»ga mavofiq quyidagi bosqichlarni o‘z ichiga oladi:

1. Birinchi bosqich – o‘tish davri bo‘lib, u 1997–2001 yillarni, 4 yilni o‘z ichiga oladi.
2. Ikkinchi bosqich – 2001–2005 yillarni o‘z ichiga oladi.
3. Uchinchi bosqich – 2005 va keyingi yillarni o‘z ichiga olishi belgilangan.

Xulosa va takliflar

¹ <https://lex.uz/ru/docs/-4545884#:~:text=O%E2%80%98>

Islohotlar amalga oshirilmoqda. Ushbu islohotlarning asl maqsadlarini ta'minlash, uning samaradorligiga erishishlik uchun nimalar qilmoq zarur? Yuqorida aytib o'tilganlardan kelib chiqib, ta'lim tizimini moliyalashtirish, budget mablag'laridan foydalanish samaradorligini oshirish bo'yicha xulosalarimni keltirib o'taman. Quyidagilarni amalga oshirish maqsadga muvofiq sanaladi:

-budget va avtonom tashkilotlarga kengroq vakolatlarni, jumladan moliyalashtirish va xarajatlarni boshqarish sohasida, berish orqali yangi turdagi budget muassasasiga o'tishni yakunlash;

- ta'lim muassasalari daromadlarining o'sishini ta'minlash;

- aholi jon boshiga moliyalashtirishning joriy qilingan moliyaviy mexanizmlari va mehnatga haq to'lashning yangi tizimini samaradorligini oshirish;

- qisqa muddatlarda ta'lim tizimi uchun kadrlar rahbarlar va menejerlarning malakasini oshirish bo'yicha chora-tadbirlarning tayyorlanishini ta'minlash;

Faqatgina yuqoridagi vazifalar kompleks yechilgan taqdirda, ta'lim muassasalarini moliyalashtirish tizimini isloh qilish bo'yicha amalga oshirilayotgan chora-tadbirlar o'z samarasini beradi hamda barcha talabalarga yashash joyi, ijtimoiy, mulkiy holatidan qat'i nazar, zamonaviy ta'lim standartlariga javob beradigan va O'zbekiston hududlarining innovatsion ijtimoiy yo'naltirilgan rivojlanish talablariga mos keladigan yuqori sifatli ta'lim olish imkonini beradi.

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ДАРСҲОИ ҒАЙРИҚОЛАБИИ САВОДОМОЗИИ ЗАБОНИ МОДАРӢ ВА ХОНИШ

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Аннотатсия: Дар мақолаи мазкур аҳамияти истифодаи усулҳои ғайриқолабӣ дар раванди таълиқи дарси саводомӯзии забони модарӣ ва хониш дар синфҳои ибтидоӣ таъкид шудааст. Дар бораи истифодаи технологияҳои инноватсионӣ дар рушди қобилиятҳои эҷодӣ ва татбиқи онҳо дар раванди таълим маълумот дода шудааст.

Калимаҳои таърифи: дарс, метод, роҳу равиш, саводомӯзӣ, интерфаъл, тафаккури эҷодӣ, системаи таълим.

INTERACTIVE LESSONS IN MOTHER TONGUE AND READING LITERACY

Abstract: This article emphasizes the importance of using interactive methods in the process of organizing the lesson of mother tongue literacy and reading in primary classes. Information is given on the use of innovative technologies in the development of creative abilities and their application in the educational process.

Key words: lesson, method, approach, literacy, interactive, creative thinking, educational system.

Дар замони ҳозира системаҳои таълимии кишварҳои пешрафта, аз қабилҳои Фаронса, Шветсия, Итолиё ва Финландияро назар афканем, барои мукамал аз худ кардани забони модарии хонандагони синфҳои ибтидоӣ, инкишофи

тафаккури интиқодӣ ва қобилияти эҷодкории онҳо диққати махсус дода мешавад. Агар тамоми ислоҳоти соҳаи маорифи кишварамонро таҳлил кунем, пас ҳамаи онҳо тавачҷӯҳ ба насли наврас ва пойдевор барои оянда аст. Тавре ки Президенти кишварамон дар маърӯзаҳои худ таъкид карда буданд, «фарзандонамонро ҳамчун инсонҳои ватанпарвар, дорои тафаккури мустақил, дониши замонавӣ ва малакаи касбӣ тарбия намудан масъалаи аҳамиятнок мебошад».

Омӯзиши саводомӯзии забони модарӣ ва хониш ба чаҳор салоҳият: гӯш кардан, гуфтан, хондан ва навиштан ҳамчунин ба ташаккули саводомӯзии грамматикӣ тамаркуз мекунад. Мо бояд дар таълим вазифаи коммуникатсионии забонро дар мадди аввал қарор диҳем ва муносибати фаъолият, муносибати бошуурона ва муносибати танқидиро низ ба назар гирем. Истифодаи методҳои замонавӣ яке аз омилҳои зарурии баланд бардоштани сатҳи фикрронии мустақил ва инкишофдиҳии тафаккури эҷодии хонандагон мебошад.

Метод ва тарзҳои таълим чизи шахшуда набуда, доимо инкишофу такмил меёбанд. Хусусан дар шароити ҳозираи афзудани доираи маълумот комилан такмил додани тарзу усулҳо хеле муҳим аст. Раванди такмили методҳо бояд ба фаъол кунонидани шавқу ҳаваси маърифатҷӯии хонандагон, омӯзиши фаъол, инкишофи ҳаматарафаи онҳо нигаронда шавад. **Истифодаи методҳои замонавии таълим боиси самаранокии баланди ҷараёни таълим мегардад. Ин усулҳоро дар асоси вазифаи дидактикии ҳар як дарс интихоб кардан ба мақсад мувофиқ аст. Дар баробари нигоҳ доштани шакли анъанавии дарс, бояд гардонидани он бо усулҳои гуногун, ки фаъолияти хонандагонро тезтар мегардонанд, боиси баланд шудани сатҳи дониши онҳо мегардад. Инчунин тавачҷӯҳ ва шавқмандӣ ба истифодаи технологияҳои инноватсионӣ, технологияҳои педагогӣ ва иттилоотӣ дар раванди таълим рӯз то рӯз зиёд шуда истодааст, яке аз сабабҳои ин дар он аст, ки то имрӯз дар таълими анъанавӣ ба хонандагон танҳо дониши тайёр омӯзонида мешуданд, аммо**

технологияҳои муосир имкон медиҳад, ки онҳо дониши меомӯхташонро ҷустуҷӯ кунанд, мустақилона омӯхта таҳлил кунанд ва ҳатто хулоса бароранд.

Маълум аст, ки усули таълим як хел намеистад, тарзҳои нави методӣ доим дар инкишофанду усулҳои нав ба нави таълим ба вучуд омадан мегиранд. Таълими замони муосир тақозо мекунад, ки бештар дар рафти таълими фанҳо усулҳои фаъол ва интерактивиро истифода барем. Бо ёрии ин усулҳо омӯзгорон ба саволи кӯхнаи чиро таълим додан ва чӣ гуна таълим додан дар шароити олами зудтағйирёбанда ҷавоб меҷӯянд. Ин маънои онро дорад, ки муаллими замони муосир бояд ҷараёнеро ба роҳ монда тавонад, ки ба хонандагон барои «кашф»-и дониш ёрӣ расонад. Маҳз барои ҳамин таълим хонандаро бояд ба ҷустуҷӯ, тадқиқ ва ҳалли мушкилиҳои муҳими муҳити ўро ихотакарда ворид созад.

Метод аз калимаи юнонии “*metodos*” гирифта шудааст, ки он дар забони тоҷикӣ ба маъноҳои роҳ, тарз, равиши таҳқиқот, (аз нигоҳи назария), тарзи ноил шудан ба мақсад, иҷро намудани вазифаи мушаххас (аз нигоҳи амалия) қорбаст мешавад. Метод аслан дар натиҷаи фаъолияти амалии инсон ба вучуд омадааст. Ҳар як намуди фаъолият методи хоси худро дорад. Аз ҷумла, дар қори таълим як метод, дар қори тарбия дигар метод, дар қори илмӣ, истеҳсолӣ методҳои дигар ба қор бурда мешавад. Ин ба мақсад ва вазифа, намуд ва ба хусусияти фаъолият вобаста аст. Ҳар қадар ки фаъолият мураккаб бошад, ҳамон қадар методҳои он гуногун мешавад. Аз ҷумла, қори таълимӣ яке аз намудҳои мураккаби фаъолият ба шумор меравад. Аз ин рӯ, он як силсила методҳои гуногунро дарбар мегирад.

Методи таълим - тарзи қори омӯзгор ва донишомӯз, ки дар ҷараёни он донишомӯзон дониш, малакаву маҳорат ҳосил намуда, ҷаҳонбинӣ ва қобилиятшон ташаккул меёбад.

Дар аксар адабиётҳои педагогии то давраи истиқлол методи таълим ба таври зерин гурӯҳбандӣ гардидааст:

1. Методи шифоҳӣ - сӯҳбат, нақл, ҳикоя, лексия ва монанди инҳо.

2. Методи аёнӣ - усулҳои намоишдиҳӣ: нақша, таблитса, расм, тасвирҳо, таҷрибаҳо, объективҳои табиӣ, ва кинофилмҳо.

3. Методи амалӣ - усулҳои мушоҳида, супоришҳо, тадқиқотҳо, кор бо китоби дарсӣ, корҳои лабораторӣ ва амсоли инҳо.

Методҳои таълим дар охири асри XX ва ибтидои асри XXI ду номи умумиро молик гардид. Номи умумии якумӣ - “методҳои қолабӣ”, “методҳои анъанавӣ”; номи умумии дуюмӣ - “методҳои ғайриқолабӣ”, “методҳои ноанъанавӣ”, “методҳои интерактивӣ”. Методҳои баёни даҳонакӣ, кор бо китоб, мушоҳида, аналитикию синтетикӣ, индуксия, дедуксия, сӯҳбат, репродуктивӣ, кор аз рӯи расм, кор бо китоб, таълими дастурӣ, санчишу баҳогузорӣ ва ғайра **методҳои қолабӣ**; хучуми ақлӣ, арраи ажурӣ, кластер, пинборд, блис, мунозира, ҷойи худро ёб, кор бо зергурӯҳҳои хурд, меню, мувоҳида, ҳамдигаромӯзонӣ, зиг-заг, фикрронии танқидӣ, корҳои ба лойихагирӣ, тадқиқотӣ, мавқеъёбӣ, шаҷараи қарорҳо ва монанди инҳо **методҳои ғайриқолабӣ (интеркативӣ)** ба шумор мераванд.

Таълими замони муосир тақозо мекунад, ки бештар дар раванди таълими саводомӯзии забони модарӣ ва хониш, инчунин фанҳои дигар усулҳои интерактивӣ (ғайриқолабӣ)-ро истифода барем. Усули интерактивии таълим раванди азхудкунӣ ва эҷодкориро дар хонандагон метезонад ва натиҷаи он на танҳо дар омӯзиш, балки дар иштироки ҳалли масоили гуногун замина гузошта метавонад. Барои мисол, агар усул ва шаклҳои таълими интерактивӣ мақсаднок истифода бурда шаванд, самараҳои онро дар фаъолияти хонандагон, ба мисли ба даст овардани иттилоот, ҷасорати баёни андеша ва ба муаллим эътимод зоҳир кардан дидан мумкин аст. Таълими интерактивӣ тавачҷӯҳи иштирокчиёнро дар ҳалли масъалаи муҳокимашаванда бештар гардонда, онҳоро ба эҷодкорӣ ва ҷустуҷӯ водор месозад. Дар натиҷа ҳар як хонанда ба муваффақият ноил гашта, дар кори гурӯҳӣ ҳиссагузорӣ мекунад.

Дар китоби дарсӣ як қатор материалҳои дидактикӣ ба назар мерасад. Ба омӯзгор тавсия дода мешавад, ки чунин супоришҳоро бо усули хучуми ақлӣ,

муаммогузорӣ ташкил карда натиҷаҳои онро дар байни донишомӯзон бояд муҳокима намояд. Дар китоби дарсӣ матнҳое дохил карда шудааст, ки хусусияти тарбият намудани ҳисси ватанпарварӣ, табиатдӯстӣ, эъзоз намудани урфу одатҳои миллии халқамон ва ғайраро дар бар мегирад. Хуб мешуд, ки омӯзгор чунин матнҳоро бо фаъолияти амалӣ, озодфикрию озодандешӣ, ташаббускорӣ ва бо методҳои **интерфаъл: - хучуми ақлӣ, пинбард, инсерт, синквейн, кластер**, омӯзонаду бештар ба фикри мустақилонаи донишомӯзон диққатро нигаронад. Онҳоро дар таълими забони модарӣ ҳамчун шахси соҳибфикру фаъл, эҷодкор тарбия намояд. Бузургон беҳуданагуфтаанд, ки сифатнок ва эҷодкорона ташкил намудану гузаронидани дарс ба малакаю дониши омӯзгор вобаста аст. ҳаминро таъкид карданием, ки мувофиқи талаботи замон ва дар андозаҳои стандарти ҷаҳонӣ дарс гузаштан аз омӯзгор пеш аз ҳама чонбозӣ, эҷодкорӣ, ҷустуҷӯи шаклҳои усулҳои навро тақозо мекунад. Омӯзгорро лозим аст, ки аз навгониҳои соҳаи забоншиносӣ, дастовардҳои методистону педагогҳои пешқадам мунтазам огоҳ шуда равад. Дар ҳамин вақт вай вазифаи сермасъулияти дар пӯш гирифташиро сарбаландонаю сифатнок адо карда метавонад.

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ОРОЛ БЎЙИ МИНТАҚАЛАРИДАГИ ТАРҚАЛГАН ОЧ ТУСЛИ СЎР ТУПРОҚЛАРНИНГ ФИЗИК-КИМЁВИЙ ХОССАЛАРИ

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АННОТАЦИЯ

Ушбу мақолада Орол бўйида тарқалган оч тусли сўр тупроқларининг қатламлар бўйича гумус миқдори, сувли сўрим таркибидаги сульфат ва хлор ионлари аниқланганлиги ҳақида фикр юритилган бўлиб, Орол бўйи экосистемасини ривожлантиришида худуднинг бир қисмини деҳқончиликга яроқли эканлиги акс эттирилган.

Калим сўзлар: *тупроқ, гумус, сувли сўрим, қуруқ қолдиқ, хлор, сульфат, корбанат, ион, она жинс, чанг заррачалари, физик лой.*

ABSTRACT

In this article, the amount of humus, sulfate and chlorine ions in the watery soil of the light-colored sour soils distributed on the coast of the island were determined, and it was reflected that a part of the territory is suitable for farming in the development of the ecosystem of the island.

Key words: *soil, humus, water absorption, dry residue, chlorine, sulfate, carbonate, ion, parent rock, dust particles, physical clay.*

КИРИШ

Мавзунинг долзарблиги. Ҳозирги кунда дунё аҳолисининг барқарор ўсиш тенденцияси туфайли, озиқ-овқат маҳсулотларига ҳамда хом ашёсига бўлган талабнинг ортиши кузатилмоқда. Бу, ўз навбатида қишлоқ хўжалиги маҳсулотларини ишлаб чиқариш учун ер ва сув ресурсларини топиш, уларни оқилона ва самарали етиштириш ҳамда ерларнинг унумдорлигини ошириш ва уларни муҳофаза қилиш заруриятини туғдиради. Сайёрамизда қишлоқ хўжалик экинларини етиштириш учун фойдаланиладиган майдонлари дунё ер фондининг 11% ни ташкил қилади, яйловлар ва ўтлоқлар эса ер фондининг 26% ни ташкил этади¹. Ҳозирда дунё аҳолиси 7,8 миллиардни ташкил қилгани ҳолда аҳоли жон бошига ўртача 0,23 гектар ер майдони тўғри келади², бу майдон, аҳоли сонини ошиши билан барқарор қисқариб боради. Шу сабабли, озиқ-овқат билан боғлиқ бўлган ҳолатни яхшилаш, озиқ-овқат хавфсизлигини ошириш ва тўйиб овқатланмаслик билан курашишда муваффақиятга эришиш учун қишлоқ хўжалиги маҳсулотларини етиштириш суръатларининг ўсиши аҳоли сонини ўсишидан устун бўлиши лозим. Бундай ҳолда, асосан мавжуд қишлоқ хўжалиги ерларидан фойдаланиш керак. Ушбу ҳолатни яхшиланиши, ер ва сув ресурсларидан самарали фойдаланишни таъминловчи барқарор жадаллашиш ҳисобига амалга ошириш мумкин.

Ҳозирги кунда аҳолини қишлоқ хўжалиги маҳсулотлари билан таъминлаш концепцияси доирасида республикада ер ресурсларидан оқилона фойдаланиш, тупроқ унумдорлигини прогноз қилиш, ошириш ва химоя қилиш бўйича кенг кўламли мажмуавий тадбирлар амалга оширилмоқда.

Ўзбекистон Республикаси Президентининг 2019 йил 23 октябрдаги ПФ 5853-сон "Ўзбекистон Республикасини 2020-2030 йилларда янада ривожлантириш стратегиялари" тўғрисидаги Фармонида қишлоқ хўжалигини ривожлантиришнинг устувор йўналишлари белгилаб берилган. Унда асосий устувор вазифаларидан бири мамлакат аҳолисининг озиқ-овқат хавфсизлигини

¹<http://ru.wikipedia.org/wiki/Земельные> ресурси;

²<http://kto.guru/geografia/154-sero-burye-pochvy.html>

таъминлашдир деб кўрсатилган³. Шунингдек, Ўзбекистон Республикаси Президентининг 2020 йил 29 январдаги “Чорвачилик тармоғини давлат томонидан қўллаб-қувватлашнинг қўшимча чора-тадбирлари тўғрисида”ги ПҚ-4576-сон қарорида эса, чорвачиликни янада ривожлантириш вазифалари ушбу соҳада озуқа базасини таъминлашда ҳал қилувчи омил бўлиб хизмат қилмоқда. Шу муносабат билан чўл зонасидаги тупроқ хусусиятларини ўрганиш бўйича тадқиқотлар олиб бориш, чунончи тупроқларнинг унумдорлигини ва уларнинг физик-кимёвий, биологик хусусиятларнинг ўзгаришига олиб келувчи зонал-иқлим шароитлари ва антропоген фаолият билан боғлиқ бўлган эволюцион жараёнларни аниқлаш, муайян қизиқиш ва долзарблик касб этади.

Марказий Осиё ўзининг табиий-географик, шу жумладан тупроқ-иқлим шароити ва ландшафтлари билан Евросиёнинг бошқа минтақаларидан кескин фарқ қилади. Осиёнинг бу минтақасининг бундай хилда ажралиши, энг авваломбор, унинг географик муҳитининг ранг-баранглигида, мураккаб тектоник, геологик ва рельеф тузилишида, иқлим, тупроқ, ўсимликлик шароитларининг тез-тез масофада ўзгариб туришида ҳамда инсон фаолияти таъсирида ерларни ўзлаштириш ишларида намоён бўлади. Марказий Осиё табиатининг бундай тарзда ўзгариши бир томондан табиий-антропоген омилларга боғлиқ бўлса, иккинчи томондан Орол денгизи фожиаси билан бевосита боғлиқдир. Шу икки бош омиллар таъсирида тупроқ пайдо бўлиш жараёнлари, уларнинг жойларда ривожланиш қонуниятларини чуқурроқ ўрганиш, таҳлил қилиш асосида тупроқ ресурсларидан оқилона фойдаланиш, унумдорлигини ошириш, экин, яйлов, пичанзор ва ўрмонзорларнинг маҳсулдорлигини кўпайтириш.

Тупроқ табиий-антропоген ландшафтларнинг асосий қисми. У инсон ҳаёти учун энг муҳим муҳит ва манба, унинг фаолият этадиган асосий майдони. Қисқа тарихий йиллар ва асрлар давомида одамлар тупроқ ва ўсимликларни ўзлаштириш ва ўзгаштириши билан бир қаторда, жуда йирик саноат корхоналари, сув объектлари ва иншоотларини барпо қилдилар. Инсонлар

томонидан олиб борилган бу ишлар, минтақага хос ва мос бўлган табиий қонуниятларни чуқурроқ ўрганилмаганлиги ва таҳлил қилинмаганлиги натижасида айрим ҳудудлар орасида фожиали ҳодисалар яъни, Орол денгизи фожиаси, тупроқ шўрланиши, эрозияси, чўлланиши ва хокозолар кучаймоқда.

НАТИЖА

Ушбу тупроқларни, ранги, механик таркиби ҳамда тўшама жинслар – гипсли ётқизиклар ва оҳакли плиталарнинг яқин жойлашганлиги бўйича кучсиз ифодаланган ўрта қисми билан характерланадиган кучсиз табақалашган профили ажралиб туради.

Оч сур тусли кўнғир тупроқларнинг кимёвий ва механик таркиби

Намуна олиш чуқурлиги, см	Гумус, %	CO ₂ карбонатлар, %	Ca SO ₄ 2H ₂ O, %	Механик таркиби		Сув сўрими, %		
				Физик лой <0,01мм	Шу жумладан гил <0,001мм	куруқ қолдиқ	Cl ⁻	SO ₄ ⁻
0-12	1,08	14,3	0,2	36,8	6,1	0,080	0,004	0,019
13-21	1,12	15,58	0,2	45,7	7,3	0,056	0,004	0,010
21-33	0,88	13,1	0,1	44,2	11,1	0,056	0,006	0,007
34-45	0,84	12,4	0,1	61,6	23,1	0,060	0,004	0,007
46-67	0,64	9,2	0,2	62,4	24,0	0,074	0,013	0,008
68-93	0,55	9,4	0,2	28,9	25,5	0,190	0,071	0,022

Тупроқ пайдо қилувчи она жинслари чангли-кумоқли, оҳак тошлар ва палеоген-неоген ва бўр жинсларидан ташкил топган бўлиб, гумус (0-12 см), ва тупроқ ҳосил қилувчи горизонтларида (34-67 см) учрайди. Унинг миқдори 0,64% дан то 1,08% гача, Бу қатламлардаги корбонатлар 9,2-14,3%, гипс миқдори 0,2%, йирик чанг – 36,8-62,4%, куруқ қолдиқ 0,080-0,074%, Хлор ва сульфат ионлари 0,004; 0,019 мл/кг дан пастга томон тегишлича 0,013 ва 0,008 мл/кг ўзгариб боради.

МУХОКАМА

Демак, инсонлар томонидан бунёд этилган ирригацион тармоқлари таъсирида тупроқларда кечадиган салбий жараёнларни тадқиқот этилиши, иқтисодий шароитларини яхшиланиши билан бевосита боғлиқдир. Ишлаб чиқаришда замонавий самарали агротехнологиялардан фойдаланиши, шунингдек экологик томондан тоза ҳаво, сув ва нормал табиий муҳитга ҳам бевосита боғлиқ. Шундай экан, Қорақалпоғистон республикаларида кенг миқёсда олиб борилаётган қурилиш, бунёдкорлик, саноат, қишлоқ хўжалигида янги суғориш, мелиорация ишларини барпо қилиш, тупроқларнинг унумдорлигини ошириш, экинларнинг ҳосилини кўпайтириш каби назарий ва амалий ишлар йилдан-йилга ортиб бормоқда.

ХУЛОСА

Хулоса қилиб шуни такидлаш жоизки, тадқиқ қилилинган тупроқ иқлим шароитларида ғаллачилик, чорвачилик йўналишларда деҳқончилик агротадбирларини ишлаб чиқибжорий этиш имконини беради.

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ZIG'IR O'SIMLIGI NAVLARINING DALA UNUVCHANLIGIGA EKISH ME'YORLARINING TA'SIRI

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ANNOTATSIYA

Maqolada Qashqadaryo viloyati sharoitida zig'ir o'simligi navlarini yetishtirishda ekish me'yorlarining dala unuvchanligiga ta'siri aniqlangan. Zig'ir o'simligining ikkita navida ekish me'yorlarining ortib borishi hisobiga dala unuvchanligining yuqori bo'lishi ta'kidlangan. Tadqiqotning asosiy natijasi sifatida zig'ir o'simligining “sadaf” va “qora shaxzoda” navlarida ekng yuqori dala unuvchanlik “qora shaxzoda” navida kuzatilganligi aniqlandi.

***Kalit so'zlar:** Zig'ir, o'simlik, nav, urug', ekish me'yor, dala unuvchanlik, tuproq, harorat, yog'in miqdori, iqlim, gektar.*

ANNOTATION

In the article, the impact of planting standards on field fertility in the cultivation of flax varieties in the conditions of Kashkadarya region is determined. In two varieties of flax plant, it was noted that the field fertility was high due to the increase in planting rates. As the main result of the research, it was found that the highest field fertility was observed in the "Black Prince" variety of flax plant "Sadaf" and "Black Prince".

***Keywords:** Flax, plant, variety, seed, sowing rate, field fertility, soil, temperature, rainfall, climate, hectares.*

KIRISH. Bugungi kunda dunyoning deyarli barcha davlatlarida kunjut ekini 5,0 mln gektardan ortiq maydonlarida ekilib, 8,2 mln tonnadan ortiq urug‘ yetishtiriladi. Shundan kunjut yetishtirish bo‘yicha yetakchi mamlakatlarga Tanzaniya, Myanma, Hindiston va Xitoy kiradi. Bulardan Hindistonda kunjut jami 1357,8 ming gektar maydonda yetishtiriladi. Dunyoda kunjutning o‘rtacha hosildorligi 7,0 s/ga ni tashkil etsa, O‘zbekistonda kunjut lalmikor maydonlarda o‘rtacha 5-6 s/ga, sug‘oriladigan maydonlarda 20-22 s/ga urug‘ hosilini beradi¹.

Dunyo mamlakatlarida kunjut ekini urug‘idan olinadigan moy uchun hamda ushbu moydan oziq-ovqat, qandolatchilik mahsulotlari, konserva, margarin va boshqa oziq-ovqat mahsulotlarini tayyorlash imkonini berishi sababli keng yetishtiriladi.

Mamlakatimizda aholining qishloq xo‘jaligi mahsulotlari, jumladan, ekologik toza o‘simlik moyiga bo‘lgan ehtiyojini ta‘minlash maqsadida kunjut, kungaboqar, maxsar yetishtirish bo‘yicha izchil choralar ko‘rilmoqda. Moyli ekinlarni ko‘paytirish aholi farovonligini yuksaltirish va fermer xo‘jaliklarining iqtisodiy samaradorligini yanada oshirish imkonini beradi. Shuning uchun, Respublikamiz har bir mintaqasining turli tuproq va iqlim sharoitini hisobga olib, kunjutning turli navlaridan moylilik darajasi yuqori bo‘lgan urug‘ yetishtirish pirovardida mamlakatimizda moyning import salohiyatini kamaytirish va arzon hamda sifatli moy mahsulotlari bilan aholini muntazam ravishda ta‘minlash bugungi kundagi dolzarb masala hisoblanadi.

Yuqoridagilardan kelib chiqqan holda ta‘kidlash joizki, mamlakatimizda bugungi kunga qadar kunjut ekinidan moylilik darajasi yuqori bo‘lgan serhosil urug‘ yetishtirish agrotexnikasiga doir ilmiy tadqiqotlar yetarlicha olib borilmaganligi hamda kunjut ekinini Qashqadaryo viloyatining sug‘oriladigan och tusli bo‘z tuproqlari sharoitida maqbul ekish muddati va me‘yorlari ishlab chiqilmaganligini hisobga olib, kunjut navlari o‘sishi, rivojlanishi va hosildorligiga ekish muddati va me‘yorlarining ta‘sirini o‘rganishga doir ilmiy tadqiqot ishlarini olib borish o‘ta muhim hisoblanadi.

¹ <https://reallib.org/reader?file=1221739>

Tadqiqotning amaliy ahamiyati. Qashqadaryo viloyatining sug'oriladigan och tusli bo'z tuproqlari sharoitida kunjut navlaridan yuqori va sifatli hosil yetishtirishni ta'minlaydigan maqbul ekish muddati va me'yorini qo'llash agrotexnologiyasini qo'llash evaziga maqbul dala unuvchanligiga erishiladi. Bunda, hosildorlik va sifat ko'rsatkichlarining o'zgarishi. Tadqiqot natijalarini ishlab chiqarishga joriy qilinishi va iqtisodiy samaradorlik ko'rsatkichlari bilan asoslanadi.

Tadqiqot ob'ekti va usullari. Urug'larning unib chiqishiga tuproq hajm og'irligining ta'sirini aniqlash bo'yicha tadqiqotlar Janubiy dehqonchilik ilmiy tadqiqot institutining markaziy tajriba maydonida olib borildi.

Tadqiqot xududi dengiz sathidan 342 metr balandlikda, 33,31318^o shimoliy kenglikda, 65,53187^o sharqiy uzunlikda joylashgan. Tuproq qoplami bo'z tuproqlar sharoiti bo'lib, chirindi va oziqa moddalar bilan kam darajada ta'minlangan. Sizot suv sathi 5-6 metr, iqlimi keskin kontinental, oktyabrda havo harorati +15,1 °C, nisbiy namlik 41,5%, shamol tezligi 2 m/sek, noyabr va yanvar oylarida havo harorati o'rtachasi +6,9 °C, nisbiy namlik 72,7%, shamol tezligi 3 m/sek, fevral va aprel oylarida havo harorati o'rtachasi +11,8 °C, nisbiy namlik 62,7%, shamol tezligi 3 m/sek, may oyida havo harorati +23,9 °C, nisbiy namlik 45,4%, shamol tezligi 4 m/sek.ni tashkil qiladi (G'uzor meteostansiya ma'lumotlari).

Zig'ir o'simligining unib chiqishini aniqlashda umum kabul qilingan uslublarda amalga oshirildi.

NATIJALAR

Kunjut urug'larining dala unuvchanligi harorat, tuproqdagi namlik, urug'larning ekinboplik sifatlari va boshqa omillariga bog'liq holda o'zgaradi. Kunjutdan mo'l va sifatli hosil olishda urug'larni to'liq undirib olish muhim ahamiyatga ega. Ko'plab adabiyotlar ma'lumotlari tahliliga ko'ra, moyli ekinlar urug'larining dala unuvchanligi o'tmishdosh ekinlar, ob-havo sharoiti, ekish muddatini tanlash, ekish chuqurligini belgilash, tuproqda yetarli namlikning bo'lishi, tuproqni ekishga tayyorlash va boshqa omillarga bog'liq.

Tajribada kunjutning «Sadaf» va «Qora Shaxzoda» navlari 1 mln dona/ga me'yorida ekilganda dala unuvchanligi tegishli 59,5; 66,6%, 1,5 mln dona/ga me'yorida ekilganda 66,4; 73,5%, 2 mln dona/ga me'yorida ekilganda, 80,2; 81,9%, 3 mln dona/ga me'yorida ekilganda esa, 79,6; 81,1 foizni tashkil etgan (1-jadval).

1-jadval

Zig'ir navlarining dala unuvchanligi

(JDITI ning tajriba maydoni 2023.y)

Ekin turi	Nav nomi	Ekish me'yor, mln dona/ga	Dala unuvchanligi	
			mln dona/ga	%
Kunjut	Sadaf	1,0	0,5946	59,5
		1,5	0,9954	66,4
		2,0	1,6039	80,2
		3,0	2,3878	79,6
	Qora shaxzoda	1,0	0,6656	66,6
		1,5	1,1026	73,5
		2,0	1,6372	81,9
		3,0	2,4327	81,1

Olib borilgan dala tajribamizda olingan natijalardan shuni ta'kidlab o'tish joizki, kunjut navlarida dala unuvchanligi yuqori bo'lishi ekish usullari va me'yorlariga bog'liq bo'lib, Bizning olib borgan dala tadqiqotimizda kunjutning «Sadaf» va «Qora Shaxzoda» navlari 2 mln dona/ga me'yorida ekilganda dala unuvchanligi maqbul bo'lishi kuzatildi.

MUXOKAMA

Olib borilgan dala tajribamizda olingan natijalardan shuni ta'kidlab o'tish joizki, kunjut navlarida dala unuvchanligi yuqori bo'lishi ekish usullari va me'yorlariga bog'liq bo'lib, Bizning olib borgan dala tadqiqotimizda kunjutning «Sadaf» va «Qora Shaxzoda» navlari 2 mln dona/ga me'yorida ekilganda dala unuvchanligi maqbul bo'lishi kuzatildi.

XULOSA

Xulosa qilib shuni ta’kidlash joizki, zig‘ir o‘simligi navlarini yetishtirishda ekish me’yorlarining dala unuvchanligiga ta’siri bo‘lib, ekish me’yorlarining ortib borishi hisobiga dala unuvchanligining yuqori bo‘lishi ta’kidlangan.

Qashqadaryo viloyati sharoitida zig‘ir o‘simligining “sadaf” va “qora shaxzoda” navlari orasida eng yuqori dala unuvchanlik “qora shaxzoda” navida kuzatilganligi aniqlandi.

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BOSHLANG'ICH SINIF O'QUVCHILARIGA ERTAK O'QITISH ORQALI BADIY ASARNI TAHLIL QILISHGA O'RGATISH

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***Annotatsiya:** Bu maqolada boshlang'ich sinf o'quvchilariga ertaklar yordamida badiiy asarni tahlil qilishga o'rgatish, ertak turlari va ularning o'quvchiga ta'siri haqida yoritiladi.*

***Kalit so'zlar:** Ertaklar, badiiy asar tahlili, metodlari, xalq og'zaki ijodi.*

Ma'lumki, hayotimiz turli qarama-qarshiliklar, ziddiyatlar va to'siqlardan iborat. Masalan, yaxshi-yomon, katta-kichik, achchiq-chuchuk, baland-u past va hokazo. Ularning har biri o'ziga xos xususiyat va ma'noga ega. Bularni anglab farqlay olish esa har bir inson tafakkuri, dunyo qarashi va fikrlash doirasiga bog'liq.

Dunyoqarashning bunday shakllari esa, albatta, badiiy adabiyotlar, asarlar yordamida shakllanadi. Badiiy adabiyotlar va kitoblar o'qishning dastlabki bosqichi bu maktabgacha va boshlang'ich sinf davrlari hisoblanadi. Maktabgacha davrda asosan tinglab tushuniladi. Boshlang'ich sinflarda esa ham o'qib ham eshitib tushunish shakllanadi. Ana shu jarayonni tog'ri tanlash kerak. Bolalar yaxshi tushunishlari uchun asar kichik hajmli, soda aniq va hayotga yaqin bo'lishi lozim. Bolalar uchun mos asarlarga xalq og'zaki ijod namunalari misol bo'la oladi.

Xalq og'zaki ijodi- ota-bobolarimiz aytmoqchi bo'lgan pand nasixatlar, xalqimizning urf odatlari, an'analari, milliyligimiz, yog'rilgan og'zaki ijod namunalari hisoblanadi. Ularning barchasi insonni yaxshilikka, mehnatsevarlikka, to'g'rilikka o'rgatadi. Xalq og'zaki ijodida ertaklar alohida ahamiyatga ega.[1]

[1]. Madayev Omonulla „O'zbek xalq og'zaki ijodi " Toshkent „Mumtoz so'z" 2010 - yil , 228 bet .

Ertaklar-hayot haqiqatiga asoslangan xayot va fantaziya xususiyatlari bilan yo'g'rilgan odamlarga ibrat beruvchi og'zaki ijod namunalari hisoblanadi. O'zbeklar o'rtasida ertaklar varoq, cho'pchak, masala kabi atamalar bilan yuritiladi. Ertaklar quyidagi o'ziga xos xususiyatlarga ega:

- 1) Og'zaki hikoyaga asoslangan
- 2) Voqealarning ongli tarzda xayoliy uydurmalar orqali aks ettirilishi
- 3) Estetik vazifalarning yetakchilik qilishi
- 4) O'ziga xos badiiy qolib hamda tilga ega bo'lishi (bir bor ekan, bir yoq

ekan kabi maxsus boshlanmalar bilan boshlanib murod-maqсадiga yetibdilar, kabi maxsus tugallanmalar bilan yakunlanadi).

Xalq ertaklari mazmunan 3 guruhga bo'linadi .

1. Hayvonlar haqidagi hamda majoziy ertaklar
2. Sehrii fantastik ertaklar
3. Hayotiy maishiy ertaklar[2]

Hayvonlar haqidagi ertaklar ko'proq ma'rifiy g'oyani amalga oshirish maqsadida yaratiladi. Hayvonlar haqidagi ertaklarda hayvonlarda odamlarning xislatlari bo'ladi. Ya'ni odamlar orasidagi munosabatlarni hayvonlar orqali tushuntiriladi. Bolalarda hayvonlar haqidagi ertaklar yordamida hayvonlar haqidagi daslatbki tasavvurlarni shakllantirishga yordam beradi.nMasalan, juda ko'p ertaklarda laylakning tumshug'i Juda uzun bo'lishi, bo'rilarning yirtqich hayvonlar ekanliklari haqidagi dastlabki ma'lumotlarga ega bo'ladi. Bunday ertaklarga "Bo'ri bilan laylak", "Xo'roz bilan tulki", "Suvsanbil" kabilar misol bola oladi. Xususan, "Suvsanbil" ertagi odamlardan bezor bolgan hayvonlar "Suvsambil" degan joyga ketishim tasvirlanadi. Bu ertakda ho'kiz, eshak, xo'roz,arilar, yumronqoziq kabi hayvonlar ishtirok etadi va ahil bolganliklari uchun ertak uchun bo'rilarga ham qarshi tura oladilar. Suvsambilni o'zlariga makon qiladilar. Bu ertak orqali uy hayvonlariga ozor bermaslikni o'rgatish mumkin.

Sehirli afsonaviy ertaklarda asosan insonlarning hayoti ularning tabiatga munosabati, dunyoqarashida yaxshilik va go'zallik haqidagi qarashlari ,umid orzulari ifodalanadi. Sehirli afsonaviy ertaklar o'z nomi bilan fantaziyaga boy ertaklar hisoblanadi. Bunday ertaklarga Hamid Olimjonning "O'zi uchar gilamlar", "Betoqat uchgan otlar", "O't bog'lagan qanotlar", "Bola bop qolgan chollar" kabi ertak tasvirlari aynan sehirli ertak matnlari bog'liq hisoblanadi. [1]

Bolalarning tasavvur doirasi, fantaziyasining boyishida demak sehirli ertaklarning o'rni beqiyos ekan. Xalq ongida insonning biror yaxshiligi, albatta taqdirlanishi lozim. Asar qahramoni semrug'ga, ayiqqa, laylakka ko'rsatgan yordami evaziga mushkullari oson bo'ladi. Uning yordamidan foydalangan hayvonlar keyinchalik sehirli imkoniyatlari bilan qahramon hamrohiga va biror oliyjanob maqsadni qo'lga kiritish vositasiga aylanadi. Ayrim ertaklarda esa adolat aynan mana shu yaxshilik evaziga g'alaba qozonadi. Masalan "Ur toqmoq" ertagida chol o'zi davolagan laylakdan "qaynar xumcha", "ochil dasturxon", "ur to'qmoq" kabi sehirli narsalarni oladi. Lekin do'sti uni aldab, qaynar xumchani ham, ochil dasturxonni ham olib qoladi. Chol olib kelgan keyingi narsani "ur toqmoq"ni olib qolmoqchi bo'lib uni ishlatib ko'radi. Shunda ur toqmoq uni savalab ketadi. Keyin do'sti undan ur to'qmoqni to'xtat deb iltimos qiladi va unga olgan narsalarini qaytarib beradi. Bu ertak orqali o'quvchiga birovning narsasini olmaslikka, har doim rost gapirishga chorlash mumkin.

Maishiy ertaklar. Maishiy ertaklar mazmun jihatidan hayvonlar, sehirli ertaklardan bevosita hayotiy voqea hodisalar haqida hikoya qilishi bilan farqlanadi. To'g'ri bu turdagi ertaklarda sehirli fantastik belgilarning mavjudligini inkor qilib bo'lmaydi. Ammo umumiy ifoda chegarasi maishiy ertaklarda ancha cheklangan. Chunki ularda xalq, avvalo oddiy odamlar qo'lidan keladigan ishlar yuzasidan fikr yuritiladi. Bevosita real hayot, turmushda ro'y berishi mumkin bo'lgan voqealar asos qilib olinadi.

[1] Madayev Omonulla „O'zbek xalq og'zaki ijodi " Toshkent . „Mumtoz so'z" 2010- yil . 228 bet .

[2] . Sherboyeva Nodira Jumayeva "Bolalar adabiyoti nazariyasi fanidan amaliy mashg'ulot" Uslubiy qo'llanma. Jizzax 2003-yil

Ular haqiqiy hayotdagi inson-millat vakili (hox ijobiy hox salbiy bo'lsin) uning imkoniyati darajasidagi jismoniy kuchi, ilmi, aqliga voqealar zaminida tavsif beriladi. Aksariyat hollarda asar qahramonlarining ismlari qayd etilmaydi. Chol-kampir, bir odam, qiz, kambag'al, boy kabi insonlar maskur ertaklarning qahramonlari bo'lib kelaveradi. Ba'zan esa asar qahramoni haqida to'liq ma'lumotlar ham berilishi mumkin. Bunday asarlarga misol qilib "Uch og'a-ini botirlar", "Tohir va Zuhra", "Xurshid oy", "Ayoq", "Zolim podsho" va boshqa ertaklarni misol qilib keltirishimiz mumkin. "Uch-og'a ini" ertagida bir cholning uch o'g'li bo'ladi. Chol o'g'illarini o'z baxtlarini topishlari uchun safarga jo'natadi. Ularga shunday deb tayinlaydi: „To'g'ri bo'ling, bexavotir bo'lasiz, maqtanchoq bo'lmang , uyatda qolmaysz, dangasa bolmang, baxtsiz bo'lmaysiz". O'g'illar safar davomida turli qiyinchiliklarga duch kelsada, bu to'siqlardan cholning tarbiyasi tufayli eson-omon o'tadilar. Ertak oxirida podshohning qizlariga uylanadi va baxtli hayot kechiradilar.[1]

Misol uchun 1-sinf o'qish savodxonligida "Rostgo'y bola" nomli ertakni ko'rib chiqaylik. Bunda o'qituvchi o'quvchiga topshiriq beradi. Har bir o'quvchi o'zi alohida mustaqil o'qish yoki gaplarni ketma-ket o'qiydi. Ertak tugaganidan keyin darsda qatnashmayotgan o'quvchidan ertak mazmuni nimada ekanligini so'raymiz. Bu bilan biz o'quvchilarni darsga diqqat bilan quloq solishlarini nazorat qilgan bo'lamiz. Ertakning mazmuni quyidagicha bo'ladi. Qadim zamonda bir podsho bo'ladi. U doimo tushkun kayfiyatda yurar ekan. Buning sababi esa uning farzandi yo'q ekan. Shunda shoh farzand asrab olmoqchi bo'ladi va shahardagi barcha bolalarga gul urug'larini tarqatib chiqishni buyuradi. Kimning guli chiroyli bo'lsa, shuni farzand qilib olaman debdi. Oradan ancha vaqt o'tgach berilgan gullarni ko'rish uchun podshoh shaharni aylanib chiqibdi. Qancha chiroyli gullar bo'lsa ham ularni tanlamabdi. Bir chekkada turgan bolaning gulini ko'rmoqchi bo'lgan ekan, qarasaki bola gulsiz tuvakni ko'tarib turibdi. Podshoh "seni guling qani?" deb so'ragan ekan. Bola shunda: gul urug'i unib chiqmaganini aytibdi. Podshoh endi sen mening farzandimsan, aslida gul urug'i unib chiqmasligi kerak edi, deb bolani o'ziga farzand qilib asrab olibdi. [3].

[3] T. G'afforova , E. Shodmonov, G. Eshturdiyev . O'qish kitobi .1-sinf uchun darslik „Sharq " Toshkent - 2017 - yil,128bet .

Bu ertak orqali biz o'quvchilarni doimo rost gapirishga o'rgatamiz. O'quvchilarga "podshoh nima uchun doimo tushkun kayfiyatda yurar edi?", "nega podshoh gul o'stirmagan bolani tanladi?" kabi savollar bilan ularning tushunganlik darajasini tekshirib ko'ramiz.

Bolalarning ertaklar yordamida hayotga bo'lgan munosabati, insonlar orasidagi aloqalarini, vatanga bo'lgan, do'stlarga bo'lgan hurmati ortadi. Ularni qadrlashni o'rganadi. Boshlang'ich sinf o'quvchilariga va kichik maktab yoshidagi o'quvchilariga ko'p ertaklar aytib berilsa yok o'qitilsa ularning xarakterlarida ijobiy o'zgarishlar tobora ortib boradi. Ertak qahramonlarining yaxshi xislatlarini oladi, yomon xislatlarini olmaslikka harakat qiladi. Ertakdagi salbiy yoki ijobiy qahramonlarini to'g'ri yoki noto'g'ri ishlarini bir-biridan ajratishni o'rganadi. Bu jarayon badiiy asarni tahlil qilishning ilk bosqichi hisoblanadi. Demak ertaklarning tahlili bo'lgan bolalar, biror badiiy asarni tahlil qilish jarayonida ham qiyinchilikka uchramaydi.

Foydalanilgan adabiyotlar ro'yxati:

1. Madayev Omonulla „Ózbek xalq og'zaki ijodi " Toshkent „Mumtoz so'z" 2010 - yil, 228 bet .
2. Sherboyeva Nodira Jumayeva „Bolalar adabiyoti nazariyasi fanidan amaliy mashg'ulot" Uslubiy qo'llanma. Jizzax 2003-yil
3. T. G'afforova , E. Shodmonov, G. Eshturdiyev . O'qish kitobi .1-sinf uchun darslik,„Sharq " Toshkent - 2017 -yil ,128bet .

THE PROSPECTS OF COOPERATION OF UZBEKISTAN AND FRANCE DEVELOPMENT TENDENCIES

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***Resume.** The article examines the transformations and future prospects of cooperation between Uzbekistan and France. By utilizing comparative and systematic methods, the study investigates the key areas of collaboration, as well as the shifts in foreign policy concerning trade, economy, and regional matters. The analysis demonstrates that both Uzbekistan and France are actively engaged in constructive and dynamic cooperation, driven by mutual interests. Uzbekistan's interests encompass a wide range of issues, including social modernization, economic partnership, industrial growth, regional cooperation, international engagement, and the utilization of French expertise and investments for overall development. On the other hand, France's interests primarily stem from Uzbekistan's geostrategic position, its abundant natural resources, and the potential of its transportation infrastructure. Furthermore, the study reveals that Uzbekistan, along with the rest of Central Asia, presents a fresh and untapped alternative market and a new platform for French businesses.*

The main keywords associated with this article are Uzbekistan, France, Central Asia, international relations, foreign policy, and bilateral cooperation.

INTRODUCTION

France is a country of rich historical and cultural heritage, socio-political traditions and innovations. He is one of the founders of European integration, a permanent member of the UN Security Council. France is the seventh largest economy in the world and the second in the European Union by GDP per capita. Also, France

is one of the first countries to establish official diplomatic relations with all the former Union countries of Central Asia after they gained independence. However, within the framework of France's general activities in world politics and Uzbekistan's active and effective political and economic relations with global actors such as the Russian Federation, the People's Republic of China, the United States, India, the Republic of Korea, Germany, and Japan, the Uzbek-French cooperation is not only France, but also It may not seem to be a priority and extremely important for Uzbekistan. In particular, the main problem in the evolution of cooperation was determining the priority direction: France believed that the main issue in the development of Uzbekistan should be organizational, administrative and legislative reforms. Uzbekistan considered the main topic of discussion to be investment and trade issues.

This situation made it difficult to achieve full coordination of mutual actions, especially from the first stages of cooperation. However, if we pay attention to the dynamics of the last five years of cooperation, we can see transformations both quantitatively and qualitatively. These transformations make it possible to identify promising areas and directions in Uzbek-French relations.

METHODS AND METHODS OF ANALYSIS.

Systematic, comparative and perspective assessment (forecasting) analytical methods were widely used during the research. Systematic research is used to study a specific topic (process, event, etc.) as a set of interrelated elements / components that study the relationship between the internal processes of the system and the external environment. The method of comparative analysis helps to determine the relationship between two or more phenomena by studying the current and previous state of the research object or comparing its differences and similarities with other objects. The prospective assessment (forecasting) method presents the possibility of assessing the future state of cooperation based on the study of existing data, events or concepts, in our case, the history/evolution of the Uzbek-French cooperation, modern features.

ANALYSIS OF LITERATURE ON THE SUBJECT.

Despite the fact that the topic of this article has not yet been comprehensively and scientifically studied, the dynamics of France's foreign policy, the characteristics, areas, problems and prospects of cooperation with the countries of Central Asia, its interests in the region and competition with other external actors in Central Asia (mainly As part of the European Union), many scientific researches have been carried out in such directions as the historical roots of the cooperation between Uzbekistan and France, the comparative analysis of the political systems of the two countries, and the foreign policy and geopolitics of Uzbekistan. In particular, Jacques Barra, Colin Ferro, Charlotte Wang, F. Bozo, F. Charillon, Armand Colin, Marie Kessler, Jacques Delor, Uber Vedrin, R. Chauvancy, Thomas Gomart, Robert Aldrich on these topics in French and foreign political sciences. , John Connell, Christian Lakesn conducted scientific research.¹ The scientific works of some CIS and Central Asian experts are also important for the regional analysis of Uzbekistan-France relations. Such specialists include S.M. Yun, P.P. Timofeyev, D.B. Nishanov, S.V. Zhukov, O.B. Researches of Reznikova can be highlighted.

The relations between Uzbekistan and France in our country are mainly focused on the general analysis of the foreign policy of Uzbekistan, the issues of the political and legal systems of the two countries, their similarities and differences, and the historical foundations of cooperation and cultural dialogue. Among the researchers, we can single out R.Farmonov, K.Zhorayev, A.Ayrapetov, L.Tereshenko, E.Nuritdinov, M.Rahimov, S.Saidolimov, S.Usmanov and others.

DISCUSSION AND RESULTS

We can divide the current changes in Uzbek-French cooperation into the following directions: 1. In the issue of determining the priority directions of cooperation. The main problem in the evolution of Uzbek-French cooperation was the issue of priority setting: while France believed that the main emphasis should be placed on organizational, administrative and legislative reforms in the development of Uzbekistan, the main topic of negotiation for Uzbekistan were investment and trade

issues. This made it possible to achieve full coordination of mutual actions from the first stages of cooperation.

However, the tactical policy of the French government towards the whole of Central Asia is being reshaped in recent years. In particular, 2020 is the year of the French government's Central Asia ideal partner for: we are completely neutral in domestic politics, but we can give a lot for your countries. Unlike many of our neighbors, I repeat, we do not interfere in your internal affairs, we respect your independence and simply respond to your requests and try to satisfy your needs" [3]. Therefore, instead of political and social modernization, democratization, and internal changes, French official circles actively use the concept of "neutral partner" when entering into mutual relations with the countries of the Central Asian region. 2. Regarding trade and economic cooperation. If you pay attention to the partnership relations between France and Uzbekistan in the field of trade and investment, you can witness some unexpected indicators. For example, as of the end of 2019, France is the 4th partner of Uzbekistan in terms of public external debt (in terms of capitalized investments) - the first in Europe (after China, Japan, Korea) - 345.8 million \$. However, France is not among the top five trading partners of Uzbekistan, it is Uzbekistan's 20th foreign trade partner by the end of 2020 (7th among European countries, 6th among EU member countries).

For France, Uzbekistan is the 120th trading partner, 106th place in terms of imports from France, 146th place in terms of exports [5]: One of the areas of the transformed bilateral cooperation is the French business structures. is to enter Uzbekistan. Since 1992, the French-Uzbekistan working council has been operating in MEDEF International 4, a French association of entrepreneurs, but only by 2015, this council became active in Uzbekistan. In the same year, a Memorandum of Understanding was signed between MEDEF and the Ministry of Investments and Foreign Trade of the Republic of Uzbekistan [6], which paved the way for many French companies to enter Uzbekistan over the next 5 years. If, until 2019, the French companies Alstom transport, CNH France S.A., Euromedex, Laboratoire innotech

international, Legrand SNC, Sanofi-aventisgroupe, Thales international operated in Uzbekistan, and the main part of these enterprises are agricultural and pharmaceutical in the field of Orexloisirs, Compagne des Alpes, Geode, Egis (architecture, tourism) only in 2019-2020; Orano (uranium); As system (energy management); Total Eren (electricity); Suez (water supply); Semmaris (agrologistics); More than 10 large French companies, such as Carrefour (trade), have started operations in Uzbekistan. Most of the new French companies entering this Uzbek market operate in the fields of financial and economic expertise and consulting/design and business development.

In particular, on December 9, 2020, the Ministry of Agriculture of Uzbekistan and the French company RungisSemmaris, which has an annual turnover of 9 billion euros, signed an "Agreement on the establishment of fruit and vegetable wholesale market networks". According to it, 8 agro-logistics centers and 3 wholesale markets will be established in Uzbekistan, first in Tashkent, Samarkand and Andijan. This project will serve to structural reform of Uzbekistan's agriculture and reduce the amount of fruits and vegetables lost annually due to improper harvest and storage up to 30%. It is planned to create 10,000 new jobs through the project[7]. Another important project is being implemented between the Suez company of France and the Tashkent city government, the Ministry of Housing and Communal Economy of the Republic of Uzbekistan.

The seven-year project (2020-2027) and the cost of 142 million euros is aimed at the modernization of water supply networks of the city of Tashkent and the optimization of the management system of these networks in accordance with international standards. The project includes measures related to the establishment of the "Uzbekistan water academy" (Uzbekistan water academy), which is considered the only one in Central Asia, which is engaged in consulting and personnel training in addition to water supply management, construction and installation works. The French companies held in the Republic of Uzbekistan began to establish comprehensive cooperation with the government of Uzbekistan in the field of energy. 2019 Launch of Solar Power Plant with Total Iran Company;

Creation of new networks of electricity production, transportation and distribution with the Assystem enterprise; Agreements were reached with the Orano company on the creation of a joint venture for uranium mining (51% Orano, 49% Ecological Committee) [9]. Therefore, the cooperation between France and Uzbekistan in the real sectors of the economy is carried out on the basis of "public-private partnership": from France, private companies participate as the main investors and initiators, and from Uzbekistan, government agencies (ministries, agencies, hokimitas, etc.) participate; Uzbekistan-France trade and economic cooperation cannot be built on the basis of the traditional scheme of "donor-recipient" cooperation between developed and underdeveloped countries. Cooperation is based on long-term projects aimed at the improvement of socio-economic infrastructure in strategic areas for Uzbekistan (agriculture, logistics, energy, tourism, land reclamation, etc.), delivery of advanced knowledge and experience, and standardization. is being built. French companies are always fully involved in project development, coordination and management. The main thing is that among the many foreign companies operating in Uzbekistan, French enterprises and organizations are trying to occupy the Uzbek national market by providing expertise of large projects and providing consulting services. 3. Regional foundations of cooperation. If the above two changes were mainly related to the change in the attitude of the French government and business circles towards Uzbekistan and the whole of Central Asia, then the changes in the regional issues of the Uzbek-French cooperation in Uzbekistan It reflects the desire to strengthen cooperation with the European Union (EU). In fact, development of mutual communication and partnership relations between Uzbekistan and the European Union, promotion of trade, investment and financial cooperation, transfer of high technologies, development in the fields of science, technology, education, ecology, health, and culture. believes that mutually beneficial relations and strengthening of regional cooperation are important areas of cooperation [10].

Also, during the meeting of the President of Uzbekistan Sh. M. Mirziyoyev with European experts in March 2021, European experts led by the former president of

Poland Alexander Kwasniewski and the former Chancellor of Austria Alfred Guzenbauer will be involved in order to expand Uzbekistan's relations with the European Union [11], means that the government and official representatives of Uzbekistan are interested in expanding relations with the EU. In the future, due to the fact that the trade relations between Uzbekistan and the European Union have entered a new stage, there is a high probability of an increase in trade indicators between Uzbekistan and France. From April 10, 2021, Uzbekistan was admitted to this program of preferences. As a GSP+ participant, Uzbekistan receives more additional economic benefits than the standard GSP scheme. That is, tariffs on 2/3 of the Standard GSP line of products will be canceled. Today, our country exports 3,000 types of products to the European Union without customs tariffs and 3,200 types of products on the basis of reduced payments [12], now Uzbekistan, as a participant of GSP+, has obtained the right to export 6,200 types of products to the territory of the EU without customs duties. Currently, 9 countries are using the GSP+ scheme, Armenia and Kyrgyzstan are also beneficiaries of the CIS countries. The GSP+ scheme also imposes a number of obligations. For example, the country undertakes to effectively implement 27 international conventions on human rights, ecology, labor rights, effective management.

CONCLUSION

Thus, the relationship between Uzbekistan and France is built on the basis of mutually beneficial cooperation, has a positive significance in the socio-political development of Uzbekistan, affecting the development trend in the future and the transformation of Central Asia into an arena of cooperation or competition. France is still in the process of reforming its foreign policy in Central Asia. Today, it focuses on developing bilateral partnerships with five countries in the region. But, with a high probability, it will continue to use EU mechanisms to realize its national interests in Central Asia in the medium term. The most promising direction of cooperation is trade and economic relations. The large-scale inflow of French capital into Uzbekistan, the increase in the participation of French companies in the economic sectors of our country, and the inclusion of Uzbekistan in the GSP+ mechanism are highly likely to

increase the volume of mutual trade between the two countries. Despite geographical barriers, bilateral structures, cooperation mechanisms, a very small number of permanent official dialogues in various fields, and the delay in Uzbekistan's integration into the world market, Uzbek-French cooperation has maintained growth dynamics in some areas, in particular, trade-economic and investment ratios. However, the two countries are still at the stage of determining the main directions of cooperation, and have not yet reached the stage of full diversification of partnership relations.

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MADRASALARNING INSONIYAT TARIXIDA TUTGAN O‘RNI. MATNIYOZ DEVONBEGI MADRASASI TARIXI.

Usmonova Nazokat Isoqjonovna

“Ichan-Qal’a” davlat muzey-qo‘riqxonasi ilmiy xodimi.

ANNOTATSIYA

Ushbu maqolada Madrasalarning tashkil topishi, qanday maqsadda foydalanilganligi, turli madrasalarning qurilishidagi farqlar va madrasalarnida ta’lim qanday olib borilganligi haqida, shuningdek, Xivada joylashgan “Matniyoz devonbegi” madrasasi tarixi haqida qisqacha ma’lumot berilgan.

***Kalit so‘zlar:** Abu Bakr Muhammad Narshaxiyning «Buxoro tarixi», «Farjak», «Aqoid», «Bidon», «Kofiya», «Avvali ilm», «Kitob at-tavhid».*

THE PLACE OF MADRASAS IN THE HISTORY OF HUMANITY. HISTORY OF MATNIYOZ DEVONBEGI MADRASA.

ANNOTATION

This article provides brief information about the establishment of Madrasahs, what they were used for, the differences in the construction of different Madrasahs and how education was conducted in Madrasahs, as well as the history of the Matniyoz Devanbegi Madrasah located in Khiva.

***Keywords:** Abu Bakr Muhammad Narshaxiyning «Buxoro tarixi», «Farjak», «Aqoid», «Bidon», «Kofiya», «Avvali ilm», «Kitob at-tavhid».*

Madrasa (arab, darasa—o‘rganmoq) — musulmonlarning o‘rta va oliy o‘quv yurti. Ulamolar va maktabdorlar, Yaqin va O‘rta Sharq mamlakatlarida davlat organlari xizmatchilarini ham tayyorlaydi. VII - VIII asrlarda islom dini ulamolari

musulmon ilohiyoti masalalarini sharhlab berib turadigan markaz sifatida arab davlatlarida paydo bo'lgan. IX – XIII asrlarda islom diniga e'tiqod qilinadigan mamlakatlarda, jumladan, O'rta Osiyoda tarqaldi. Madrasalarda milliy ziyolilar tayyorlangan. Abu Bakr Muhammad Narshaxiyning «Buxoro tarixi» asarida aytib o'tilgan 937-yildagi yong'inda zarar ko'rgan «Farjak» madrasasi O'rta Osiyodagi dastlabki Madrasalardandir. Madrasalarning xon madrasalari, eshon madrasalari, xususiy madrasalar kabi turlari bo'lgan. Madrasa muassislari madrasani ta'minlash uchun maxsus mulk - vaqf ajratishgan va bu mulkni boshqaruvchi mutavvalini tayinlashgan. Madrasalarning vaqf daromadlaridan bir qismi vaqf mulkini saklab turish, madrasa binosini ta'mirlash uchun ajratilgan, ma'lum qismi mutavvali, mudarrislar, talabalar, masjid imomi, muazzini, sartaroshi, farroshi va boshqa xizmatchilarga berilgan.

Madrasaga maktabxonann tugatganlar qabul qilingan. Talabalar yoshi 10 dan 40 yoshgacha bo'lgan. Ular madrasa yotoqxonalarida yashash huquqiga ega bo'lgan kunduzgi bo'lim va darslarga erkin qatnovchi sirtqi bo'lim talabalari toifalariga ajratilgan. Madrasa o'quv dasturining umumiy jihatlari X – XII asrlarda ishlab chiqilgan va keyinchalik takomillashib borgan. Mashg'ulotlar, odatda, sent. da boshlanib, may oyigacha davom etgan. Yoz oylari va ramazon oyida ta'tilga chiqilgan. Madrasada hafta kunlari tahsil (shanba, yakshanba, dushanba, seshanba) — mashg'ulot kunlari va ta'til (chorshanba, payshanba, juma) — o'tilganlarni takrorlash hamda dam olish kunlariga bo'lingan. Darslar quyosh chiqish payti (bomdod nomozidan keyinoq) boshlangan.

Madrasada ta'lim 3 bosqichda: boshlang'ich (adno), o'rta (avsat) va yuqori (a'lo) guruhlarda olib borilgan. Adno bosqichi «Aqoid» kitobini o'qishga o'tguncha davom etgan, avsat bosqichi «Aqoid» kitobini o'qishdan boshlanib, «Sharhi mulla» kitobini o'rganguncha bo'lgan va undan keyingi murakkab qo'llanmalarni o'rganuvchilar a'lo bosqichi talabalari hisoblangan. Madrasada o'qish talabalar iqtidoriga qarab, 7—12 yil davom etgan. O'rta Osiyodagi madrasalarda arab va fors tilida yozilgan kitoblar o'qitilgan, ular talabalarga mudarris tomonidan turkiy tilda

sharxlab berilgan. Madrasa o'quv kursi, odatda, «Avvali ilm» deb nomlangan fors tilidagi o'quv qo'llanmasini o'zlashtirish b-n boshlangan. Keyin o'rta asrlarning ilmiy tili hisoblangan arab tili grammatikasi (arab tili morfologiyasi — sarfi va sintaksisi - nahvi «Bidon», «Kofiya» kabi darsliklar asosida) o'qitilgan. Arab tili grammatikasidan so'ng o'quv kursi 2 bo'limga: umumta'lim kursi — mushkulot va fiqh kursi — masala bo'limlariga ajratilgan. Madrasalarda fiqh kursining faroiz — meros huquqi qismi bilan birga mat. fani ham majburiy o'quv kursiga kiritilgan. Talabalar o'z xo-hish-istaklari va qobiliyatlariga qarab mushkulot yoki masala bo'limlaridan birini, agar istasalar har ikki bo'limni o'qib tamomlashlari mumkin bo'lgan. Madrasalarda to'liq kureni o'qib tamomlash uchun talabalardan falsafa va huquq fanlariga oid taxminan 137 darslik - qo'llanmani o'zlashtirish talab etilgan. Bu darsliklarning aksariyatini O'rta Osiyolik allomalarning asarlari, jumladan, Imom Buxoriy va Abu Iso Muhammad ibn Iso Termiziylarning hadis to'plamlari, Abu Mansur Moturidiy Samarqandiyning «Kitob at-tavhid», Burhoniddin Marg'inoniyning «Zil Hidoya fi sharh albidoya», Najmiddin Ali ibn Umar Qazviniyning «arrisola ash-shamsiya fi-l qavoid almantiqiya», Abdurahmon Jomiyshg «al-Favoid addiyoiya», Mahmud ibn Ahmad Mahbubiyning «Viqoyat arrivoya fi masoil», Ubaydulloh ibn Mas'-ud Mahbubiyning «an-Nuqoya» («Muxtasar alviqoya») kabi asarlari tashkil etgan. Madrasalarda talabalarning qiziqishlari va mudarrislarning mavjudligiga qarab, falakiyot, handasa, tibbiyot, kimyo, jug'rofiya, tarix, adabiyot, aruz ilmi, me'morlik asoslari, xattotlik, musiqa, axloq, notiqlik kabi fanlar ham o'qitilgan. XIX asr oxiri - XX asr boshlarida O'rta Osiyo madrasalari o'quv dasturi birmuncha isloh etilib, ularda o'qitiladigan fanlar tarkibiga turk, rus, fransuz, ingliz tillari, fizika, ziroatchilik, hisob, gigiyena, psixologiya, metodika, trigonometriya, siyosiy iqtisod, tijorat kabi fanlar kirib kela boshlagan. XIX asr oxiri - XX asr boshlarida Buxoro amirligida 336, Xiva xonligida 132, Turkiston generalgubernatorligida 348 Madrasa bo'lgan. XX asrning 2-choragi boshlarida sovet hukumati tomonidan Madrasalar diniy muassasalar qatorida davlatdan ajratilgan va «xurofot o'choqlari» tamg'asi bilan tugatib yuborilgan. O'zbekiston Resda O'zbekiston musulmonlari idorasi ixtiyorida qolgan bir nechta

Madrasa esa endilikda faqat ruhoniylar tayyorlaydigan oʻrta va oliy diniy oʻquv yurtlariga aylantirilgan.

Madrasalar musulmon olamida meʼmorlik inshooti sifatida X – XI asrlarda vujudga kelgan. Ilk madrasalar bir qavatli, oʻrta qismi hovli va uning atrofi hujralardan iborat boʻlgan. Baʼzan gumbazli goʻrxona qurilib, madrasaga homiylik qilgan kishining sagʻanasi qoʻyilgan. XIV – XVI asrlardan boshlab hashamatli madrasa binolari qurish avj oddi. Ular 2-3 qavatli qilib qurilib, odatda, katta va goʻzal peshtoqli, atrofi hujralar bilan oʻralgan hovlisi, darsxona, kutubxona va mayejidi boʻlgan. Keyinroq, katta madrasalar yoniga minora qurish ananaga aylana borgan. Kirish peshtoqining roʻparasida, peshayvon boʻlib, u yozgi darsxona vazifasini bajargan hamda hovliga salobat bergan. Baʼzan madrasalarda hujralarning hovli tomoni ravoqli ayvonlar bilan oʻralib, hovli oʻrtasida hovuz qilingan. Madrasalarning tashqi va ichki qismi har xil rangli koshinkori va ganchkori bezaklar bilan bezatilgan va Qurʼoni Karimdan oyatlar va sahih hadislar koʻchirib yozilgan. Masalan Buxorodagi Ulugʻbek madrasasi eshiklariga «Bilim olmoq har bir musulmon erkak va ayolning burchidir» degan hadis bitilgan.

Madrasalar umumiy qurilish tipologiyasi (tasnifi) loyihasi va qurilmasiga koʻra, ajralib turadi. Oʻrta Osiyo meʼmorchiligida masjid va darsxona qoidaga koʻra, peshtoqning ikki yon qanotida joylashtirilgan. Suriya va Misrda ular kiraverishda hovlining toʻrida koʻndalangiga ayvonli qilib qurilgan. Turkiyada hovli tepasi ham gumbaz bilan qoplangan. Oʻrta Osiyo va Gʻarbiy Osiyoda odatdagidek ravokli qilib yopish uslubi qoʻllangan. Shimoliy Afrikada toʻsinli tomlar boʻlgan. Arab mamlakatlarida dastlabki madrasa vazir Nizomulmulk tomonidan Bagʻdodda (XI asrning 2-yarmida) qurilgan.

Xiva xonining moliya vaziri boʻlmish Muhammad Niyoz devonbegi 1871-yilda Xiva shahrining markazida bir madrasa va madrasaga yondosh qilib chorsu qurdirgan.

Madrasa Muhammad Aminxon madrasasi yonida joylashgan boʻlib, asosiy kirish qismi gʻarb tomonga qaragan. Madrasaning yon fasadlari yoʻl tomonda, atroflari ochiq va koʻkalamzorlashtirilgan. Madrasa bir qavatli boʻlib, unda 21 ta hujra,

darsxona va kutubxona mavjud bo‘lgan. Birinchi qavatida 19 ta hujra bo‘lib, qolgan ikki hujra yuqorida peshtoq orqasiga qurilgan. Unga bitta bo‘lma yoki dahliz orqali o‘tiladi. Hamma madrasalardagidek to‘rtburchakning oxiri guldasta-minora bilan tugallangan. Yon ko‘rinishlari arkalar bilan qurshalgan. Asosiy bezaklar binoning old ko‘rinishida qo‘llanilgan. Hamma madrasalar kabi peshtoq bezaklarida islamiy naqshlar ko‘p qo‘llanilgan.

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XORAZM QAL'A DEVORLARINING SHAHAR MUDOFAASIDA TUTGAN O'RNI. "ICHAN-QAL'A" DEVORLARINING TARIXI.

Nurmetova Bikajon Anvarbek qizi

“Ichan-Qal'a” davlat muzey-qo'riqxonasi ilmiy xodimi.

ANNOTATSIYA

Qadimgi Xorazm mudofaa inshootlari yurtimiz tarixining eng qadimgi davr moddiy madaniyat yodgorliklari hisoblanadi. Bu inshootlar o'lkamizning qadimgi tarixida harbiy soha takomillashuvi, shahar rivojlanishi, urbanizatsiya jarayonlari, qal'alar qurilishining dastlabki va keyingi bosqichlaridagi o'zgarishlar haqida ma'lumotlar beradi. Bu o'zgarishlar o'sha davr Xorazm aholisining yashash turmush tarziga ham sezilarli ta'sir o'tkazgan. Ushbu maqolada Xorazmning qal'a, devorlari ahamiyati va "Ichan-Qal'a" devorlari haqida qisqacha ma'lumot berilgan

***Kalit so'zlar:** Oltintepa, Baqtriya, Farg'ona, Avesto, "Ichan-Qal'a", Hazorasp, Devkesgan, Tuproqqal'a.*

THE ROLE OF KHORAZM FORT AND WALLS IN CITY DEFENSE. HISTORY OF "INCHAN-KAL'A" WALLS.

ANNOTATION

Ancient Khorezm defense structures are the oldest material culture monuments of our country's history. These structures provide information about the improvement of the military sphere, urban development, urbanization processes, changes in the initial and later stages of the construction of fortresses in the ancient history of our country. These changes had a significant impact on the lifestyle of Khorezm residents at that time. This article provides brief information about the fortress of Khorezm, the importance of its walls and the walls of "Ichan-Qal'a".

***Keywords:** Oltintepa, Baqtriya, Farg'ona, Avesto, "Ichan-Qal'a", Hazorasp, Devkesgan, Tuproqqal'a.*

Mustaqil respublikamizning ijtimoiy fanlar sohasi olimlari oldida xalqimiz tarixini, shuningdek boshqa xalqlar tarixini haqqoniy va to'laqonli o'rganish masalasi eng muhim vazifa hisoblanadi. Birinchi Prezidentimiz Islom Karimov 1998-yil 14-iyulda bir guruh tarixchi olimlar va yetakchi jurnalistlar bilan bo'lib o'tgan uchrashuvda tarix fani, uning bugungi ahvoli va istiqbolini chuqur tashkil etish haqidagi o'z fikr-mulohazalarini bildirib, bu yo'nalishda tarixchi olimlar oldiga qator vazifalarni qo'ydi. Birinchi Prezidentimiz takidlaganlaridek: "Albatta, tarixda kechgan voqealarning ibratli tomonlarini o'rganish, shu bilan birga, ularning salbiy jihatlarini ham yahshi bilish kerak. Eng muhimi, tarixni bilgan, o'rgangan odam, kim bo'lishidan qat'i nazar, ko'p narsadan xabardor bo'ladi"

Ushbu vazifalardan eng muhimi - yangi jamiyatimizni isloh, qilish va yangilash jarayonini boshqaradigan va ta'minlaydigan, xozirgi davr talabi asosida yangicha fikrlaydigan yoshlarni tarbiyalash, muximi, ular ongiga milliy istiqloq, Vatanga sadoqat va yurtparvarlik g'oyalarini yanada chuqurroq, singdirish va teran anglatishdan iboratdir.

Qadimgi Xorazm mudofaa inshootlari yurtimiz tarixining eng qadimgi davr moddiy madaniyat yodgorliklari hisoblanadi. Bu inshootlar o'lkamizning qadimgi tarixida harbiy soha takomillashuvi, shahar rivojlanishi, urbanizatsiya jarayonlari, qal'alar qurilishining dastlabki va keyingi bosqichlaridagi o'zgarishlar haqida ma'lumotlar beradi. Bu o'zgarishlar o'sha davr Xorazm aholisining yashash turmush tarziga ham sezilarli ta'sir o'tkazgan.

Markaziy Osiyo hududida mudofaa inshootlarining yuzaga kelishi va barpo etilishi bir tekis ketmagani ma'lum. Chunonchi, Janubiy Turkmanistondagi manzilgohlar atrofida dastlabki mudofaa devorlari eneolit davrida ko'tarilgan (Geoksyur manzilgohlari) va jez davrida ularni qurish avj olgan (Oltintepa). Baqtriya va Farg'ona vodiysi hududlarida ular bronza davrida shakllana boshlagan. Sug'd va Xorazm mintaqalariga kelganda esa, u yerda manzilgohlar va mudofaa inshootlari mil. avv. I ming yillik o'rtalaridan ma'lum bo'ldi. Shu bois K. Sabirov va G. Frank-for

tomonidan ilova qilingan xronologik tasniflar ko‘rib chiqilayotgan hududning lokal mintaqalariga nisbatan doim ham maqbul emas.

Antik mualliflar qadimgi Xorazm qal‘alari to‘g‘risida deyarli hech qanday ma‘lumot qoldirishmagan. Baqtriya bilan Sug‘d mudofaa inshootlari to‘g‘risida Aleksandr yurishlari tarixi bilan bog‘liq, mazmunan xilma-xil materialga ega bo‘lsak, olis Xorazmning faqat qadimgi davri emas, balki ilk o‘rta asrlar davri ham, to arab fathiga qadar, biz uchun deyarli butunlay qorong‘u. Biroq Xorazmning qadimgi harbiy arxitekturasini tavsiflash uchun deyarli hech qanday material bermaydigan fors bitiklarida, Avestoda va paxlaviy diniy adabiyotida, grek-lotin, xitoy va arman manbalarida ba‘zi-ba‘zida Xorazm nomi uchraydi.

1—IV asrlarda yangi istehkomlar qurilishi bilan birga, eskilari ta‘mirlandi ham. Ba‘zi hollarda avvalgi qal‘a devorlari butkul yangi devor bilan o‘rab olindi (Hazorasp, Devkesgan, Xivadagi Tuproqqal‘a va boshqalar). Boshqa holatlarda otish yo‘lagining pastki qavatiga g‘isht terildi (Kichik Qirqqizqal‘a, Oqshaxonqal‘a, Sulton Uvays tog‘idagi Govurqal‘a va boshqalar), natijada to‘g‘ridan otilgan o‘q kelib tegadigan joy pastki qavatdan tepa qavatga ko‘chdi. Bunday baquvvat poydevorli istehkomlar qurilishiga o‘tish qadimgi Xorazm harbiy istehkomlari tizimidagi ikkinchi tub burilish bo‘ldi. Istehkomlarning umumiy tarhi qanhxa davridagi kabi qolgan bo‘lsa-da, ularning xususiyati keskin o‘zgardi: poydevor baland ko‘tarildi, devorlar tik qurildi va h.k.

Bu davrda Xorazm harbiy arxitekturasida dumaloq ko‘rinishdagi istehkomlar qurilishi keskin kamaygani ko‘zga tashlanadi. I - III asrlarda dumaloq shakldagi baquvvat devorli ayrim qal‘alar o‘zining mudofaa vazifasidan mahrum bo‘ldi

“Ichan-Qal‘a” deb ataluvchi ko‘hna qal‘a eramizdan avvalgi VI - V asrlarda qurilgan. Qal‘a devorining uzunligi 2200 metr, umumiy ichki maydoni 26 gektar, ya‘ni, sharqdan g‘arbiga 450, shimoldan janubga 600 metrni tashkil etadi. Shahardagi ikkala qal‘a devori ham xom loydan va ayrim joylari xom g‘ishtdan 8-10 metr balandlikda qurilgan bo‘lib, ustida soqchilar, himoyachilar va arava yurishi uchun

yo‘lak, tepa qismidan o‘q otish uchun maxsus teshik – shinaklar qo‘yilgan. Devorning asosi 10-15 metrdan 20 metrgacha, tepasi 4-5 metr qalinlikda qurilgan.

Qadimda qal’a devorining ichkari va tashqari tomonidan qabrlar qo‘yilib, mozoristonga aylantirilgan. Janubiy - Tosh darvozaning g‘arb tomonidan boshlab, shimoliy - Bog‘cha darvozagacha qal’a devorining tashqari tomonida, ichkaridan esa faqat janubiy tomondagina qabrlar bo‘lgan, ularning aksariyati bugungi kungacha saqlanmagan. Faqat oz qismi ta’mir lanib, tarixiy obida sifatida saqlangan.

Bu qabrlarning qal’a devorida qo‘yilishi otashparastlik davridan qolgan hisoblanadi. Ma’lumki, otashparastlar o‘z yaqinining suyagini uyidan uzoqlashtirmagan. Suyaklarni ostadonlarga joylab uyining devori ichiga qo‘yishgan.

Shahardagi har bir qal’a devorining va darvozalarning o‘z tarixi, rivoyat va afsonalari ham bor. Darvozaning ichkarisida soqchilar uchun maxsus xonalar mavjud bo‘lib, ular mustahkam qilib bitkazilgan. Ko‘hna shahar darvozalari oldida va ichkarisida savdo rastalari, chorsular joylashgan. Darvozalar kechalari yopilib, ertalab saharda ochilgan.

Shunday qilib, antik davrda qadimgi Xorazm mudofaa inshootlari san’ati Markaziy Osiyo mudofaa inshootlari san’ati darajasida bo‘lgan. Bu yerda istehkomli inshootlar qurish maktabi mavjud bo‘lgan, deb ta’kidlash mumkin.

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ENTERTAINING QUESTIONS IN TEACHING ENGLISH

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Abstract: *This article shows bright way to teachers of primary to make entertaining questions from stressful questions.*

Key words: *Question, appropriate answer, strategies, method, volunteer, primary school, colorful paper, different shapes, eyes, mouth, smiled paper, cartoon hero, competition, motivating.*

Nowadays Pupils are becoming bored and nervous from questions. Although they know appropriate answers for question, they cannot answer because of stress. Such kind of situations are happening more in primary school than high school. I decided to help to English teachers of primary school with useful strategies. For example, teachers only ask questions with telling and they become strict while asking question, as a result, fright is born in learners' hearts and they forget their answer.

Firstly, I want to introduce some useful ways for asking questions. I believe that these methods will be your best helpers in your teaching process. For achieving such kind of success we should make our questions attractive for pupils. Then, pupils try to answer them as volunteers and they can reveal their ideas clearly. Now, I will show some methods:

1. Colorful paper is a key to attract learners' attention.

Learners of primary school love colors, so, colorful paper helps teachers to wake up pupils. If teachers use colorful sheet for asking question, learners become volunteer without hard time. For instance, I always asked questions with telling or using white paper, and, I usually got bad results. One day, I used sheet which was in different color, as a result, my learners' result shocked me with good answers.

2. Different shapes can uplift learners' mood.

Using similar shapes make boredom in pupils. I advise teachers to use different shaped sheet in every lesson in order to remove boredom. For example, one teacher used rectangular sheet to ask new vocabularies and he decided to change shape of sheet to either round or triangle. His pupils' eyes became bright with the help of unusual shape, so they can translate all new words.

3. Smiled question paper with eyes and mouth is great way to concentrate pupils' attentions for answering questions.

Dear teachers should not use unhappy or sad emotions in your lesson, because they decrease great mood of your lessons. If instructors use happy smiled questions with eyes and mouth, their lesson become interesting, also, they can get more results than their wanted one.

4. Using cartoon heroes' toys make lesson interestingly.

Cartoon heroes are the best helpers of teachers. Instructors can find way to pupils' hearts with them. If you want to ask grammar questions, please use from toys of heroes. If you ask question with making toy speak, pupil become happy and answer quickly and you do not waste time and lesson.

5. Asking questions with competitions is able to increase students' answering rate.

Other good way to ask English lesson rules is to use competitions. If teacher ask either English word or English grammar rules one by one, pupils feel bored with listening others and last pupils cannot answer questions cause of dull. It would be worth organizing competitions for asking. Because, every student become awake and they listen carefully their friends' questions and answers.

6. Motivating with gifts rise number of your answered guys dramatically.

Motivating is very effective way to encourage every human. Pupil is not an exhibition. They are motivated with taking gifts for true answer. Teachers should organize to give gifts for best pupils every month. During month every learner try hard to get gift with answering good and preparing lesson well.

These methods make lessons entertaining and they make teachers lovely. Questions will not be stressful, if teachers use appropriate asking way.

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