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## THE DEVELOPMENT OF SYNTACTIC ANALYZER ALGORITHM FOR THE UZBEK LANGUAGE

Annotation

This articles shows some linguistic approach and algorithms sequences syntactic attitudes of word combination in simple sentences in Uzbek. We testes our claim that rule based (grammar based) on syntactic word combinations between nominal and verbal class of the words. Applying this approach offered in the paper that there were higher outcome to evaluate POS models in the scope of simple sentences.

**Keywords:** Uzbek language, parsing, grammar based approach, Uzbek electronic corpus, computational linguistics.

**Introduction.** Dependency analysis methods for syntactic parsing have become well known in natural language processing in recent years. Dependency analysis is used to as a term since the nineteenth century by Lucienne Tesnière’s Dependency Grammar [1]. According to this reference, the grammatical theory sentence comprises by two parts whose distinguishes between linear and structure composition. Linear linking words could be easily apprehended due to one-dimensional phase. Hence, the sequential structural connection of the sentence elements is hidden because of multi-dimensional aspect. Tesnière [1] uses stemma for vertical and horizontal relations of parts of speech which signify graphically. In this case predicate plays significant role within hierarchical level of the elements in the sentence due to governing the subject with other complements. Moreover, connection, junction and transference are basis of syntactical relations in the sentence.

Overall, two methods are applicable as approach in natural language processing: grammar-based methods (“deep”) and statistical approaches (“shallow”) [2]. In this case, dependency tree [3] is considered as closer to semantic relations directly of components of sentence by doing beneficial outcome in NLP investigations. However, Uzbek language as an agglutinative language free component order in the sentence that can be expended as length as possible.

In this article we outlined general approaches for parser of Turkic languages by analyzing comparatively methodological aspects in section 2. Section 3 gives information a very brief introduction to Uzbek morphology and syntax and discusses the representation of morphological information and syntactic dependency relations. In section 4 we implemented applying grammar based approach by own algorithm of parsing. Given overall conclusion and further discussion in section 5.

**Related works.** In recent years, various approaches proposed to investigate Turkic languages parser in accordance with data collection and data analysis. The results so far primarily come from investigations developed for Turkic languages in various types of parsing methods. A related references parsing for English showed that some of the parsing relied on constituency-based representations, partly influenced by the availability of data resources such as the Penn Treebank [4].

G. Eryigit et al[4] measured two types of parser regarding to the way of solution. One is statistical parser based on probabilistic model and classifier based parser. According to this research by applying Turkish treebank it has done the following implementation: two naive parsers, which link a dependent to an IG in the next word, and one rule-based parser. Then data-driven parsers in the subsequent sections: a statistical parser using a conditional probabilistic model (from now on referred to as the probabilistic parser) and a deterministic classifier-based parser using discriminative learning (from now on referred to as the classifier-based parser).

Our previous research we applied Turkish model to analyze the texts for CoNLLU format, hence there have been the some distinction between Turkish and Uzbek structures [5].

As agreed some studies, parsing for Turkish based on the constraints in the ontology proposed by Murat Temizsoy and Ilyas Cicekli. According to this, morphological marks indicate semantic properties as well. Finding the propositional structure of the input utterance without constructing a deep syntactic tree instead it utilizes a weak interaction between syntax and semantics [6].

Moreover BOUN Treebank for Turkish applied UD main tag set and the previous conventions of Turkish annotation schemes for the most part. At the end created BoAT, a new annotation tool specifically designed for dependency parsing. BoAT is a desktop annotation tool which is specifically designed for CoNLL-U files [7].

Nivre et al. presented in his study that tokens collected and analyzed left to right to obtain the result of the rule based parser which developed version of deterministic parsing algorithm [8].

Uzbek language has rich morphological combination of the lexeme. While an inflection a number of languages, namely English – follows SVO [subject-verb-object] syntactic order, the Uzbek language follows SOV [subject-object-verb] order. It is known that sentence is consequences of words which syntactically and semantically bonding each other. The important conception of dependency is based on the notion that the syntactic structure of a sentence consists of binary and asymmetrically vertical relations between the words of the sentence. Though morphological features play important role

in syntax not every time is proper to find out the functions of the constituencies.

Our approach is relied on grammar based approach and target tokens include following linguistic features lexicon (LEX), part of speech (POS), inflections of the words (IW), features and functions of syntactic relations each words (SR).

An significant concern in our point of view is to what extent our models and algorithms are tailored to properties specific purpose as methodological aspect to improve language models based on grammar features. This issue is particularly pertinent for further data-driven approaches in NLP sphere in order to implement for syntactic analysis which is portability to applications of computational linguistics.

Morphotactic structures of Uzbek language

In this section, we focus on morphotactic structures of Uzbek language due to the syntactic role of words depends on morphological forms.

Here we can cite one example to represent this model of the word in Uzbek comparing with English:

Keltirilmaganligidanmi?=>

{kel+tir+il+ma+ganligi+dan+mi} – Because of not having been brought yet?

Considering this, a language that is characterized by rich agglutinative morphology, free constituent order, and

predominantly head-final syntactic constructions. Thus, that can be strictly differentiate word order patterns between inflected and agglutinative languages. Uzbek is an agglutinative language with a predominant Subject+Object+Verb word order, although scrambling is common, especially in spoken form. Written Uzbek language uses the Latin and Cyrillic alphabet in Uzbekistan. Structure of syntactic analyzer has three main parts: stemming, morphological analyzing and syntactic analyzing. All three parts connected to each other. Thus, there should be full information morphological word forms so that mediate syntactic functions each constituent in the text.

**Stemming process.** In stemming process, the main objective is to be input from user and separate each word by space then save it to array. Then each word will be compared to database root words using string similarity approach. In this approach, each input word compared letter by letter by with database root words. For example, let us say user entered vatanim, maktabning, insonlar, o‘qiyapti.

Database root words [vatan, maktabning, insonlar]. Stemming process takes each input word then compared them with database root word if input word match root database root word stemming process removes suffixes then displays remaining part of the word as a stem of the input word.

Input words	Database of token	Stem word
vatanim	Vatan+im	Vatan
maktablarning	Maktab+lar+ning	Maktab
Insonlardanmi	inson +lar+dan+mi	inson
o‘qiyapti	o‘qi+yapti	o‘qi

### Morphological analyzer

Algorithm has stem form of the input word in stemming process [9, 10, 11]. In this process is morphological analyzer process that algorithm takes this list of stem words then identifies their suffixes and saves them to a suffix array. Morphological analyzer process analyzes each suffixes and identifies each stems word form (NOUN, VERB, ADJECTIVE, PRONOUN, and NUMERAL).

Input words	Database root words	Stem word	suffixes	Word class
Vatanim	Vatan	Vatan	Im	NOUN
Maktabning	Maktab	Maktab	Ning	NOUN
Insonlar	Inson	Inson	Lar	NOUN
o‘qiyati	o‘qi	o‘qi	Yapti	VERB

### Syntactic analyzer

Syntactic analyzer process that identifies sentence’s Subject and VERB. In order to achieve this process, algorithm will apply each sentence’s word classes and its suffixes to a given model (word class and suffixes identified in stemming and morphological processes). It is important to state that word’s location in sentence has significant importance. Because VERB is very central to identify correlation of POS. Then depending on the VERB, algorithm will identify the SUBJECT. VERBs normally located last word of the sentence. Then VERB words normally have suffixes with that states sentence’s tense or it can state that whether sentence has PRONOUNS. For example, men (I, me), siz(you), biz (we), ular (they).

Let’s say user entered following sentence: Men maktabga bordim.

In Uzbek [OV] is available core model for any kind of type of sentences even there are nominal either verbal. Here we can see different types of word combinations in this case:

Correlation	OV in Uzbek	Example
Adposition type	Postpositions	Sen uchun keldim – I came for you.
Order of noun and genitive	genitive before noun	Onamning xatini o‘qidim – I read my mother’s letter.
Order of adjective and standard of comparison	standard before adjective	Ko‘rganlarim ichida eng chiroylisi shu edi. – this is the most beautiful things which I have ever seen.
Order of verb and adpositional phrase	adpositional phrase before verb	Ertaga samalyot orqali uchaman. – Tomorrow I fly by airplane.
Order of verb and manner adverb	manner adverb before verb	U juda tez yugura oladi. – He can run very fast.
Order of copula and predicative	predicate before copula	Men ertaga kelishim mumkin. – I may come tomorrow.

Order of auxiliary verb and content verb	content verb before auxiliary	Buni yaxshilab o'ylab ko'rishing lozim. – You have to think over.
Place of adverbial subordinator in clause	clause-final subordinators	Kelishing bilanoq menga qo'ng'iroq qil. – As soon as you arrive, give me a call.

After having general grammar features it can ease to comprehend the process of attitudes of POS in the text.

Stemming process

Input word	Stem word
Men	Men
Maktabga	Maktab
Bordim	bor

Morphological process

Input word	Stem word	Suffixes	Word class
men	men	none	PRONOUN
maktabga	maktab	ga	NOUN
bordim	bor	dim	VERB

Syntactic process

Input word	Stem word	Suffixes	Word class	Syntactic
Men	Men	NONE	PRONOUN	SUBJECT
Maktabga	Maktab	Ga	NOUN	NONE
Bordim	Bor	dim	VERB	VERB

These are formula to find Subject:

Formula for identifying Subject
If first word in sentence starts with pronoun (Men, Sen, Biz, Ular)

If sentence does not start with pronouns then algorithm goes second condition formula:

Formula for identifying Subject (two words as a Subject) If sentence has following combination:	Example
Noun+Noun	(temir uskuna)
Adjective+Noun	(qulay imkoniyat)
Pronoun+Noun	(hamma ishtirokchilar)
Number+Noun	(birinchi kun)
Gerund+Noun	(o'qiyotgan qiz)
Infinitive+Noun	(nishonlash kuni)
Adverb+Noun	(sekin harakat)
Noun+dagi(suffix)+Noun	(devordagi rasm)
infinitive+dagi(suffix)+Noun	(o'qishdagi intizom)
Adjective+dagi(suffix)+Noun	(qizildagi joziba)
Noun+dagi(suffix)+Adjective	(sinfidagi a'lochi)
Adjective+Number	(mo`jizaviy yetti)
Noun+dagi(suffix)+Number	(rasmdagi bir)
Adjective+Infinitive	(qulay joylashish)
Adverb+infinitive	(tez yeyish)

Formula for identifying Subject (three words as a Subject) If sentence has following combination:	example
Infinitive+(suffix)->dagi+Noun	ishlashdagi g'ayrat
Adverb+(suffix)->dagi+Noun	yuqoridagi qavat
Noun{ni, ga, da, dan}+Gerund+Noun	maktabga ketayotgan qiz
Adverb+Gerund+Noun	tez kelgan lahza
Noun+(suffix)->day dek)+Adjective	oyday oppoq

These are formulas to find Verb:

Formula for identifying Verb (two words as a Verb) If sentence has following combination:	Example
Adjective+Verb	yaxshi o'qimoq

Adverb+Verb	astoydil o‘qimoq
Gerund+Verb	kulib gapirmoq
Noun+(suffix)->ga+Verb	maktabga bormoq
Noun+(suffix)->ga+Infinitive	daftarga yozmoq
Noun Pronoun+(suffix)->dan+Verb	universitetdan qaytmoq
Noun Pronoun +(suffix)->ni+Verb	hikoyani o‘qimoq
Noun +(suffix)->ni+ravishdosh	ishni bajarib
Noun+(suffix)->da+Verb	maktabda o‘qimoq
Noun+(suffix)->da+Gerund	osmonda uchib kelayotgan

### Algorithm for syntactic analyzer

Pseudo code for the syntactic analyzer algorithm

<pre> Input -&gt; Tokenize(input); If TokenizeValidate(input) then return input; ===== for each Word in Words do if Input Match with DB stem then stem-&gt; extractStem(input); else return null; ===== for each Word in Suffixes do if input Have suffix then stem-&gt; extractSuffix(input); else return null; ===== for each Word in Wordclass do if input match with DB stem wordClass-&gt; identifyWordClass(input); else return null; ===== for each Word in identifyWordClass do if word match with Subject formalu then subject-&gt; identifySubject(input); else return null; ===== for each Word in identifyWordClass do if word match with Verb formalu then subject-&gt; identifyVerb(input); else return null; ===== if (input not match DB stem &amp;&amp; input have no prefix &amp;&amp; input have no suffix) then return invalidWord(input); </pre>
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### Implementation

Syntactic analyzer tool implemented using Python Django framework and JavaScript scripts with the MySQL database. Web application is easy to access and easy to use for users. To test Syntactic analyzer simply visit <https://uzbeklinganalysis.uz/stem/syntactic> web page and type a word you want to analyze then click ‘Analyze’ button (refer to Fig 4).

Let’s test syntactic analyzer tool. Let’s say we have following three sentences.

Uzbek	English
Siz maqola yozing	You write article
Men maktabga bordim	I went to school
Biz ertalab yugurdik	We jogged in the morning

Textni Kiriting
siz maqola yozin
Analyze
Syntactic
siz(Ega) yozin(Kesim)

Fig. test 1

Textni Kiriting
men maktabga bordim
Analyze
Syntactic
men (Ega) bordim(Kesim)

Fig. test 2

Textni Kiriting
biz ertalab yugurdik
Analyze
Syntactic
biz(Ega) yugurdik(Kesim)yugurdik(Kesim)

Fig. test 3

**Conclusion.** As we mentioned in the article, the experiments carried out based on grammar approach as initial process of parsing. What we presented syntactic analyzer it could be one applicable tool as an open-source syntactic analyzer for the Uzbek language in NLP. Syntactic analyzer provides an interactive query interface through its website. Syntactic analyzer has a manually crafted lexicon, to reduce the number of redundant analyses. Manual configuration is an ongoing process and we modify the lexicon by inspecting the results of analyses. To the best of our knowledge, after having higher ration accuracy parsing then we can use it as a tool by automatic analysis of the Uzbek text.

As a further development, we are planning to provide an interactive tool to generate semantic analyses for Uzbek language.

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## GENDERNING IJTIMOYIY-PSIXOLOGIK XUSUSIYATLAINI INNOVATSION BOSHQARUV FAOLIYATIGA TA'SIRI

Annotatsiya

Ushbu maqolada boshqaruv kadrlarini tanlashning samarali usullarini yaratishda ijtimoiy muhitning boshqaruv va zaxira kadrlar faoliyatiga ta'sirining jins bo'yicha tafavutlari maskulinlik, femininlik va androgenlik (IS) psixologik jins xususiyatlarini ahamiyati, ta'sir omillari hamda tip xususiyatidan kelib chiqib tahlil etiladi. Barcha fikrlar tadqiqot doirasida olingan natijalar bilan isbotlanganligi ilmiy asoslanadi.

**Kalit so'zlar:** samaradorlik, innovatsion boshqaruv, kadrlar zaxirasi, maskulinlik, femininlik va androgenlik (IS), psixologik jins, yorqin maskulinlik, yorqin femininlik.

Boshqaruv kadrlari zaxirasini shakllantirish, boshqaruvni professional jihatdan rivojlantirish, inson omilini baholash, boshqaruv kompetentsiyasini modellashtirish, davlat xizmati, kar'era, professional-xizmat vazifalarida o'sish, jamoani boshqarish, baholash taktikasi va strategiyasining ijtimoiy, siyosiy iqtisodiy ahamiyati doirasida qator tadqiqotlar amalga oshirilgan. Xususan, tashkiliy boshqaruvning ta'sirchanligi to'g'risidagi bilimlarga bo'lgan ehtiyojni ortib borishi kuchli korporativ madaniyatlarni rivojlanishi, ularni shakllanish mexanizmlari doirasidagi qonuniyatlarni o'rganishga bo'lgan talabni yuqoriligi bilan baholanadi. Shaxs resurslarini psixologik omillar hisobiga rivojlantirish va tashkilotchilikning ta'sirchanligini oshirish bo'yicha texnologiyalarning o'rni muhim hisoblanadi.

O'tgan davr mobaynida kadrlar siyosatini tubdan isloh qilish, mavjud lavozimlarga kelgusida foydalanish uchun kadrlar zaxirasini shakllantirishning samarali yo'llarini topish, lavozimlarga munosib nomzodlarni ilgari surish, zaxiraga tavsiya etilayotganlarni ijtimoiy mavqeyi, irqi, jinsidan qat'iy nazar ularning psixologik portretini yaratish bo'yicha ilmiy izlanishlar olib borilib, qator tadbirlar amalga oshirilmoqda.

**Adabiyotlar tahlili.** Ta'kidlashimiz kerakki, bugungi kunda kadrlarni lavozimlarga tanlash jarayonida genderning ijtimoiy-psixologik omillariga ahamiyat qaratishga ham zarurat bor. Tadqiqotlar shuni ko'rsatmoqdaki, gender muammosini ochib berishda siyosiy qarashlar, ijtimoiy-psixologik omillar, ijtimoiy stereotiplar ularning kelib chiqishi, ta'sir doirasi, sabab va oqibatlarini tahlil etishda gender kontseptsiyasiga tayanish muxim hisoblanadi. Xususan,

1. Gender farqlar;
2. Genderning ijtimoiylashuvi;
3. Ayollar psixologiyasi;
4. Erkaklar psixologiyasi;
5. Gender munosabatlari psixologiyasi;
6. Liderlikning gender psixologiyasi

Shu o'rinda masalaning yana bir muhim jihatiga ahamiyat qaratish zarur, har bir tashkilotning ichki tartib-qoidasi, madaniyati, qadriyati, kadrlarni boshqarish tizimining turlicha bo'lishi aniq. Demak, kadrlarni boshqarish siyosati avvalo tashkilotning falsafiy nuqtai nazari asosida amalga oshiriladi. Ma'lumki har bir tashkilotning o'z falsafasi bo'lganidek, o'ziga xos kadrlar siyosati ham mavjud bo'ladi [1].

Rahbarlarni tanlash tashkilotda boshqaruv ta'sirchanligini oshirishning asosiy omili hisoblanadi. Binobarin, jamoa

faoliyati eskirgan boshqaruv modeliga asoslangan bo'lsa, bu tashkilotdagi munosabatlarda salbiy oqibatlarga, xatoliklarga olib kelishi mumkin. Tashkilotning ishonchlilikka va ijtimoiy mas'uliyatlikka bo'lgan munosabatlarining oshib borishi boshqaruvni yangi modelini yaratishga bo'lgan ehtiyojni ortib borayotganligini anglatadi [V.M.Dyachkov, A.L.Juravlev, Ye.A.Klimov, R.L.Krichevskiy va boshqalar].

Ma'lumki, norasmiy boshqaruvchanlik muammosi falsafiy nuqtai nazardan B.M.Bass, R.M.Stogdill, F.E.Fielder, R.Likert, V.Vroom, R.R.Blakelar tomonidan uzoq yillardan buyon chuqur o'rganib kelinadi. Xususan, falsafa boshqaruvni guruh faoliyati integratsiya mexanizmlaridan biri sifatida o'rganadi. Ayrim hollarda "rahbarlik", "liderlik" tashkilot yoki guruhdagi maxsus munosabatlarni anglatuvchi tushuncha sifatida qo'llaniladi. Ijtimoiy psixologiya esa, muammoning xususiyatlari va qonuniyatlarini, faoliyatda metodlarni tanlash, o'qitish va xarakterga mos ravishda ularni lavozimlarga tavsiya etishni; siyosatshunoslik siyosat maydonidagi liderlar va liderlikni o'rganishga asosiy diqqatini qaratadi.

**Metodologiya.** Tadqiqotlar boshqaruvda mas'uliyatni oshirish kadrlarning ayrim immanent sifatlariga bog'liq bog'liq bo'lishi mumkinligini ko'rsatadi. Gender xususiyatlarini tadqiq etilishi esa bevosita Sandra Bem qarashlariga borib taqaladi. Zero, eng asosiy va amaliy jihatdan yagona metod Sandra Bem so'rovnomasi hisoblanadi. Mazkur so'rovnoma ko'plab adabiyotlarda jins rollari BSRI (Bem sex Role Inventory) anketasi deb yuritiladi. Mazkur so'rovnoma femininlik va maskulinlik xarakterlarining namoyon bo'lish darajasini aniqlash uchun keng qo'llaniladi. Shuningdek, femininlik, maskulinlik, androgenlik shaxs tiplarini aniqlash uchun ham qo'llaniladi.

S.Bem so'rovnomasi avtor tomonidan androgeniya kontseptsiyasi doirasidagi gipotezalarini empirik tadqiq etish maqsadida ishlab chiqilgan. Androgeniya ("Androgynos" grekchadan tarjima qilinganda "ikki jinslik" ma'nosini anglatadi) ya'ni bitta organizmda ayollik va erkaklik jihatlarining mavjudligini anglatadi; Androgeniyaning ko'p uchraydigan holati – "germafroditizm" hisoblanadi. S.Bem o'z kontseptsiyasida "androgeniya" termini anatomo-fiziologik tuzilishni emas balki, individga ijtimoiy-psixologik xarakteristika berish uchun qo'llaydi.

Gender psixologiyasining asosiy kategoriyalari:

1.Femininlik – ayollik sifatleri (emotsionallik, mayinlik, noziklik)ning yorqin namoyon bo'lishi bilan tavsiflanadi.

2. Androgenlik – ayol va erkak psixologik sifatlarining o'zaro mutanosiblashuvi, ya'ni, vaziyatdan kelib chiqib o'zining fe'l-atvorni o'zgartira olish qobiliyati, stresslarga bardoshlilikning shakllanishi, turli yo'nalishlardagi faoliyatda natijadorlikka erishishga yordam beradi.

3. Maskulinlik – mantiqiylik, qaror qabul qilish, qat'iylik, shuhratparastlik kabi an'anaviy erkak sifatlarining yorqin namoyon bo'lishi.

4. Jinsiy-psixologik shaxsiylik aniqlanmagan individlarda femininlik yoki maskulinlik sifatleri yorqin namoyon bo'lmaydi. Sandra Bem nazariyasiga ko'ra androgenlik bu an'anaviy ayollik va erkaklik qirralarining muvofiqlashuvi, ya'ni insonning muhim psixologik tavsifidir. Bu shaxsning xulq-atvorini turli xil vaziyatga bog'liq holda o'zgartira olish qobiliyatini anglatadi.

Mazkur kontseptsiyaga muvofiq, maskulin erkakda femininlik, feminin ayollarda maskulinlik qirralari bo'lishi mumkinligi hamda mazkur kontsepsiya ikkala jinsda ham hulq-atvoridagi ko'pqirralikni tushunish imkoniyatini yaratadi.

Gender, jinsiy dimorfizmda propozitsional biologik asosni tashkil etib, shaxsning formallashtirilgan bosh tavsifi hisoblanadi. Ya'ni, bir vaqtning o'zida hayotiy stsenariylarni boshqarish trayektoriyasi hisoblanadi. Psixologik jins muammosini tadqiq etish nafaqat femininlik, maskulinlikni o'rganishga qaratilgan, balki, androgenlikni ham o'rganishga qaratilgan bo'lib, jins differentsiatsiyasi tushunchasini kengaytiradi.

Gender identivligi va gender identifikatsiyasi haqida so'z borganda zamonaviy tadqiqotlarda asosiy uchta aspekt ilgari suriladi: Markazlashtirish, baholash va hissiy zo'riqish. Xususan, "Markazlashtirish gender identivligining muhimligi; gender bilan bog'liq qadriyatlar, rollar; zarurat tug'ilganda haqiqiy madaniy qadriyatlarga rioya qilish o'z tasavvurlariga nisbatan hissiy zo'riqishni paydo bo'lishini tushuntiradi" [3].

**Tahlil va natijalar:** Femininlik va maskulinlik boshqa gender kategoriyalari singari yagona ma'noni aks ettirmaydi va kamida uch xil ko'rinishni namoyon etadi.

1. Maskulinlik va femininlik deskriptiv tavsiflovchi kategoriya sifatida ayollardan farqli ravishda erkaklarga xos bo'lgan hulq-atvor va psixologik jihatlar yig'indisini anglatadi.

2. Maskulinlik va femininlik askreptiv kategoriya sifatida jamiyat madaniyatlarini ramziy elementlarini anglatadi. Xususan, ayol va erkak qanday bo'lishi kerak, qanday sifatlar ularga tegishli bo'lishi zarurligi to'g'risidagi ijtimoiy normalar, ustanovkalar, e'tiqodlar yozib qo'yilishini anglatadi.

3. Maskulinlik va femininlikda preskreptiv kategoriya – o'rtacha statistik tahlillarni emas balki, ideal (haqiqiy) erkak

va ayol nazarda tutiladi. Bu ayollik va erkaklikning normal etaloni hisoblanadi. [4]

Real hayotda shaxsning individual xususiyatlari, omma tushunchalari bilan bog'liq bo'lgan stereotiplar, ijtimoiy normalar va real voqeelik haqidagi tushunchalar hohish va istaklar hech qachon o'zaro mos kelmaydi. Shuning uchun femininlik va maskulinlikning tadqiq etishning nafaqat turli etalonlari balki, turli xil paradigmalari mavjud. Bular bir ko'rinishda bir birini inkor etuvchi hisoblansa, aslida bir-birini to'ldiruvchi hisoblanadi.

Psixologik jins xususiyatlarini innovatsion boshqaruv samaradorligini oshirishga ta'sirining omillari amaliy jihatdan zaxiradagi va boshqaruv kadrlar o'rtasida o'tkazilgan tadqiqotda o'z aksini topgan. Jumladan, erkak jinsiga mansub boshqaruv hamda zaxiradagi kadrlarda psixologik jins (maskulinlik, femininlik va androgenlik) xususiyatlarining namoyon bo'lishi taqqoslanganda quyidagilar aniqlangan.

Maskulinlikni namoyon bo'lishi bo'yicha zaxira va boshqaruv ( $U=70029,5$ ;  $p<0,01$ ) kadrlar ko'rsatkichlarida ishonchli farqlar aniqlangan. Ya'ni, erkak jinsiga mansub sinaluvchilarimizda maskulinlik zaxira kadr faoliyatida (574,8) boshqaruv kadr (677,7) faoliyatida yanada o'sishi kuzatildi. Bu kadrlarda faoliyat muhiti va mas'uliyat yukining ortishi, javobgarlik doirasining kengayishi psixologik jins xususiyatlariga ta'sir ko'rsatishi anglatadi.

1. Femininlikni zaxira va boshqaruv ( $U=69065$ ;  $p<0,01$ ) kadrlarda namoyon bo'lishi ishonchli farqlar aniqlangan. Ya'ni, erkak jinsiga mansub zaxira (573,9) va boshqaruv (683,4) kadrlarida faoliyati davomida femininlik psixologik jins xususiyatlari namoyon bo'lishi kuzatiladi. Bu, e'tiborlilik, tartiblilik, faoliyatni ta'sirchanligini oshirishda, qo'l ostidagilarga nisbatan xayrihohlikda namoyon bo'lishi mumkinligini anglatadi. Aynan, kadr zaxiradagi faoliyatdan boshqaruvga o'tishi femininlikni yaqqolroq namoyon bo'lishiga olib kelishi mumkin.

2. Androgenlik (IS) xususiyatlari ham erkak jinsiga mansub sinaluvchilarda zaxira (583,8), boshqaruv (623,7) kadrlarda o'rganilganda psixologik jins xususiyatlari o'sib borishini ko'rsatdi. Zaxiradagi kadr boshqaruv lavozimiga o'tkazilganda femininlik va maskulinlik psixologik jins xususiyatlarining har ikkisi mujassam holda o'zini namoyon qilishi mumkin. Ya'ni, androgenlik bir vaqtning o'zida qattiq-qo'l+mehribon, talabchan+intizomli, tashkilotchi+nazoratchi bo'lishi mumkinligini anglatadi. Bunda faoliyat turi, xususiyati, jamoaning barqaror jipsligi, korporativ madaniyatlari, guruh ichidagi rasmiy va norasmiy guruhlarining mavjudligi, jamoani boshqariluvchanligi omil sifatida ta'sir qilishi mumkin. (1.1. jadvalga qarang).

### 1.1. Jadval

**Erkak jinsiga mansub boshqaruv hamda zaxiradagi kadrlarda psixologik jins xususiyatlari namoyon bo'lishini taqqoslash natijalari (Mann-Uitni U-mezone)**

Ko'rsatgichlar	O'rtacha ranglar		U	p
	Zaxiradagi kadrlar (n=1010)	Boshqaruv kadrlari (n=168)		
Maskulinlik	574,8	677,7	70029,5	0,000**
Femininlik	573,9	683,4	69065	0,000**
IS	583,8	623,7	79091,5	0,156

Izoh:\*\* -  $p<0,01$ .

Shuningdek natijalarimiz, erkak jinsiga mansub boshqaruv ( $n=168$ ) hamda zaxiradagi kadrlarda ( $n=1010$ ) maskulinlik-femininlik tiplari namoyon bo'lishidagi tafovutlar yorqinlik darajasini ham tadqiq etish imkoniyatini yaratadi.

Natijalarimizga ko'ra, erkak jinsiga mansub boshqaruv kadrlarida 4,8% zaxira kadrlarda 6,8% ni namoyon etdi. Ya'ni, boshqaruv faoliyati davomida sinaluvchilarimizda yorqin maskulinlik xususiyati pasayib borishi aniqlandi. Maskulinlik

va androgenlik xususiyatlarining namoyon bo'lishida ham ayrim tafovutlar kuzatildi. Boshqaruv 7,1%, zaxira 16,2% ni tashkil etdi.

Bu sinaluvchilarda maskulinlik tiplari kadrning zaxiradagi faoliyatida yuqoriroq namoyon bo'lishini anglatadi. Demak, boshqaruv faoliyatida kuchli jins egalarida avtoritar boshqaruvni qo'llashdan ko'ra, hamkorlik tartibiga o'tish

tashkilot natijadorligiga ijobiy ta'sir ko'rsatishi mumkin bo'ladi.

Boshqaruv kadrlarida androgenlikning namoyon bo'lishi aynan boshqaruv faoliyatida o'sib borishi 81,5%, zaxirada 61,6%ni tashkil etdi. Bu kadrlarda boshqaruv faoliyatiga kirishgandan keyin psixologik jins xususiyatlarining har ikki ko'rinishi mujassam holda namoyon bo'lishi-

ni anglatadi. Psixologik jins tiplari bo'yicha tafovutlarni kuchli namoyon bo'lishi *qattiqqo'l+mehribon, talabchan+intizomli, tashkilotchi+nazoratchi* bo'lishni taqozo etadi va mazkur model ketma-ketlikda ishlashini nazarda tutadi.

Tadqiqotda femininlik (10,6%) va yorqin femininlikni (4,8%) namoyon bo'lishi zaxiradagi kadrlarda psixologik jins xususiyatlarini yuqori bo'lishini ko'rsatdi.

1.2.-jadval

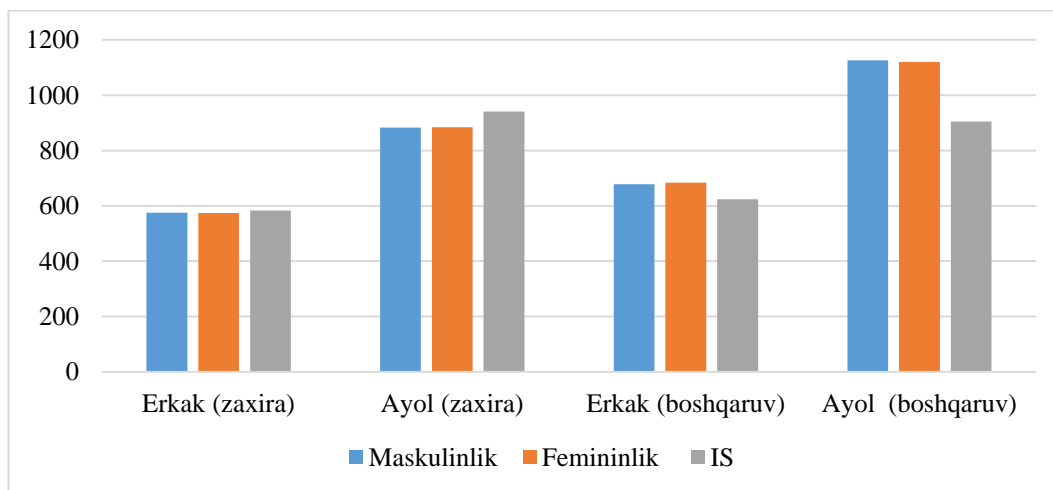
Ayol jinsiga mansub boshqaruv hamda zaxiradagi kadrlarda psixologik jins xususiyatlari namoyon bo'lishini taqqoslash natijalari (Mann-Uitni U-mezon)

Ko'rsatgichlar	O'rtacha ranglar		U	P
	Zaxiradagi kadrlar (n=1477)	Boshqaruv kadrlari (n=388)		
Maskulinlik	882,5	1125,2	211961,5	0,000**
Femininlik	883,8	1120,3	213846,5	0,000**
IS	940,5	904,6	275520,5	0,239

Izoh: \*\* -  $p < 0.01$ .

Ayol jinsiga mansub sinaluvchilarda boshqaruv va zaxiradagi kadrlarda psixologik jins xususiyatlari namoyon bo'lishini taqqos bo'yicha olingan natijalar keltiriladi. Jumladan, boshqaruvdagi ayollarda maskulinlik (1125,2) va femininlik (1120,3); zaxirada kadrlarda maskulinlik (882,5) va

femininlik (883,8) bo'yicha ishonchli farqlar aniqlangan. Ya'ni, ularda psixologik jins xususiyatlari ( $U=211961,5$ ;  $p < 0,01$ ); ( $U=213846,5$ ;  $p < 0,01$ ) namoyon bo'lishida ayrim farqlar kuzatildi.



1-rasm. Zaxira va boshqaruv kadrlarida psixologik jins xususiyatlarini namoyon bo'lishi

Biroq zaxiradagi va boshqaruvdagi kadrlarda ayol jinsiga mansub sinaluvchilarda androgenlik (IS) xususiyatlari bo'yicha ishonchli farq kuzatilmadi. Sababi, ayollarni ijtimoiy rollari bilan bog'liq bo'lishi mumkin.

**Xulosa va takliflar:** Erkak va ayollarda mas'uliyatni o'ziga qabul qilishning turli darajada bo'lishiga ko'plab ijtimoiy omillar ta'sir etishi mumkinligini ko'rsatadi.

Xususan, kadrlarda psixik faollik, qiziquvchanlik, emotsional tonus, zo'riqish, komfortiga kadrning ish joyi, lavozimi, tashkiloti, jamoadagi munosabatlarni o'zgarishi ham ta'sir ko'rsatishi kuzatiladi;

Yangi muhitni qabul qilish reaksiyasi, moslashish darajasi, zaxira yoki boshqaruv kadr sifatida namoyon etishni

baholash imkoniyatining yuzaga kelishi ularda emotsional tonus, psixik faollik, qiziquvchanlik, zo'riqish va komfortni yuzaga keltirishi mumkin;

Psixologik jins xususiyatlariga ko'ra ayol jinsidagi moslashuvchanlikni shakllanganligiga, genderning ijtimoiy stereotiplari bevosita ta'sir etishi ham mumkin;

Yuqoridag natijalarimiz va hulosalarimiz, kadrlarda mas'uliyatni emotsional jihatdan barqaror qabul qila olish uning psixik hamda jismoniy chiqqanligiga, vaziyatni baholashiga bog'liq bo'lishi mumkinligi to'g'risidagi qarashlarni ilgari surishimizga asos bo'lib xizmat qiladi.

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## THE BENEFITS OF LISTENING TO MUSIC IN LEARNING ENGLISH

Abstract

Listening to music can be a powerful tool for language learners, particularly those learning English as a second or foreign language. Music can enhance listening skills, improve vocabulary and grammar, enhance pronunciation, boost motivation and engagement, and provide cultural insight. By exposing learners to different genres of music, they can practice listening to authentic English pronunciation and intonation, as well as become familiar with a variety of accents and dialects. Moreover, music can be a fun and engaging way to learn English that can provide a welcome break from more traditional forms of language learning. By incorporating music into their language learning routine, learners can improve their language skills while enjoying the benefits of music.

**Key words:** Language acquisition, pronunciation, vocabulary expansion, grammar comprehension, intonation and rhythm, memory retention, motivation, cultural immersion, listening skills

**Introduction.** Music is a universal language that can transcend cultural and linguistic barriers. It has the power to evoke emotions, trigger memories, and motivate individuals. Music can also be a powerful tool for language learners, particularly those learning English as a second or foreign language. In this article, we will explore the benefits of listening to music in learning English.

### 1. Enhances Listening Skills

Listening is a crucial skill in language learning. However, many language learners struggle with understanding spoken English, especially when it comes to accents, intonation, and rhythm. Listening to music can help learners train their ears to distinguish different sounds and improve their comprehension skills. Music also provides a context for learners to practice listening to authentic English pronunciation and intonation. Moreover, exposure to different genres of music can expose learners to a variety of accents and dialects, which can help them better understand and communicate with English speakers from different regions.

### 2. Improves Vocabulary and Grammar

Music is rich in vocabulary and grammar structures. Lyrics often contain idiomatic expressions, colloquialisms, and slang that are commonly used in everyday conversations. Listening to music can help learners expand their vocabulary and learn new grammatical structures in a fun and engaging way. Learners can also learn how to use idiomatic expressions and phrasal verbs in context, which can improve their ability to communicate effectively in English.

### 3. Enhances Pronunciation

Music can be an effective tool for improving pronunciation. When listening to music, learners can pay attention to the way the singer pronounces words and phrases. They can then mimic the singer's pronunciation and practice it themselves. This can help learners develop a more accurate and natural-sounding accent. Additionally, singing along to songs can help learners practice their pronunciation and intonation, as well as improve their fluency and rhythm.

### 4. Boosts Motivation and Engagement

Learning a new language can be a daunting task, and learners may sometimes feel demotivated or disengaged. Music can be a powerful motivator and can help learners stay engaged with the learning process. Listening to music can be an enjoyable and relaxing activity that can provide a break from more traditional forms of language learning. It can also be a way to connect with English-speaking cultures and learn more about their traditions and values.

### 5. Provides Cultural Insight

Music can be a window into the culture of English-speaking countries. Different genres of music can reflect different aspects of culture, such as history, values, and social issues. Listening to music can help learners gain a deeper understanding of the culture behind the language, which can in turn help them communicate more effectively with English speakers. Furthermore, exposure to different forms of music can broaden learners' cultural horizons and help them appreciate the diversity of English-speaking cultures.

**Material and methods.** The study of the benefits of listening to music in learning English could be approached using different methods, such as surveys, experiments, and observations. Surveys could be used to gather data on the frequency and types of music that language learners listen to, as well as their perceived benefits of listening to music in learning English. Experiments could be designed to measure the impact of listening to music on language learning outcomes, such as listening comprehension, vocabulary acquisition, and pronunciation accuracy. Observations could be conducted to gain insights into how learners use music in their language learning routines and how they perceive its effectiveness.

To conduct an experiment, a sample group of language learners could be randomly assigned to a music group and a control group. The music group would listen to English songs for a certain amount of time each day, while the control group would not. Pre and post-tests could be administered to both groups to measure improvements in listening comprehension, vocabulary acquisition, and pronunciation accuracy. Additionally, surveys could be administered to both groups to gather data on their motivation, engagement, and enjoyment of the language learning process.

Observations could be conducted by observing language learners in a naturalistic setting, such as a language classroom or language exchange program. Researchers could observe how learners use music in their language learning routines, such as when and how often they listen to music, what types of music they listen to, and how they use music to practice their language skills. Researchers could also conduct interviews with learners to gain insights into their perceptions of the effectiveness of music in language learning.

Overall, a combination of surveys, experiments, and observations could be used to gain a comprehensive understanding of the benefits of listening to music in learning English.

**Results and discussion** The benefits of listening to music in learning English have been widely acknowledged in

the language learning community. Research studies have shown that listening to music can enhance listening skills, improve vocabulary and grammar, enhance pronunciation, boost motivation and engagement, and provide cultural insight.

One study conducted by Wong and Chen (2015) found that listening to English songs can improve listening comprehension and vocabulary acquisition among English language learners. The study involved a group of Taiwanese high school students who listened to English songs for one hour per week for eight weeks. The results showed that the students who listened to English songs had significantly higher scores on listening comprehension and vocabulary tests than those who did not listen to music.

Another study conducted by Chamorro-Premuzic and Furnham (2007) found that listening to music can increase motivation and engagement in language learning. The study involved a group of university students who were learning English as a second language. The students were asked to listen to English songs for 30 minutes per day for five days. The results showed that the students who listened to music had higher levels of motivation and engagement in their language learning compared to those who did not listen to music.

In addition, listening to music can improve pronunciation and intonation. A study conducted by Kim (2013) found that singing along to English songs can improve pronunciation and intonation among Korean learners of English. The study involved a group of Korean students who sang along to English songs for one hour per week for eight weeks. The results showed that the students who sang along to

English songs had significantly higher scores on pronunciation and intonation tests than those who did not sing along to music.

Furthermore, listening to music can provide cultural insight and exposure to different forms of English. A study conducted by Eslami and Fatahi-Bafghi (2014) found that listening to English songs can increase cultural awareness and sensitivity among Iranian learners of English. The study involved a group of Iranian students who listened to English songs and analyzed the lyrics for cultural themes. The results showed that the students who listened to music had a higher level of cultural awareness and sensitivity compared to those who did not listen to music.

Overall, the benefits of listening to music in learning English are numerous and can have a significant impact on language learning outcomes. By incorporating music into their language learning routine, learners can improve their listening skills, vocabulary and grammar, pronunciation, motivation and engagement, and cultural awareness.

**Conclusion.** In conclusion, listening to music can be a valuable tool for language learners, particularly those learning English. It can enhance listening skills, improve vocabulary and grammar, enhance pronunciation, boost motivation and engagement, and provide cultural insight. Moreover, music is a fun and engaging way to learn English that can provide a welcome break from more traditional forms of language learning. By incorporating music into their language learning routine, learners can improve their language skills while enjoying the benefits of music.

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## SOTSIAL KAPITAL TUSHUNCHASINING DASTLABKI KONSEPSIYALARI

Annotatsiya

Ushbu maqolada kapital va sotsial kapital tushunchalarining asosiy mazmuni yoritilgan. Mazkur tushunchalarning ijtimoiy va iqtisodiy sohalaridagi ahamiyati ochib berilgan. Mazkur kategoriyaning jamiyat hayotida ko'payishi va faoliyat sifatida yuritilishi ma'lum darajada iqtisodiy o'sishga ta'sir etishi haqida ma'lumot berilgan. Sotsial kapital tushunchasining ilk tarixiy kelib chiqishining o'ziga xos xususiyatlari ochib berilgan. Sotsial kapitalning mikro va makro darajadagi nazariy konsepsiyalari olimlar fikrlarida va qarashlarida murakkab falsafiy va chuqur mantiqiy asosini ko'rsatilgan. Hozirgi kunga kelib mazkur sotsial kapital tushunchasining ko'pgina ta'riflari ushbu maqolada keltirib o'tilgan.

**Kalit so'zlar:** sotsial kapital, kapital, sotsial aloqalar, substansiya, mikro darajadagi sotsial kapital, makro darajadagi sotsial kapital, ishonch, jamoaviy resurs.

**Kirish.** Inson hamisha hayotida o'zi uchun kerakli bo'lgan boyligni yig'ishga harakat qiladi. Ushbu insoniy harakat inson farovonligini oshirishning muhim mezonini bo'lib hisoblanadi. Boylik ilmiy farazlarda "kapital" tushunchasi bilan konvertatsiya qilinadi. Shuning uchun ham, ijtimoiy va iqtisodiy sohalarida "kapital" tushunchasi keng qo'llanilmoqda va uning turli xil shakllari ajralib chiqmoqda. Uning asosiy mohiyati harajat qilish va to'plashda bo'lib, mazkur ijtimoiy qonun kategoriyasi sifatida insoniy faoliyatni namoyon etadi. Mazkur kategoriyaning jamiyat hayotida ko'payishi va faoliyat sifatida yuritilishi ma'lum darajada iqtisodiy o'sishga ta'sir etishi mumkin.

- **Mavzuga oid adabiyotlarning tahlili (Literature review).** Aholi turmush sifatini yuksaltirish va sotsial kapital masalalarining o'zaro aloqadorligiga oid muammolar insoniyat tarixining barcha davrlarda o'rganib kelingan. Sotsial kapitalning nazariy sotsiologik konseptual asoslarini shakllantirgan olimlardan L.Xanifan[1], J.Jekobe[2], G.Bekker[3], G.Louri[4], P.Burdey[5], J.Koulman[6], A.Portes[7], R.Patnem[8], P.Shtompka[9], M.Granovetter[10], S.Knek va P.Kiffer[11], M.Mularskaya-Kucharek va K.Brjeinskiy[12], D.Narayan va Pritchettlar[13], F.Fukuyama[14], R.Bert[15] sotsial kapitalning iqtisodiy taraqqiyotga ta'sirini, o'lchov birligini, baholashning kombinatsiyalangan usulini, ijtimoiy tarmoqlarni baholashni taklif etganlar.

- **Tadqiqot metodologiyasi (Research Methodology).** "Sotsial kapital" tushunchasi ilk bor maktab ta'limi tizimi bilan chambarchas bog'liq bo'lgan amaliyotchi va tadqiqotchilar ishlarida o'z aksini topgan. Amerikalik jamiyatshunos va ta'lim islohatchisi D.Dyui ta'kidlashicha "har kim maktabda o'zi tug'ilgan ijtimoiy muhit chegarasidan chiqish imkoniyatiga ega bo'ladi va keng ijtimoiy muxit bilan yanada jonliroq aloqaga kirishadi. Bunday aloqa gorizontalar tarmoq aloqalarini o'rnatilishiga yordam beradi. Undan tashqari, D.Dyui fikricha, umumiy ta'lim makoni jamiyatdagi markazlashirilgan kuchlarni pasaytiruvchi muhim omil bo'lib, yuqori hilma-xillik bilan farq qiladi.[16]

Mazkur tushuncha ilk bor sotsial aloqalar va ularning qanday shakllanishi bilan bog'liq holda rivojlanishni

boshlagan. Albatta, biz bilamizki har qanday individ ijtimoiy munosabatlarga kirishishning boshlang'ich murakkablashgan makonida ya'ni ta'lim muassasasida shakllanishni boshlaydi. Ta'lim muassasasida individ ma'lum bir sotsial aloqani o'rnatadi, jamiyatga xos bo'lgan madaniy meyorlarni o'rganadi. O'rnatilgan aloqa va o'rganilgan meyorlar, individni jamiyatga integratsiya qilishida ma'lum bir qulayliklar yaratadi. Bunday holat esa individda jamiyatga nisbatan ishonchini hosil qiladi.

Yana bir boshqa ta'lim tadqiqotchisi L.Xanifan sotsial kapital darajasini qanday qilib ko'tarish mumkin? degan savolga javob berar ekan, u AQShdagi ayrim mahalliy hamjamiyatlar haqida misol keltirib, ulardagi dasturlarda boshlang'ich va o'rta ta'limni hammabopligini kuchaytirish tashabbusi keltirib o'tilganligi haqida tushuntirgan. Muallif fikricha, maktab islohot natijasida mazkur hamjamiyat ijtimoiy hayotining markaziga aylanganligi e'tirof etilgan. Mazkur xududda yashovchilarning muntazam ravishda uchrashuv o'tkazishlari sotsial kapitalga bo'lgan bir talay keskin yondashuvlar shakllanishiga, nafaqat ta'lim bilan bog'liq, balki sotsial infratuzilmani sifatini yaxshilashga qaratilgan (yo'llar, tibbiy xizmat) va boshqa jamiyat ravnaqidagi umumiy muammolarni yechishga imkon bergan. L.Xanifan fikricha sotsial kapitalga qilingan har qanday investitsiya sezilarli darajada moddiy jihatdan foyda keltirishi mumkinligini tushuntirgan.[16]

Aslida ham "sotsial kapital" terminini birinchilardan bo'lib L.Xanifan 1920 yillarda qishloq maktablaridagi jamoatchilik markazlarini, insonlarning kundalik hayotidagi muhim "substansiya"ni aniqlash uchun, o'zining munozaralarida ishlatgan. Ushbu "substansiya" ijtimoiy guruh tuzuvchilar o'rtasidagi ijtimoiy aloqa va birdamlik ekanligini L.Xanifan ta'kidlab o'tgan.[17]

Albatta, sotsial kapital nafaqat ta'lim sohasiga balki, barcha sohalariga bir xil shaklda ta'sir ko'rsatadi. Makur holatda sotsial kapitalning asosiy funksiyasi insonlar o'rtasidagi ijtimoiy aloqalarning o'rnatilishi, aloqalarni mustahkamlanishi va insonlar o'rtasida o'zaro ishonch ko'rsatkichining shakllanish tamoyiliga asoslanganligini ko'rishimiz mumkin. Yuqorida keltirib o'tilgan substansional

asos, bu munosabatlar tizimidagi mohiyat - aloqa ekanligini tushuntirishga harakat qilingan. Chunki, inson kundalik hayot faoliyatida ko'pgina aloqalarga kirishadi. Shu aloqalar tufayli u shakllanadi va ijtimoiylashadi.

Keyinchalik sotsial kapital kategoriyasi juda chuqur konseptuallashuvni hosil qildi va bugungi kunga kelib ko'pchilik tadqiqotchilar ushbu xodisani tushunishda ikki xil yondashuv yoki ikki xil darajadagi tahlilga ajratadilar. Xususan S.P.Borgatti, K.Djons, M.G.Everet va N.Linlar shunday deb xisoblaganlar. Ushbu darajalarni shartli ravishda makro va mikro darajalar deb nomlash mumkin. Birinchi yondashuv sotsial kapitalni individual sotsial aktor sifatida sifatini tavsiflaydi, vaholanki, ikkinchi esa uni gurux sifatida sifatini tavsiflaydi (odatda umumiy jamiyat bo'lib tavsiflanadi). Sotsial kapitalning yetakchi tadqiqotchilaridan biri N.Lin, iqtisodiy o'xshashliklarga tayanib, undagi majoziy kapitalga urg'u beradi va undagi aniq chegarani belgilab, ushbu yondashuvlar kim foyda olishi kerak – individ yoki gurux savolining javobini berishga imkon beradi.[17]

- **Tahlil va natijalar (Analysis and results).** Yuqorida berilgan yondashuvlar sotsial kapitalning jamiyat faoliyatidagi o'z strukturasi shakllanishini ifodalaydi. Mazkur struktura makro va mikro darajalarda shakllanadi, ammo ushbu tavsif sotsial kapitalni faqat foyda olish nuqtai nazaridan ifodalaydi. Albatta, ushbu vaziyatda kapital tushunchasini majoziy jihatlariga ko'p e'tibor berilganligi ko'zga tashlanadi. Shu bois ma'lum bir dilemma hosil bo'ladi. Aholini turmush sifatini oshirishda sotsial kapitalning qaysi bir tavsifi: individual yoki guruxiy tavsifi ko'proq qo'llaniladi. Ushbu dilemmaning yechimi mazkur tushunchani ijtimoiy yoki iqtisodiy omil ekanligiga tavsif beradi.

Mikro darajadagi sotsial kapital tushunchasining taxmini shundaki, individ o'z shaxsiy sotsial kapitaliga investitsiya kiritishi mumkin. Ushbu sotsial kapital tadqiqotining mazmunini nobel mukofoti laureati G.S.Bekker tomonidan taklif etilgan, an'anaviy asosda davom ettirilgan. 1964 yil G.S.Bekker "inson kapitali" tushunchasini ilmiy muomilaga kiritib, unda u ishchilarning ko'nikma, bilim va mahoratlarni majmuyini belgilagan, ketkaziladigan sarf harajat vaqti kelib ishchining o'ziga va uning ish beruvchisiga sezilarli darajada foyda keltirishini ta'kidlagan.[17]

Har qanday tushunchani strukturalash orqali ma'lum darajada uni tadqiq etish metodikasi shakllanadi. Sotsial kapital tushunchasi va uning strukturasi makro va mikro hamda mezo darajalarda o'rganish ilmiy tadqiqot ishining maqsadlaridan biri ekanligini ta'kidlab o'tishimiz zarur.

Sotsial kapital tushunchasining mikro darajadagi konseptualizatsiyasiga eng ahamiyatli xissani fransiyalik sotsiolog Pyer Burdye qo'shgan. Pyer Burdye sotsial kapitalni real va salohiyatli resurslar majmuasi sifatida, eng mustahkam aloqalar bilan, birmuncha institutlashtirilgan munosabatlarining o'zaro xabardor va e'tirof etilganini bog'liq deb ta'riflaydi. Mazkur ta'rifdan kelib chiqadiki, sotsial kapital – bu ijtimoiy tarmoqlarni o'z ichiga oluvchi resurslardir. Burdye "Kapital shakllari" asarida ushbu xodisani tarkibini: tarmoqlar, ijtimoiy meyorlar va ishonchni ajratib ko'rsatadi. Shu tarzda, sotsial kapital ko'lami muallif tomonidan, aktor funksiyasining ijtimoiy tarmoqdagi o'lchami va kapitalning hajmi (iqtisodiy, madaniy va simvolik) hamda ushbu aktorning shaxsiy tarmog'idagi a'zolikka egalik qilishi sifatida belgilab qo'yilgan.[17]

Sotsial kapitalning mikro darajadagi nazariy konseptiyasini yaratgan olim P.Burdye o'z fikr va qarashlarida murakkab falsafiy va chuqur mantiqiy asosni ko'rsata olgan. "P.Burdye birinchilardan bo'lib sotsial kapitalning tizimli tahlilini amalga oshirgan, uning qarashlari foyda olishga qaratilgan bo'lib, insonlar turli xil tashkilotlarga a'zo bo'lganlarida uni ko'paytirib oladilar"[18] degan fikrga kelgan. Albatta, mazkur fikrga qo'shilmaslikning ilojisi yo'q. Chunki, har qanday inson eng avvalo munosabatlar tizimidagi

tarkibiy asos – aloqaga kirishadi. Ushbu aloqa tizimi resurs sifatida P.Burdye tomonidan belgilangan.

Shuni ta'kidlash lozimki, Burdyening qarashlari instrumental (ishlab chiqaruvchan) bo'lib, shu asosda sotsial kapital individual tomonidan yig'ib boriladigan resurs sifatida gavdalanadi. "Aloqalar tarmog'i moddiy va simvolik foydani saqlashga ruxsat berishi uchun uzoq muddatga mo'ljallangan foydali munosabatlarni tuzishiga va qayta tiklashiga imkon berishi zarur, deb yozadi Burdye. Boshqacha qilib aytganda, garchi Burdye hulq-atvor modellarining haqiqiy holati xilma xil ekanligini e'tirof etsada, ular har doim ham iqtisodiy kalkulyatsiyalar bilan aniqlanavermaydi ammo, uning sotsial kapital konsepti foyda olish bilan chambarchas bog'liq ekanligini tushuntiradi."[19]

Mazkur taxlildan ko'rinib turibiki, sotsial kapital mezoni sifatida aloqa tarmoqlari P.Burdye tomonidan belgilab qo'yilgan. Aloqa o'rnatish orqali har qanday inson o'zida foyda olish resursini shakllantira oladi. Albatta, shuni ham ta'kidlab o'tish joizki, foyda olish har doim ham iqtisodiy jihatdan tavsiflanavermaydi. Uning foyda olishga bo'lgan munosabati o'rnatilgan aloqalar asosida belgilanadi. Burdye ta'birida uni resurs deb ta'kidlash o'rinni xisoblanadi. Chunki, hatto nomoddiy resurslar ham moddiyleri singari to'planish va ishlatilish xususiyatiga ega bo'ladi. Ularni xisoblash juda murakkab xisoblanib, faqat jamiyatda belgilangan ma'naviy omillarga uni baholash qudratiga egadir.

Burdye "tarmoqlarning munosabatlari o'zaro e'tirof va tanilish" haqida ekanligini gapirgan. Ushbu tarmoqlarning asoslari "majburlashda va tanlanadigan xususiyatga ega bo'lishda hamda uzoqqa mo'ljallangan majburiyatlarni ko'zlashda, subyektiv darajada (misol uchun, minnatdorlik hissi, hurmat, do'stlik va hakazolar) yoki institutsional kafolatlanishda (huquq) seziladi". Bu fikrning diqqatga sazovorligi shundaki, Burdye birinchi o'ringa aynan emotsional voqealarni – "minnatdorlik xissi, hurmat, do'stlik"ni qo'yadi. Sotsial kapital nazariyasida mavjud iqtisodiy asos farovonlikning konseptual konstantasi sifatida emotsiyani namoyon etadi.[19]

R.Patnem tizimi doirasida kapitalni guruxiy, jamoaviy resurs sifatida individlar uchun muhim emas, ammo butun bir jamiyat yoki insonlar hamjamiyati uchun muhim deb baholaydi. Patnem tizimi sotsial kapitalni: umumiy maqsadlar yutuqlarini yengillashtiruvchi sotsial tarmoqlar (yoki bir vaqtning o'zida ularning ustidan o'tuvchi ham sotsial tarmoqlar va ham resurslar) sifatida, hamjamiyat tarkibi sifatida guruxiy darajada konseptualashtiradi. Sotsial kapital individlar uchun yordam beruvchi manba bo'lib xizmat qiladi, ijtimoiy muxit tomonidan zarur holatlarda ularga psixologik va moddiy yordam berishni ta'minlaydi hamda stresslarning negativ oqibatlarini yumshatish uchun qalqon vazifasini o'taydi.[20]

Burdye nisbatan Patnem sotsial kapitalni ijtimoiy tarmoq sifatida jamiyatga yordam beruvchi resurs deb baholaydi. Mazkur resurs jamiyat a'zolarining ma'lum bir stresslar oqibatidan ozod qilish xususiyatiga egaligini tushuntiradi. Robert Devid Patnemning "Demokratiya ishlab ketishi uchun: zamonaviy Italiyadagi fuqarolik urf-odatlari" kitobida sotsial kapital tushunchasining bir nechta boshqacha mahalliy o'zini-o'zi boshqaruvining tadqiqotlariga asoslangan talqini berilgan. Unda jamoaviy harakatlar va kooperatsiya dilemmasi sifatida, mantiq tarixidan mashxur va salbiy samaraga ega bo'lgan sotsial tizimlar mohiyati ifoda etilgan samarasizlik sababi o'rganilgan (kelajakda sen menga yordam bermasliginni bilib, men senga yordam bermayman). Samarali davlat nafaqat vertikal xokimiyatga (politsiyaga), balki jamoatchilikning gorizontaal kooperatsiyasiga tayanmog'i zarur deb, hisoblaydi Patnem.[21]

R.Patnem fikridagi sotsial kapitalning siyosiy tizimga bog'liq jihatlari yaqqol namoyon bo'lganini ko'rishimiz mumkin. Albatta, yuqorida keltirilgan fikrlarimizda sotsial

kapital jamiyat va davlat boshqaruviga o'z ishtiroki bilan ta'sir etish kuchiga ega ekanligini ta'kidlab o'tganmiz. R.Patnem fikrida insonlar o'rtasidagi hamkorlik (kooperatsiya) jamoaviy harakatga asos bo'lib xizmat qiladi. Bu hamkorlik strukturasi norasmiy munosabatlar ham o'z o'rnini topgan. Vertikal hokimiyat tizimidan ko'ra insonlar norasmiy jamoatchilik hamkorligiga (kooperatsiya) ya'ni, gorizontal tizimga tayanishi haqida fikr yuritadi.

Aynan R.Patnemning yondashuvi, iqtisodiyot sohasidagi o'girilgan jarayonlarni tushuntirish uchun sotsial kapital nazariyasini ro'yobga chiqardi, chunki, ratsional hulq-atvor qolipi doirasiga joylashtira olmadi va norasmiy tavsiflarga ega bo'ldi, u nafaqat shu holicha sotsial munosabatlarni uchun ta'rifladi, balki, iqtisodiyotdagi norasmiy munosabatlarda ishlatishni boshladi. Ta'kidlab o'tish kerakki, mazkur kontekstda qandaydir ideal munosabatlar turi sifatida norasmiy munosabatlar mavzusi ijobiy ahamiyatga ega bo'ldi, qonunchilik asosida tartibga solish ehtiyoji bo'lmasdan, guruhda qabul qilingan faqat an'anaviy asosdagi meyorlar bilan tartibga solindi.[20]

Yuqorida keltirilgan fikrga ko'ra, R.Patnemning yondashuvi asosan rasmiy va norasmiy munosabatlarni iqtisodiyot sohasidagi konvertatsiyasini tavsiflaydi. R.Patnem fikricha insonlar hayoti davomida qonunchilikka asoslangan rasmiy munosabatlardan ko'ra, aynan sotsial guruhlar tomonidan tan olingan an'anaviy norasmiy munosabatlarga ko'proq kirishar ekan. Albatta, mazkur yondashuv siyosiy tavsifga ega. Ushbu taklif etilayotgan jarayonni birdaniga qo'llab bo'lmaydi, chunki har doim ham norasmiy munosabatlar yoki an'anaviy munosabatlar jamiyatdagi ijtimoiy adolat tamoyilini shakllantirmaydi. Faqatgina ma'lum bir pozitsiya nuqta nazardan baho berganimizdagina mazkur munosabatlarni ijobiy jihatlarni qayd etishimiz mumkin. Agar salbiy jihatlarga baho beradigan bo'lsak, unda guruhiy bosimni, sabrsizlikni, munosabatlardagi keskinliklarni va korrupsiya kabi illatlarni qayd etishimiz zarur.

Djeym Samuel Koulman sotsial kapital tushunchasini ratsional tanlov nazariyasi asosida rivojlantiradi. U 1977 yilda amerikalik iqtisodchi Glen Kartmen Louri tomonidan sotsial kapital tushunchasini, ushbu terminning keng mazmunidan kelib chiqib, tashkilotlar va oilalarga tegishli munosabatlar, resurslar yig'indisi sifatida kiritgan. Koulman ushbu resurs tushunchasini uning funksiyasi asosida belgilaydi. Sotsial kapital elementlariga ikkita xususiyat tegishli: 1) mahsuldorlik, madomiki u imkoniyati yo'q yoki erishishi qiyin bo'lgan vaziyatlarda, ishtirokchilar munosabatlarining o'z maqsadlarini amalga oshirishlarida yordam beradi; 2) u qanday munosabatlarga asoslanishi bilan, o'sha harakatlarini qo'llab-quvvatlash qobiliyatiga ega. Bu Koulman nazariyasidan kelib chiqadi, unga ko'ra manfaatdor shaxs almashinuvga (tranzaksiyaga) kirishadi, chunki yolg'iz resurslarni boshqarishi va xodisalarni nazorat qilishi qiyin. Buning natijasida hamkorlikning turli xil shakllari paydo bo'ladi, masalan, ishonchli munosabatlar. Asos soladigan harakatlarning biror maqsadga qaratilganligini aniqlash uchun Koulman iqtisodiyot ilmidan ratsionallik tushunchasini jalb etadi: ratsional hulq-atvor individual foydalilik tamoyiliga asoslanadi. Inson kapitaliga nisbatan sotsial kapital individumlar faolligi xisobidan o'sadi va rivojlanadi.[21]

D.Koulman aynan iqtisodiyot ilmidagi "Ratsional tanlov nazariyasi"ga tayanadi. Unga ko'ra, tanlov maqsadli yoki ratsional ko'rinishga ega bo'ladi. Insonlar atayin harakatlarni maqsadli amalga oshiradi, chunki ular foydaliligiga qarab harakatni tanlashadi. Mazkur harakat maqsadli shaklda bo'lganligi uchun kutilayotgan natija iqtisodiy tamoyillarga asoslanadi. YA'ni, insonlar foydani maksimalashtirilgan shaklda olishga intilishadi. Ratsional shakldagi harakat ko'proq ijtimoiy asosga ega bo'lib, olingan natija ishonchlilik tavsifiga ega bo'lishi nazarda tutiladi. Shu asosda D.Koulman sotsial kapitalni darajalarga bo'lib

o'rganishni taklif etadi. Uning fikricha sotsial kapital ishonch darajasi, informatsion daraja va meyoriy darajalarga bo'linadi.

Ishonch darajasi deganda u ishonch qandaydir oldindan berilgan avans sifatida javobga nisbatan, qarama-qarshi xizmatni amalga oshishini kutilayotganidek paydo bo'ladi deb tushuntiradi. Ratsional majburiyatlarni, ayniqsa agar ularning javob tariqasidagi beriladigan mukofotning qadri bilan solishtirgandagi tannarxi katta bo'lmagan holda o'z zimmasiga olishi mumkin. Xizmat ko'rsatish, agar unga ehtiyoj bo'lsa yordam ko'rinishida qoplanadi. Koulman mazkur sug'urta polisiga ega majburiyatni jamg'arilishini solishtiradi. Qancha ijroga ega jamg'arilgan majburiyatlar («kreditlar») ko'p bo'lsa, shunchalik sotsial kapital ko'payadi. Jamg'arilgan «kreditlar» resurslar va voqealar ustidan nazoratni kengaytiradi va o'z o'rnini xukumat strukturasi topshiradi. Koulman ta'kidlaydiki, sotsial kapital nafaqat alohida insonlarga, balki guruxning barcha a'zolariga ham foyda keltiradi, chunki kiritilgan resurslar bilan birga umumiy foyda ham oshadi.

Informatsion darajada ijtimoiy munosabatlar informatsion potensialga ega. Yurist yoki vrach bilan tanish bo'lish yaxshi, chunki ular doim norasmiy ba'mani maslaxat berishlari mumkin. Hattoki agar ma'lumot sotsial kapitalga murojaat qilish natijasida paydo bo'lgan bo'lsada, Koulman uni kapital deb xisobga oladi.

Meyoriy darajada Koulman "amaldagi meyorlar"ning muximligini belgilab o'tadi, ayniqsa "jamoa manfaatlar uchun o'z manfaatlaridan voz kechish" kerakligini talab etadi. Bu yerda u umumiy manfaat mavzusini gapirib o'tgan. Sotsial kapital va u bilan bog'liq meyorlar jamiyat darajasidagi ongli beg'arazlikka va birdamlikka olib boradi. Ammo o'z foydasiga ratsional intilayotgan inson o'z manfaatlaridan voz kechishiga nima sabab bo'ladi degan savol paydo bo'ladi? Koulman fikricha, meyorlarning mavjudligi: jamiyat foydasi uchun inson o'z manfaatlarini ko'zlashdan tiyishi, baribir xususiy foydani xisoblab chiqishda inobatga olinadi. Ushbu meyorlarning umumiy ahamiyati ish beradi, chunki unga barcha amal qilishiga ishonadi.[21]

Ushbu darajaga bo'lingan komponentlar sotsial kapitalning strukturasi tashkil etishi Dj.Koulman tomonidan berilgan fikrlaridan ko'rinishi turibdi. U ishonchni faqat iqtisodiy ta'rifini, ma'lumot almashish va aloqa o'rnatishni foyda olish, ya'ni kapital manbai ekanligini hamda meyorlarga bo'ysunish faqat xususiy foydani ko'zlashni nazarda tutishini ko'rsata olgan.

- **Xulosa va takliflar (Conclusion/Recommendations).** Hozirgi kunga kelib mazkur sotsial kapitalning ko'pgina ta'riflari mavjud. Ulardan ba'zilarini sanab o'tamiz:

- insonlarning bir-biriga bo'lgan ishonchi asosidagi insoniy munosabatlarning qo'shimcha resurslari mobillashuviga imkon beruvchi "kley" (yelim) (M.Peldem);

- agentlar maxsus sotsial strukturadan oladigan va o'z manfaatlaridan kelib chiqib foydalanadigan resurslar (U.Beyker);

- aktual va salohiyatli resurslar majmuasi sifatida, eng mustahkam aloqalar bilan, birmuncha institutlashirilgan munosabatlarning o'zaro xabardor va e'tirof etilgani (P.Burdey);

- xizmatdagi kasbdoshlar orasidagi do'stona aloqalar va undanam kengroq aloqalar tufayli o'zining moliyaviy va insoniy kapitalidan foydalanishi mumkin (R.Bart);

- individlarning cheklangan resurslarni o'z a'zolari asosidagi ma'lum bir ijtimoiy tarmoqda yoki ancha keng ijtimoiy strukturada boshqarish qobiliyati (A.Portes);

Yuqorida keltirilgan ta'riflar kabi biz ham sotsial kapital haqidagi o'z konsepsiyamizni kiritishga harakat qildik.

**Sotsial kapital** – bu jamiyat tarixida insoniyat tomonidan o'zlashtirilgan ijtimoiy boyluk, sotsial strukturadan olinadigan noiqisodiy foyda, insoniy munosabatlar mohiyati, sahovatli manfaat fazilatlarini, to'plangan yaxshi xislatlar, ezu

va ratsional resurslar majmuyidir. Albatta, mazkur belgilar ijtimoiy aloqalar o'rnatish, jamiyatda belgilangan ijtimoiy-madaniy meyorlarni o'zlashtirish va eng asosiysi jamiyatda ishonch ko'rsatkichini oshirish orqali amalga oshiriladi.

Demak, o'rnatilgan ijtimoiy aloqalar, belgilangan ijtimoiy-madaniy meyorlar va qozonilgan ishonch sotsial kapitalning o'lchash mezonlaridan eng asosiylari bo'lib xizmat qiladi.

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## O‘ZBEKISTONDA KORRUPSIYAGA QARSHI KURASHISH SOHASIDA DAVLAT SIYOSATINI TAKOMILLASHTIRISH MASALALARI

Annotatsiya

Korrupsiya va unga qarshi kurashish bugungi kunning eng dolzarb masalalaridan biridir. Bu borada ko‘pchilik mamlakatlar tizimli ravishda faoliyat yuritib, davlatdagi ijtimoiy-siyosiy holatni inobatga olgan holda korrupsiyaga qarshi kurashish strategiyasini ishlab chiqmoqda. So‘nggi yillarda O‘zbekiston Respublikasida ham korrupsiyaga qarshi kurashish borasida bir qancha keng qamrovli ishlar amalga oshirilib, bir qator normativ-huquqiy hujjatlar qabul qilindi.

**Kalit so‘zlar:** davlat, siyosat, korrupsiya, BMTning Korrupsiyaga qarshi konvensiyasi, normativ-huquqiy hujjat.

Bugungi kunda korrupsiya muammosiga jahonning deyarli har bir mamlakatida duch kelish mumkin. Korrupsiya so‘nggi yillarda xalqaro miqyosda transmilliy jinoyat sifatida tomonidan keng muhokama qilinayotgan mavzulardan biridir.

Ta‘kidlash lozimki, korrupsiya keltiradigan zarar barcha davlatlar uchun teng sanalib, mazkur illat davlatning turli sohalari, xususan siyosiy, iqtisodiy, ijtimoiy, madaniy jabhalarida amalga oshirilayotgan islohotlarga hamda mamlakatning xalqaro maydondagi imidji va investitsiyaviy jozibadorligiga salbiy ta‘sir ko‘rsatadi.

O‘zbekiston Respublikasi Prezidenti Sh.M. Mirziyoyevning 2020 yil 24 yanvar kuni O‘zbekiston Respublikasi Oliy Majlisiga qilgan Murojaatnomasida ta‘kidlaganidek, “Jamiyatimizda korrupsiya illati o‘zining turli ko‘rinishlari bilan taraqqiyotimizga g‘ov bo‘lmoqda. Bu yovuz baloning oldini olmasak, haqiqiy ishbilarmonlik va investitsiya muhitini yaratib bo‘lmaydi, umuman, jamiyatning birorta tarmog‘i rivojlanmaydi”.

Korrupsiyaga qarshi kurashishning ustuvor huquqiy asoslari qator xalqaro huquqiy normalarda o‘z ifodasini topgan bo‘lib, ularga quyidagilarni kiritish mumkin:

2003 yil 31 oktabrda qabul qilingan BMT ning Korrupsiyaga qarshi Konvensiyasi;

2000 yil 15 noyabrda qabul qilingan BMT ning Transmilliy uyushgan jinoyatchilikka qarshi Konvensiyasi;

1999 yil 27 yanvardagi Yevropa Kengashining “Korrupsiya uchun jinoiy javobgarlik to‘g‘risida” gi Konvensiyasi;

1999 yil 4 noyabrda “Korrupsiya uchun fuqarolik huquqiy javobgarlik to‘g‘risida” gi Konvensiyalari va boshqalar.

O‘zbekiston yuqorida ta‘kidlangan xalqaro normalardan 2008 yilda Birlashgan Millatlar Tashkilotining Korrupsiyaga qarshi Konvensiyasi, shuningdek, 2010 yilda Iqtisodiy hamkorlik va taraqqiyot tashkiloti doirasida qabul qilingan Korrupsiyaga qarshi kurash bo‘yicha Istanbul Harakat rejasini ratifikatsiya qilgan.

Ta‘kidlash joizki, mamlakatimizda korrupsiyaga qarshi kurashish hamda ushbu turdagi jinoyatlarni sodir etilishini oldini olishga qaratilgan kompleks chora-tadbirlar tizimli ravishda amalga oshirilmoqda. davlat va jamiyat hayotining barcha sohalari korrupsiya omillarini keltirib chiqarayotgan tizimli muammolarni bartaraf etishga qaratilgan qator normativ-huquqiy hujjatlar qabul qilinib, amaliy hayotga tatbiq etilmoqda.

Xususan, O‘zbekiston Respublikasi Prezidentining 2020 yil 29 iyundagi PF-6013-sonli “O‘zbekiston Respublikasida Korrupsiyaga qarshi kurashish tizimini takomillashtirish bo‘yicha qo‘shimcha chora-tadbirlar to‘g‘risida”gi farmoni qabul qilinib, mazkur farmon asosida korrupsiyaning oldini

olish va unga qarshi kurashish sohasidagi davlat siyosatini, shuningdek, korrupsiyaga oid huquqbuzarliklarning tizimli sabab va shart-sharoitlarini bartaraf etish hamda korrupsiyaga qarshi kurashish choralari samaradorligini oshirishga qaratilgan davlat va boshqa dasturlarni shakllantirish va amalga oshirish maqsadida Korrupsiyaga qarshi kurash Agentligi tashkil etildi.

Farmon bilan, agentlikka Iqtisodiy hamkorlik va taraqqiyot tashkilotining Sharqiy Yevropa va Markaziy Osiyo mamlakatlari uchun korrupsiyaga qarshi kurashish bo‘yicha tarmog‘ining Istanbul harakatlar dasturi doirasidagi ishlar hamda ishlab chiqilgan tavsiyalarning amalga oshirilishini ta‘minlash, BMTning Korrupsiyaga qarshi konvensiyasi va O‘zbekiston Respublikasining korrupsiyaga qarshi kurashish sohasidagi boshqa xalqaro shartnomalari qoidalari bajarilishi bilan bog‘liq chora-tadbirlarni amalga oshirish hamda ushbu yo‘nalishdagi faoliyatni muvofiqlashtirish bo‘yicha O‘zbekiston Respublikasi milliy koordinatori vazifa va vakolatlari, shuningdek fuqarolik jamiyati institutlari bilan birgalikda hududlar, iqtisodiyot tarmoqlari va boshqa sohalar kesimida korrupsiyaning darajasini baholovchi milliy indeks tuzishni tashkillashtirish yuklatildi.

Shuningdek, mazkur farmon asosida quyidagi chora-tadbirlarni bosqichma-bosqich amalga oshirish belgilanligi ahamiyatlidir, xususan:

2020-2021 yillarda barcha davlat va xo‘jalik boshqaruvi organlarida korrupsiyaga qarshi ichki nazorat tizimi (“komplayens-nazorat”)ni bosqichma-bosqich joriy etish;

davlat hokimiyati va boshqaruvi organlarining korrupsiyaga qarshi kurashish sohasidagi faoliyati, shuningdek ushbu sohadagi davlat va boshqa dasturlar samaradorligini monitoring qilish hamda baholash imkonini beruvchi E-Anticor.uz elektron platformasini joriy etish;

korrupsiya holatlari haqida xabardor qilish imkonini beruvchi maxsus mobil dasturiy ta‘minotni joriy etish.

Xorijiy amaliyot tahlili shuni ko‘rsatdiki, bozor iqtisodiyoti qonunlarga asoslangan mamlakatlarda korrupsiyaga qarshi kurashish sohasida davlat va xususiy sektor ishtirokchilarining xalqaro standartlar, qonun hujjatlari va boshqa zamonaviy usullarga muvofiq samarali faoliyat yuritishini ta‘minlovchi muhim vositalardan biri o‘z tarkibida korrupsiyaga qarshi kurashish komplayens nazorat (compliance control) tizimini tashkil etish hisoblanadi.

Korrupsiyaga qarshi komplayens nazorati – davlat va xo‘jalik boshqaruvi organlari, xo‘jalik yurituvchi subyektlar faoliyatini korrupsiyaga qarshi kurashish sohasidagi xalqaro standartlar, qonun va boshqa meyoriy-huquqiy hujjatlarga muvofiq tashkil etuvchi, korrupsiya xavf-xatarlari, manfaatlar to‘qnashuvini o‘z vaqtida aniqlash va chek qo‘yish, qonun

buzilishi va korrupsiyaga oid huquqbuzarliklar haqida xabar berishni o'zida mujassam etgan profilaktik tizimdir.

Qayd etish lozimki, olib borilayotgan islohotlarni amaliy hayotga tatbiq etish maqsadida 2020 yil 4 fevralda Oliy Majlisning Inson huquqlari bo'yicha Vakili (Ombudsman) tomonidan Korrupsiyaga qarshi kurash bo'yicha idoraviy chora-tadbirlar dasturi tasdiqlangan bo'lib, fuqarolar va yuridik shaxslar vakillari tomonidan korrupsiya haqida xabar berish mexanizmlari joriy etilganligi ahamiyatlidir, xususan bugungi kunda:

– Ombudsmanning “10-96” ishonch telefoni va virtual qabulxonasi faoliyat yuritmoqda;

– fuqarolar va yuridik shaxslar vakillarining korrupsiyaviy holatlar bo'yicha hamda xodimlarning boshqa qonunga xilof ishlari to'g'risidagi murojaatlari tahlil qilinib boriladi, ularning natijalari odob-axloq komissiyasi yig'ilishlarida muhokama qilinadi.

– Ombudsman Kotibiyatiga ishga birinchi marta qabul qilinayotgan shaxslar uchun korrupsiyaga qarshi kurashish maqsadida yo'l-yo'riqlarni tushuntirish, xizmat vazifasiga qo'yiladigan asosiy majburiyatlar, ta'qiqlar, cheklolvar, talablar va idoraviy odob-axloq qoidalari mazmun-mohiyati 3 ish kunidan kechiktirmay tushuntiriladi.

– Vakilga korrupsiya bilan bog'liq bo'lgan murojaatlarga e'tibor qaratadigan bo'lsak, 2020 yilning 6 oy davomida “Korrupsiyaga qarshi kurashish to'g'risida”gi O'zbekiston Respublikasi Qonunining 26-moddasiga muvofiq Ombudsman tomonidan Bosh prokuraturaga 17 ta murojaat yuborilgan (2019 yil – 21 ta). Ushbu murojaatlardan 2 tasi o'z tasdig'ini topgan.

Sohada amalga oshirilayotgan ushbu mazmundagi islohotlarning natijasi sifatida Transparency International xalqaro nohukumat tashkiloti tomonidan har yili e'lon qilib boriladigan “Korrupsiyani qabul qilish indeksi” da O'zbekiston 180 ta davlat orasida 2017 yilda 157-o'rin, 2018 yilda esa 158-o'rinni egallagan bo'lsa, 2019 yilda 25 ball bilan 153-o'rinni egallab, 5 pog'onaga ko'tarildi.

Bundan tashqari Jahon odil sudlov loyihasining Huquq ustuvorligi indeksidagi “Korrupsiyadan holilik” indikatorida O'zbekiston 2019 yilda 0,38 ball bilan 95-o'rinni egallagan bo'lsa, 2020 yil bo'yicha 128 davlat orasida 0,40 ball bilan 89-o'rinni egallab, 6 pog'onaga ko'tarilganligimamlakatimizda korrupsiyaga qarshi tizimli olib borilayotgan islohotlarning samarasidir.

Mamlakatimizda korrupsiyani oldini olishga qaratilgan chora-tadbirlar amalga oshirilayotgan bo'lsa-da, huquqni qo'llash amaliyotida mansabdor shaxslarning korrupsiya bilan bog'liq jinoyatlarni sodir etayotganlik holatlari hali hamon uchramoqda. Statistik ma'lumotlarga ko'ra, 2017–2019 yillar davomida 6127 nafar mansabdor shaxsning pora olishi bilan bog'liq jinoiy javobgarlik masalasi hal qilinganligi, 2019 yilning dastlabki olti oyida jami 661 nafar turli toifadagi mansabdor shaxslarga nisbatan korrupsiya bilan bog'liq 590 ta jinoyat ishlari qo'zg'atilganligi, korrupsiyaga qo'l urgan va jinoyati fosh qilingan mansabdor shaxslarning 25 nafari respublika, 36 nafari viloyat va 476 nafari tuman-shahar miqyosidagi vazirliklar, idoralar hamda korxonalar va tashkilotlarda ishlab kelganligi, korrupsiya jinoyatlarining asosan tibbiyot, ta'lim, davlat xizmati ko'rsatish, xususan tadbirkorlik subyektlari faoliyatiga litsenziya va ruhsat berish bilan bog'liq sohalardahali hamon kamaymayotganligi tashvishlidir.

Xorijiy davlatlar tajribasiga nazar tashlaydigan bo'lsak, ko'plab davlatlarda, xususan Singapur, Buyuk Britaniya, Germaniya, AQSH kabi rivojlangan mamlakatlarda “Davlat xizmati to'g'risida” gi, “Davlat xizmatida jamoatchilik nazorati to'g'risida”gi qonunlar hamda davlat xizmatchilari, mansabdor shaxslar, shuningdek sudyalarning xatti-harakat meyorlarini tartibga soluvchi Axloq kodekslari mavjud ekanligini ko'rishimiz mumkin.

E'tiborli jihati shundaki, mazkur normalalar bilan davlat xizmatchilarining olishi mumkin bo'lgan sovg'a yoki hadyalarning aniq miqdori ham belgilab qo'yilgan. Masalan, AQSHda ushbu miqdor 20 AQSH dollarini, Fransiyada 35 yevro, Buyuk Britaniyada 140 funt, Rossiyada 3000 rubl etib belgilangan. Kanadada esa mansabdor shaxslarning pul ko'rinishidagi sovg'alar qabul qilishi qat'iyon ta'qiqlanadi, Singapurda davlat boshqaruvida faoliyat ko'rsatuvchi mansabdor shaxslarning gonorar, zaym, qimmatli qog'ozlar kabi to'lovlarni olishi ta'qiqlangan.

Shuni alohida ta'kidlab o'tish joizki, O'zbekiston Respublikasi Adliya vazirligi tomonidan yuqoridagi xorij tajribasi vazirlik tizimida joriy qilingan bo'lib, unga ko'ra xodimlarning fuqarolar, boshqa tashkilotlar xodimlari, jumladan turli joylar va xorijiy mamlakatlarga uyushtiriladigan xizmat safarlari davomida sovg'alar olishi ta'qiqlandi. Xorijiy safarlar davomida olingan sovg'alar, vazirlikka o'tkaziladigan tartib joriy qilindi.

Bundan tashqari bugungi kunda ilg'or xorijiy davlatlarning korrupsiyaga qarshi samarali kurash olib borish jarayonida qo'llayotgan usullaridan biri bu davlat xizmatchilarining mol-mulki, daromadlari hamda katta hajmdagi xarajatlarini deklaratsiya qilishning majburiy etib belgilanganligidir. Bundan ko'zlangan asosiy maqsad mansabdor shaxslarning noqonuniy daromad olishni oldini olish va manfaatlar to'qnashuvini bartaraf etishdan iboratdir. Davlat xizmatida ushbu usul bugungi kunda 150 dan ortiq mamlakatda qo'llanilmoqda.

Ta'kidlash joizki, davlat xizmatchilarining mulkiy deklaratsiya tizimi korrupsiyaning oldini olish, noqonuniy boyish va manfaatlar to'qnashuvini aniqlashning qudratli vositasidir. Jahon banki ma'lumotlariga ko'ra, Yevropa xavfsizlik va hamkorlik tashkilotiga a'zo mamlakatlarning aksariyatida aktivlarni deklaratsiyalashning keng jamoatchilik uchun oshkora tizimi yo'lga qo'yilgan. Korrupsiyaga qarshi amaldagi xalqaro standartlar, jumladan, BMTning Korrupsiyaga qarshi konvensiyasi va boshqa qator huquqiy hujjatlarda davlat xizmatchilari tomonidan aktivlarning e'lon qilinishi korrupsiyaga qarshi samarali vosita ekani e'tirof etilgan.

Bu borada Daniya tajribasiga ko'ra, 2002 yilda qabul qilingan “Korrupsiya to'g'risida”gi Daniya Qonuni korrupsiyaning oldini olish chora-tadbirlarining ustuvorligini belgilovchi, ta'sirchan ogohlantiruvchi xususiyatga ega bo'lgan asosiy normativ-huquqiy hujjatdir. Xususan, ushbu qonunning qoidalari Daniya hukumati vakillarini har yili o'z mol-mulki va shaxsiy daromadlari to'g'risidagi ma'lumotlarni nashr etishga, xorijiy kompaniyalarda aksiyalarga ega bo'lishni ta'qiqlashga majbur qiladi, bu ularning boshqaruv faoliyatining oshkoraligi va shaffofligini, korrupsion holatlarini oldini olishga yordam beradi.

Korrupsiyani oldini olishning muhim omili shundaki, mamlakatda davlat xizmatchilari yuqori darajadagi ijtimoiy muhofazaga ega: ular bepul tibbiy xizmat va ta'lim olish huquqiga va ijtimoiy kafolatlarga tayanishlari mumkin, bu esa korrupsion harakatlar ehtimolini sezilarli darajada kamaytiradi.

Bundan tashqari Finlyandiya Moliya vazirligi davlat xizmatchilari axloqining asosiy muvofiqlashtiruvchi organi hisoblanishi bilan xarakterlidir. Moliya vazirligi hukumat amaldorlari uchun imtiyozlar va sovg'alarni berish va olish tartibini belgilaydi, shuningdek davlat xizmatchilari daromadlarini tekshirish vakolatiga ham ega. Finlyandiya milliy taftish byurosi (NAOF) esa mamlakatda korrupsiyani oldini olish maqsadida yilda ikki marotaba markaziy hukumat moliyasini tekshiradi, soliq siyosatini nazorat qiladi va siyosiy partiyalar va saylov kompaniyasini moliyalashtirishni nazorat qiladi.

Yuqoridagi tahlillar, korrupsiyaga qarshi kurashish hamda mazkur turdagi jinoyatlarni oldini olish borasida



mamlakatimizda quyidagi chora-tadbirlarni amalga oshirish lozimligini ko‘rsatmoqda:

birinchidan, “Davlat xizmati to‘g‘risida”gi qonun loyihasi ishlab chiqilib, muhokama qilinayotgan bo‘lsa-da, hali hamon mazkur qonun qabul qilinganicha yo‘q. Shu sababdan “Davlat xizmati to‘g‘risida”gi O‘zbekiston Respublikasi Qonunini, shuningdek davlat xizmatchilarining Axloq kodeksini qabul qilish, mazkur normalarda davlat xizmatchilarining o‘z faoliyatini olib borish jarayonida amal qilishi lozim bo‘lgan hamda korrupsiyani vujudga kelishiga imkon yaratib beruvchi sabab va shart-sharoitlarni oldini

olishga qaratilgan meyorlar aks ettirilishi maqsadga muvofiqdir;

ikkinchidan, xalqaro va ilg‘or xorijiy davlatlar tajribasini chuqur o‘rgangan holda davlat xizmatchilarining mol-mulki, daromadlari hamda katta hajmdagi xarajatlarini deklaratsiya qilishni tartibga soluvchi normalarni milliy qonunchilik tizimiga implemenetatsiya qilish maqsadga muvofiqdir. Bu esa o‘z navbatida mansabdor shaxslarning mol-mulkiidagi o‘zgarishlarni muntazam ravishda kuzatish imkonini beradi, deklaratsiyalarning ommaviyligi, ya‘ni jamoatchilik uchun ochiqligi esa ularning korrupsiyaga qarshi kurashishdagi ahamiyatini yanada oshirishi shubhasizdir.

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### TUPROQDAGI OG'IR METALLAR, PESTITSID QOLDIQLARI MIQDORIGA ORGANIK VA BIOLOGIK OG'ITLARNI UYG'UNLASHGAN HOLDA QO'LLASHNING TA'SIRI

Annotatsiya

Biologik preparatlar organik o'g'itlar (siderat va go'ng) fonida qo'llaganda tuproqdagi harakatchan shakldagi og'ir metallar miqdorini N250R175K125 – fon (nazorat) agrotsenoziq nisbatan kamayishini ta'minlaydi. Organik o'g'itlar tuproq ekologik holatini yaxshilaydi va gumus miqdorini oshiradi, natijada tuproqqa tushgan og'ir metallar organik moddalarga adsorbsiyalanadi, shu bilan birgalikda GXSG va DDT kabi pestitsidlar qoldiqlari kamayadi, tuproqning ekologik barqarorligi saqlanishi ta'minlanadi.

**Kalit so'zlar:** Agrotsenoziq, gumus, GXSG, DDT, REM, adsorbsiya, Rizokom-1, organik o'g'itlar, biopreparat, og'ir metallar, gidrooksidlar, karbonatlar, fosfatlar, ekologik barqarorlik.

Tajribada mineral va organik o'g'itlar hamda biologik preparatlar qo'llanilishining tuproq tarkibidagi harakatchan og'ir metallar miqdoriga ta'siri o'rganib borildi. Tuproqdagi og'ir metallar harakatchanligi tuproq muhiti, mexanik tarkibi, tuproq tarkibidagi gumus miqdori kabi ekologik omillarga bog'liq [3,1]. Tuproq muhitining ishqoriy tomonga o'zgarishi tuproqdagi og'ir metallar harakatchanligini kamaytiradi. Og'ir metallarning zarari mexanik tarkibi yengil, kam gumusli tuproqlarda ko'proq kuzatiladi [2]. Tuproqning organik moddalar bilan boyishi va singdirish sig'imining ortishi natijasida og'ir metallar organik moddalarga adsorblanadi (singdiriladi) va tuproqdagi turli ionlar bilan suvda erimaydigan tuzlar hosil qiladi.

S.YE.Vitkovskaya [4] ma'lumotiga ko'ra, organik o'g'itlar tarkibidagi og'ir metallar tuproqda 5 yildan ko'proq davr mobaynida organik moddalar tarkibida saqlanishi mumkin va ular bu davr davomida o'simliklar tomonidan o'zlashtirilmaydi. Organik moddalarning minerallanishi natijasida og'ir metallar tuproq muhiti ishqoriy bo'lganda tuproqdagi anionlar (gidrooksidlar, karbonatlar, fosfatlar) bilan birikib suvda qiyin eriydigan tuzlar hosil qiladi.

Tajriba o'tkazilgan maydon tuprog'ida tadqiqot boshlanishida harakatchan shakldagi Pb, Cd, Cu, Zn, Co ning miqdori mos ravishda 1,2; 0,5; 0,9; 2,6; 1,5 mg/kg ni tashkil etgan bo'lsa, 3 yil davomida organik o'g'itlar va biologik preparatlarni qo'llash natijasida tuproq tarkibidagi harakatchan shakldagi og'ir metallar miqdorining kuchli o'zgarishi kuzatilmadi. Fon+siderat – 10 t/ga, Fon+go'ng - 10 t/ga qo'llanilgan agrotsenozlarda N250R175K125 – fon (nazorat) agrotsenoziq nisbatan Pb va Co miqdorining pasayishi, Cu va Zn miqdorining biroz yuqori bo'lishi kuzatildi. Cd miqdorning esa o'zgarishi kuzatilmadi. Bunga sabab, go'ng va siderat tarkibida Pb va So kam miqdorda, Cu va Zn biroz yuqori miqdorda bo'lishidir. Lekin, ushbu miqdorlar REM (PDK) chegarasida bo'ldi (3.5-rasm).

Organik o'g'itlar va biologik preparatlar qo'llanilgan agrotsenoziqda o'rganilgan barcha og'ir metallar miqdori pasayishi kuzatildi. Organik o'g'itlar va biologik preparatlar kam meyorda qo'llanilganligi bois, ular tarkibida og'ir metallar kam miqdorda saqlanadi (1-jadval).

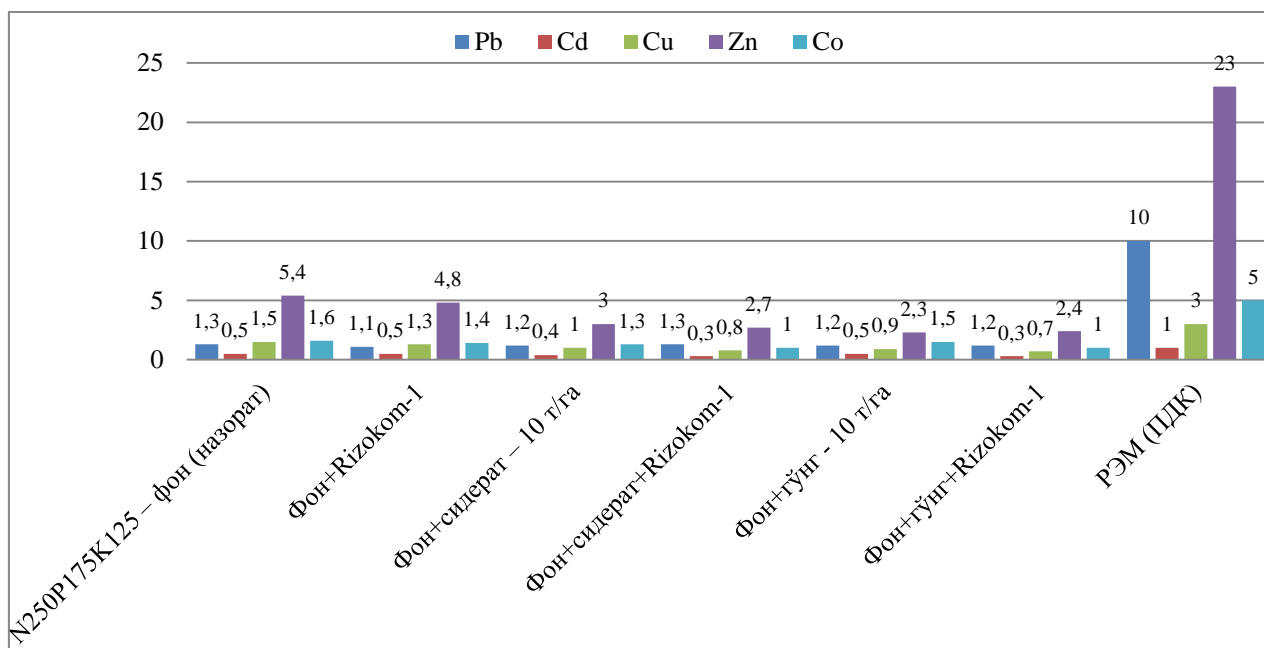
1-jadval

**Organik o'g'itlar va Rizokom-1 preparatining tuproq tarkibidagi harakatchan shakldagi og'ir metallar miqdoriga ta'siri (2019-2021 yy.), mg/kg**

№	Agrotsenoziq	Pb	Cd	Cu	Zn	Co
1	N250R175K125 – fon (nazorat)	1,3	0,5	1,5	5,4	1,6
2	Fon+Rizokom-1	1,1	0,5	1,3	4,8	1,4
3	Fon+siderat – 10 t/ga	1,2	0,4	1,0	3,0	1,3
4	Fon+siderat+Rizokom-1	1,3	0,3	0,8	2,7	1,0
5	Fon+go'ng - 10 t/ga	1,2	0,5	0,9	2,3	1,5
6	Fon+go'ng+Rizokom-1	1,2	0,3	0,7	2,4	1,0
	REEYUM (PDK)	10,0	1,0	3,0	23,0	5,0

Tuproqdagi mikroelementlar (og'ir metallar) ma'lum miqdorda o'simliklar tomonidan ham o'zlashtiriladi. Fon+Rizokom-1 biologik preparati qo'llanilgan agrotsenoziqda og'ir metallarning harakatchan miqdori boshqa agrotsenoziqlardagiga nisbatan kam bo'ldi.

Biologik preparatlar organik o'g'itlar (siderat va go'ng) fonida qo'llaganda ham harakatchan shakldagi og'ir metallar miqdorining N250R175K125 – fon (nazorat) agrotsenoziq nisbatan kamayishi kuzatildi. Umuman olganda, organik o'g'itlar tuproq xossalari yaxshilaydi va gumus miqdorini oshiradi.



1-rasm. Organik o'g'itlar va Rizokom-1 preparatining tuproq tarkibidagi harakatchan shakldagi og'ir metallar miqdoriga ta'siri (2019-2021 yy.), mg/kg

Tuproqning turli xil ionlar bilan boyishi natijasida tuproqqa tushgan og'ir metallar organik moddalarga adsorbsiya qilinadi yoki anionlar bilan birikib suvda erimaydigan tuzlar hosil qiladi.

Shunday qilib, organik o'g'itlar (siderat va go'ng) Rizokom-1 biologik preparati bilan birgalikda qo'llanilgan agrotsenozlarda tuproq tarkibidagi harakatchan og'ir metallar miqdori oshishi kuzatilmaydi, aksincha tuproqning turli xil ionlar bilan boyishi natijasida tuproqdagi og'ir metallar organik moddalarga adsorbsiyalanadi, shuningdek, anionlar bilan birikib, suvda erimaydigan turli tuzlar hosil qiladi.

Pestitsidlar (lot. pestis – maraz, caedo – o'ldiraman), zaharli kimyoviy moddalar - o'simlik zararkunandalari va kasalliklari, begona o'tlar, shuningdek, yog'och, paxta tolasi mahsulotlari, jun, teri zararkunandalari, uy hayvonlarining xavfli kasalliklari qo'zg'atuvchilariga qarshi kurashishda foydalaniladigan kimyoviy moddalar. Shuningdek, auksinlar, gibberellinlar, defoliantlar, desikantlar, retradantlar ham pestitsidga kiritiladi. Pestitsid tirik organizmlar hujayralariga kirib ularning fizik va kimyoviy xususiyatlarini o'zgartiradi. Hujayraning oqsil va boshqa moddalari bilan kimyoviy reaksiyaga kirishib, ularni cho'kmaga tushiradi, fermentlar faolligini zaiflashtiradi, modda almashinuvi jarayonini buzadi va hujayrani halokatga olib keladi.

Eng muhim pestitsid xlororganik va fosfororganik birikmalar, karbamin kislota hosilalari, o'simliklardan olinadigan (piretroidlar), triazinlar kiradi. Anorganik pestitsididan mis, oltingugurt va boshqa elementlarning birikmalarini ko'rsatish mumkin. Xlororganik pestitsid universalligi bilan afzaldir. Ular juda ko'p tur zararkunandalarni yo'q qiladi, ta'sir kuchi uzoq muddat saqlanadi va issiqqonli hayvonlar uchun xavfi kam. Xlororganik pestitsidning kamchiligi ularning tashqi muhit, tuproq, o'simlik va suvda kimyoviy jihatdan barqarorligi, ya'ni uzoq vaqtgacha parchalanmay saqlanib turishidir. Bu esa preparat qoldiklarining o'simlik mahsulotlari va hayvon organizmi tarkibida yig'ilib qolishga olib kelishi mumkin. DDT kabi juda barqaror preparatlardan foydalanish man qilingan. Fosfor organik pestitsid yuqori biologik aktivlikka ega. Bu birikmalar o'simlik ichiga singib kirish va zahar kuchini ancha vaqt saqlab turish xususiyati bilan boshqalardan ajralib turadi.

Tajribada olingan ma'lumotlar tahlili shundan dalolat beradiki, tajriba qo'yishdan oldin GXSG qoldiqlari barcha o'rganilgan agrotsenozlarda 0,02-0,05 mg/kg ni tashkil etgan bo'lsa, DDT qoldig'i 0,05-0,06 mg/kg atrofida bo'lganligi aniqlandi (2-jadval).

2-jadval

**Organik o'g'itlar va Rizokom-1 preparatining tuproq tarkibidagi pestitsidlar qoldiqlariga ta'siri, 0-30 sm (2019-2021 yy.), mg/kg**

№	Agrotsenozlar	Tajriba qo'yishdan oldin		3- yil mavsum oxirida	
		GXSG	DDT	GXSG	DDT
1	N250R175K125 – fon (nazorat)	0,03	0,06	0,02	0,04
2	Fon+Rizokom-1	0,05	0,05	0,04	0,03
3	Fon+siderat – 10 t/ga	0,05	0,06	-	-
4	Fon+siderat+Rizokom-1	0,04	0,05	-	-
5	Fon+go'ng - 10 t/ga	0,02	0,05	-	-
6	Fon+go'ng+Rizokom-1	0,03	0,06	-	-
	REM (PDK)	0,1	0,5	0,1	0,5

Tajribaning uchinchi yili mavsum oxirida o'tkazilgan tahlillarda, N250R175K125 – fon (nazorat) va Fon+Rizokom-1 agrotsenozlarida GXSG va DDT qoldiqlari mavjudligi va o'z navbatida qisman kamayganligi aniqlangan bo'lsa, organik o'g'itlar (siderat va go'ng) bilan birgalikda biologik preparat qo'llanilgan agrotsenozlarda mazkur pestitsidlar qoldiqlar uchramaganligi qayd etildi (2 -jadval). Ushbu holat pestitsid qoldiqlarining organik massaga birikishi bilan izoqlanadi.

Umuman olganda, Qashqadaryo viloyatining sug'oriladigan tipik bo'z tuproqlari sharoitida tuproq unumdorligini oshirishda turli siderat ekinlaridan foydalanish,

go'ng qo'llash, shu bilan birgalikda biologik preparatlarni qo'llash natijasida tuproqlar tarkibida og'ir metallar va shu bilan birgalikda GXSG va DDT kabi pestitsidlar qoldiqlari kamayishiga, tuproqning ekologik barqarorligi saqlanishiga erishish ta'minlanadi. Shu jihaktdan pestitsidning odam, hayvon, o'simlik, suv va umuman atrof-muhitga salbiy ta'sirining oldini olish uchun ularni qo'llashda faqatgina zararkunandaga emas, balki biotsenozga ham ta'sirini, ya'ni oqibatini oldindan hisobga olish kerak. Pestitsid zararkunandalarni yo'q qilib yuborish vositasidan, ular sonini tartibga solib turadigan vositalarga aylanishi lozim.

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## MUHAMMAD AVFIY ADABIY MEROSI, TAZKIRANAVISLIK RIVOJIDA “LUBOBU-L-ALBOB” TAZKIRASINING AHAMIYATI

Annotatsiya

Ushbu maqolada XIII asr adabiy muhitiga ulkan hissa qo'shgan Muhammad Avfiy hayoti va ijodi hamda “Lubobu-l-albob” tazkirasining fors va turkiy tazkiralarga ta'siri haqida ma'lumot berilgan. Muhammad Avfiyning “Lubobu-l-albob” tazkirasining o'ziga xos jihatlari tadqiq etilgan.

**Kalit so'zlar:** Muhammad Avfi, Alisher Navoiy, hikoyat, tazkira, “Lubobu-l-albob”, fors adabiyoti, adabiy muhit.

**Kirish.** Avfiy Buxoriy shoir, tazkiranavis va tarjimon bo'lgan. Muhammad Avfiy haqida so'z yuritilgan manbalarda olimning ismi Sa'diddin (yoki Nuriddin) Muhammad binni Muhammad binni Yahyo binni Tohir binni Usmonal-Avfiy al-Hanafiy ekanligi zikr qilinadi. Avfiy va uning asarlari haqidagi ilmiy tadqiqotlari bilan mashhur bo'lgan hind olimi Muhammad Nizomuddin ta'kidlashicha, ayrim asarlarda Avfiyning Nuruddin taxallusini olganligi haqidagi yanglish ma'lumotlar mavjud. Muallifning asarlari “Lubobu-l-albob” hamda “Javome'u-l-hikoyat va lavome'u-l-rivoyat” asarlarida Nuruddin emas, Sadiduddin taxallusini qo'llaganligiga guvoh bo'lamiz [7]. Vaholanki, Avfiy o'ziga Sadiduddin taxallusini olganligi haqidagi ma'lumotlar mavjud bo'lgani holda, bu taxallusning qay yo'sinda Nuruddinga aylangani ma'lum emas. Ammo Avfiy vafotidan yuz yil o'tib qanday paydo bo'lganligi noma'lum Nuruddin taxallusi Muhammad Qazviniy va boshqa olimlar tomonidan ko'p qo'llanilgan. Olimning Avfiy nomini olishiga sabab Abdurahmon binni Avf ismli sahoba nasliga mansubligi sabablidir. Avfiy “Javome'u-l-hikoyat” asarida muallif o'zining nasl-nasabiga oid quyidagi tafsilot diqqatlidir:

“Hazrati Umar vafot etgach, sahobalar xalifani saylash uchun yig'ilishdi va ular orasida bu kitobni yozgan muallifning ajdodi Abdurahmon binni Avf ham bor edi”. Muallif keltirgan izohlardan ma'lum bo'lishicha, sahobalar oilasidan bo'lgan Avfiyahli olim bo'lgan oilada dunyoga kelgan. Chunki uning Marv qozisi bo'lgan bobosi Imom Sharafuddin Abu Tohir Yahyo b. Tohir b. Usmon al-Avfiy Mavaraunnahrning mashhur muhaddislaridan bo'lib, ayniqsa, hadis va arab ilmida mohir edi. Otasi Muhammad b. Yahyo ham bobosi singari Marvda qozilik qilgan. Sayyidul-hukamo va malikul-at-tibo unvonini olgan tog'asi Qoraxoniylarning mashhur davlat arbobi Tamg'achxon Ibrohim ibn Husaynning xos tabibi edi. Avfiyning bolaligi va boshlang'ich ta'limi haqida, o'z asarlari “Lubobu-l-albob” va “Javome'u-l-hikoyat” asarlaridagi ma'lumotlardan boshqa juda oz narsa ma'lum. Boshlang'ich ma'lumotni bobosi va otasidan olgan Avfiy bolaligida Buxoroning ko'zga ko'ringan allomalaridan Ruknuddin Mas'ud Imomzodadan saboq olgan [5]. Buxorodagi “Dori Farxoq” madrasasida ta'lim oladi. Samarqanddan keyin Avfiy Xorazm, Marv, Nishopur, Hirot va G'azna shaharlariga sayohat qildi. Xorazmda Najmiddin Kubro va uning shogirdi Majiddin Bag'dodiy Fariduddin Attorning ustozini bilan suhbat quradi.

**Mavzuga oid adabiyotlar tahlili.** Avfiy 1223-yilda arab adibi Abu Ali Muhassin Tanuhiyning “Al-Faraj bada-sh-shabboda” (“Qiyinchiliklardan keying shodlik”) asarini fors tiliga tarjima qiladi va uni “Javome'u-l-hikoyat va lavome'u-l-rivoyat” deb nomlaydi. Avfiy ushbu asarni sulton

Eltutmishning vaziri Nizomulmuluk Junaydiyga taqdim etadi. Asarda avliyo va anbiyolar hayoti, ularning karomat va mo'jizalari, xalifalar, ajam shohlarining adolatli va adolatsiz ishlari haqida hikoya qilinadi. “Jome' ul-hikoyat va lavomi ul-rivoyat” asarida asosan mingdan ortiq turli tarixiy shaxslar, shuningdek o'zi eshitgan, ko'rgan insonlar bilan bog'liq hikoyatlar yozilgan. XV asr muallifi Shukrulloh “Baxsu-t-tavfiq”da O'rta Osiyodagi bir qancha turkiy qabilalarning muhojaratlari Osiyodagi bir qancha turkiy qabilalarning muhojaratlari (ko'chishlari) tarixini yozishda Muhammad Avfiy asaridan foydalanadi. Olmon tarixchisi Markvartning Kushonlar haqidagi asari, Pelliot, Bartold va boshqa ba'zi olimlarning asarlarida Avfiydan asarlaridan olingan muhim ma'lumotlarni uchratish mumkin. “Javome'u-l-hikoyat” oddiy hikoyalar majmuasi bo'lmay, juda e'tiboli voqealar hamda muhim ma'lumotlar manbai hamdir. Chunki Avfiy yoshligidan chuqur bilimlarni egallagan va umri davomida Movarounnahr, Xurson, Xorazm, Seyiston, G'aznin va Sind shaharlarida sayohatlari vaqtida ko'rgan-kechirganlari, davrining buyuk shoirlari, olimlari, so'fiylari va davlat arboblari, hukmdorlari bilan tanishgan va ulardan olgan bilim va ma'lumotlari o'z asarlarini yozishda muhim manba vazifasini o'tagan. Avfiyning Samarqand qoraxoniylari tarixiga oid, shuningdek, turkiy qabilalarning ko'chishlariga oid bergan ma'lumotlaridan akademik V.B.Bartold (1869–1930) o'zining Turkiston tarixiga oid “Turkiston mo'g'ul istilochilari davrida” asarida unumli foydalangan. Tadqiqot-chilarning fikriga qaraganda Muhammad Avfiy mazkur asarni yaratishda o'zigacha yashagan arabiy-navis va forsiyog'oy olimlarning 90 dan ziyod tarixiy, ilmiy, badiiy asarlaridan foydalanadi. “Osor-ul-boqiyah”, “Dasturu-l-vuzaro”, “Tarixi Tabariy”, “Siyosatnoma”, “Qobusnoma”, “Tarixi Yaminiy”, “Tarixi Turkiston” kabi asarlar shular jumlasidandir. Avfiy asarlari hindistonlik mashhur sharqshunos professor Muhammad Nizomuddin, rus olimlaridan Yu.Krchakovskiy, V.Bartoldlar e'tiborini tortgan. Bundan anglashiladiki Avfiy nafaqat adabiyotshunos olim balki tarixnavis hamdir.

**Tadqiqot metodologiyasi.** Muhammad Avfiy ijodi o'zbek va jahon adabiyotshunosligida, asosan, tarixiy-qiyosiy metod asosida o'rganilgani uchun ushbu maqolada mana shu metodning tahlil usullaridan foydalanildi. Shuningdek, Avfiyning tazkisasi – “Lubobu-l-albob” tarkibiga kirgan ijodkorlarni tahlil qilishda analitik va struktural metodlardan foydalanildi. Avfiy tazkirasining boshqa tazkiralardan farqli jihatlari, tarkibi va tuzilishiga munasabat bildirilganda qiyosiy adabiyotshunoslik talablaridan kelib chiqqan holda ish ko'rildi.

**Tahlil va natijalar.** Jahon adabiyotshunosligida tazkira asarlarning manba sifatidagi o'rni beqiyos. Tazkiralari

jahon adabiyotining uzoq tarixini o'rganish, uning shakllanishi va taraqqiyoti omillarini chuqur hamda atroflicha tasavvur qilish imkonini berishi bilan birga o'tmishda yuz bergan muhim tarixiy, ijtimoiy-siyosiy hamda adabiy jarayonlarni yoritishi bilan ham qimmatlidir.

Fors-tojik adabiyotida bizgacha yetib kelgan, chinakam mukammal fors tilidagi to'ng'ich tazkira asar Muhammad Avfiyning "Lubobu-l-albob" ("Ilmlar mag'zi") tazkirasidir. "Lubobu-l-albob" tazkirasida 1222-23-yilda Buxoro va Xorazmda boshlanib, Hindistonda yakunlangan. Tazkira sharq mumtoz adabiyotida keng tarqalgan janr hisoblanib, "Lubobu-l-albob" tazkirasida shoirlarning hayoti va ijodi haqidagi ma'lumotlar berish bilan birga, she'riyat va uning nazariy masalalari bilan bog'liq fikr-mulohazalar, safforiylar, somoniylar, g'aznaviylar, saljuqiylar sulolalari davrining adabiy muhiti haqidagi ma'lumotlar ham o'rin olgan. Movarunnahr, Xuroson, Hindiston va Iroqda yashab ijod etgan 300 ijodkor xususida ma'lumot berilgan Lubobu-l-albob" tazkirasida juda katta davr qariyb 400 yillik mumtoz adabiyot tarixi aks etganligi bois ham chuqur tadqiq etishni taqazo etadi.

Avfiy tazkirasining tuzilishi va mazmunida Sharq tazkirachilik an'analarini asos bo'lgan. Ularda adiblar hayoti va ijodiga oid ma'lumotlar talqini ustuvorlik qiladi. "Lubobu-l-albobning dunyo qo'lyozma fondlarida hozircha bizga ma'lum 3 ta qo'lyozma nusxasi mavjud. Bular Berlin, London hamda Manchester nusxalaridir [4].

O'n ikki jild, o'n ikki bobdan iborat bo'lgan mazkur tazkirada olim she'riyat nazariyasiga oid fikr mulohazalarini bayon etadi. Arab hamda forsiy tilda she'r yozgan shoirlar haqida qimmatli ma'lumotlarni keltiradi.

Qizig'i shundaki, "Lubobu-l-albob" "Javome'u-l-hikoyat" dan oldinroq yozilganiga qaramay, uch asr davomida bu kitob haqida hech kim o'z asarida qayd etmagan. Avfiydan keyingi tazkiranavislardan, Davlatshoh Samarqandiy "Tazkiratu-sh-shuaro", Abdurahmon Jomiyning "Bahoriston" va Navoiyning "Majolisu-n-nafois" tazkiralari ham Muhammad Avfiy va uning asari haqida hech qanday ma'lumot keltirmagan. Faqatgina Ahmad Amin Roziyning 1594-yilda yozilgan "Haft iqlim" asaridagina ma'lumot beriladi. 1592-yilda yozilgan Sayyid Ali binni Muhammad Husayniy "Bazmi oroyi" nomli tazkirasida "Lubobu-l-albob"ning ayni o'zidir. Sayyid binni Muhammad "Lubobu-l-albob"ning muqaddima qismini hech qanday o'zgartirishsiz ko'chiradi, Avfiy ismini va "Lubobu-l-albob" nomini aslo tilga olmaydi. Hatto asarning birinchi jildi 74-75-raqamlari ostida ma'lumot berilgan Avfiyning bobosi va tog'asi haqidagi ma'lumotlarni o'z asariga kiritmaydi.

"Lubobu-l-albob" tom ma'nosi bilan tazkira, ya'ni adabiy-tarixiy turdagi asar bo'lish bilan bir qatorda, hech shubhasiz yuksak badiiy mohiyatga ham egadir. Bu asardagi xotiraviy parchalarning puxtaligi, tilning sun'iy va yasama sajlardan xoli, sodda va ravon bo'lishligi, odamlarga berilgan sifat va tavsifnomalarning jozibali surat darajasiga ko'tarilishi, shoirlar ijodiga baholarning haqqoniy berilishi tazkiringa oliy badiiyat baxsh etadi.

Ta'kidlash joizki, Avfiy "Lubobu-l-albob"da badiiy asarlarni tahlil qilish vazifasini o'z oldiga qo'ymaydi. Zotan, tazkirachilik an'anasi buni talab ham qilmas edi. Lekin shunga qaramay "Lubobu-l-albob"dagi muhim adabiy-tanqidiy mulohazalar IX-XIII asr adabiyotini, uning bir qator namoyondalari ijodini yoritishga yordam qiladi. Avfiy fors adabiyotida tazkira janrining to'la shakllanishi va turli ko'rinishlarda rivojlanishi uchun salmoqli va muhim ijodiy izlanishlarni amalga oshirdi hamda tazkirachilikka quyidagi yangiliklarni kiritdi:

-birinchidan, tazkira tuzishda aniq bir maqsadni ko'zda tutdi va buni tazkiraning muqaddima qismida alohida ta'kidlab o'tdi;

-ikkinchidan, tazkirani tuzilishida ijtimoiy tartiblar asos qilib olindi;

-uchinchidan, tazkirada shoirlarni geografik hududlar bo'yicha alohida ajratib ko'rsatdi;

-to'rtinchidan, Avfiygacha bo'lgan an'anaga ko'ra, faqat avvalgi o'tgan shoirlar bo'yicha to'plamlar tuzilgan edi, u fors adabiyotida ilk bor turli hududlarda yashab ijod qiluvchi avvalgi o'tgan shoirlar hamda zamondosh ijodkorlarga bag'ishlangan tazkira muallifiga aylandi.

Tazkiraning dastlabki to'rt bobi nazariy ma'lumotlarga bag'ishlangan bo'lib, ushbu boblarda she'r va shoirlilik fazilatlarini, she'rning lug'aviy ma'nosi, birinchi she'r yozgan kishi hamda fors tilida birinchi she'r yozgan ijodkor haqida so'z boradi.

Tazkiraning asosiy qismi V bobdan boshlanadi. Asarda tazkira yozilayotgan davrda olamdan o'tgan yoki yozilayotgan davrda hali ijod bilan mashg'ul bo'lgan Movarunnahr, Eron, Iroq va hindistonlik shoirlar haqidagi qimmatli ma'lumotlar joy olgan. Albatta, bu shoirlarning hammasi ham she'riyat sohasini kasb etgan kishilar emas. Avfiy baribir adabiy muhitda ozmi-ko'pmi o'z ijodiyoti bilan qatnashayotgan umuman, "nozik ta'b egasi" bo'lib, so'z san'ati durdonalari yaratishga iqtidori yetgan turli soha, ijtimoiy qatlam, vakillari nomlarini abadiylashtirishga kirishadi. Shuning uchun ham ular orasida imomlar, ilm-rifat, madaniyat ahli, turli xil kasb egalari va xalq ichidan chiqqan shoir kishilar nomlarini uchratish mumkin. Muallif bob va fasllar tuzilishida tazkiringa kiritilgan adabiyot namoyondalarini sulolaviy, ijtimoiy-siyosiy hayotda tutgan o'rni, jamiyatda egallagan mavqei, jug'rofiy asoslarni sarlavhaga olib chiqqan holda, davriy asosni esa qismlar ichiga singdirgan tarzda belgilaydi. Binobarin, har faslda ijtimoiy va jug'rofiy asosga rioya qilgach, davriy asosni pog'onama-pog'ona beriladi. Ammo bu tartib har bir bob uchun amal qilmaydi. Ayrim boblarda muallif davriy asosga e'tibor qaratmaydi.

O'z qurilishi e'tibori bilan ham "Lubobu-l-albob" tazkirasining tuzilishi o'ziga xos xislatga ega. Muallif asarni o'n ikki bobga bo'lgan. Biroq kompozitsion qurilish jihatidan u boshqa tazkiralardan farq qiladi. Avfiy tazkira xillarining hammasiga xos bo'lgan belgilarni olib, murakkab bir tazkira tipi yaratadi. Chunonchi, birinchi, dastlabki to'rt bob adabiyotshunoslik masalalariga bag'ishlangan nazariyalardan iborat bo'lsa, V, VI va VII boblar tuzilish jihatidan ijtimoiy kelib chiqish prinsipi asosida tuzilgan bo'lsada bob ichida xronologik asosga ham rioya qilinadi. V bobida muallif turli sulolalar adabiy davrini vaqt tartibiga rioya qilib, ilgari o'tgan va yohud o'ziga zamondosh bo'lgan hukmdor sulola vakillarni hukmronlik davriga qarab tartibga solib bergan [1]. "Lubobu-l-albob" IX-XIII asr O'rta Osiyo, Eron hamda Hindiston adabiy muhitida yashab ijod etgan 300 ijodkor haqidagi biografik hamda avtobiografik ma'lumotlarni aks ettirishi bilan ham qimmatlidir. Ushbu ma'lumotlar va ular bilan bog'liq holda keltirilgan namuna she'rlar muayyan tartibda joylashtiriladi. Tabiiyki, dastavval hukmdor sulola vakillari va ularning shajarasiga mansub shoirlarning tarjimai holi va ijodiga oid ma'lumotlar keltiriladi. Avfiyning shoirlar haqidagi ma'lumotlarini, shartli ravishda, ijtimoiy mansublik jihatidan quyidagicha guruhlash mumkin:

Podshoh va shahzoda shoirlar haqidagi ma'lumotlar;

Saroy a'yonlari haqidagi ma'lumotlar;

Jamiyatning turli qatlamiga mansub bo'lgan ijodkorlar haqidagi ma'lumotlar.

Tazkirada Muntasir (vafoti 1005), Mahmud G'aznaviy (969-1030), Tohir Chag'oni (vafoti 992), Qobus ibn Vushmgir (976-1013), Kaykovus (tavalludi 1021), Otsiz Xorazmshoh (1098-1156), Sulton Husayn G'uriy (1149-1161) kabi davlatni boshqarish bilan birgalikda she'riyatdan xabardor bo'lgan shohlar, Rudakiy Samarqandiy, Asir Axsikatiy, Rashidiy Samarqandiy, Tohir Chog'oni, Munjiq

Termiziy, Umar Termiziy, Am'aq Buxoriy, Mansur Samarqandiy, Sobir Termiziy, Xattot Termiziy, So'zanniy, Shahob Buxoriy, Mo'yad Samarqandiy, Aruziy Nizomiy Samarqandiy, Karimiy Samarqandiy, Kofiy Buxoriy, Abu Bakr Nasafiy singari o'z davrining buyuk allomalari, Sharq va Markaziy Osiyo xalqlari orasida keng tarqalgan axloqiy-talimiy asar, fors-tojik badiiy nasrining birinchi va yirik yodgorligi "Qobusnoma" asari bilan shuhrat topgan Unsuru-l-ma'aliy Kakovus, "Siyosatnoma" asarining muallifi Nizomulmulk, she'riyat nazariyasiga oid "Hadoyiq as-sehr fi daqoiq ash-she'r" ("She'riy nozikliklardan sehr bog'lari") tajnis, saj', zulfiyatayn, savol-javob kabi she'riy san'atlar haqida so'z yuritilgan, keyingi davr shoir va adabiyot olimlariga qo'llanma sifatida xizmat qilgan asar yaratgan Roshiddin Votvot kabi ko'plab ijodkorlar ham o'rin olganki, ular ijodi mumtoz adabiyot va O'rta asr Sharq ilm-fani taraqqiyoti tarixida muhim o'rin tutadi.

Ta'kidlash joizki, Muhaammad Avfiy "Lubobu-l-albob"da hukmdorlarning, davlat amaldorlarining shoirlarning, shayxlarning shaxsiyati, ijtimoiy mavqeyi, qaysi janrda qalam tebratishi va shoirning alohida qobiliyatlari kabi muhim ma'lumotlar ustida to'xtaladi va ularga adabiyot nuqtayi nazaridan javob beradi. Bundan tashqari, ularning asarlarini tilga oladi, bu asarlar haqida o'z fikrlarini bildirib o'tadi. "Lubobu-l-albob" Avfiyning adabiy-tanqidiy qarashlarini aks ettiruvchi manba hamdir. Tazkirada keltirilgan ma'lumotlarda o'z ifodasini topgan. Jumladan, asarning muqaddima qismida Avfiy so'z va uning qudrati, she'riyat haqidagi o'z fikrlarini bayon etsa, tazkiraning asosiy boblarida shoirlarning tarjimai hollari, ijodiy faoliyati xususida, ayrim o'rinlarda o'z ijodi to'g'ri ssida so'zlaydi. Tazkiranavis o'z adabiy tanqidiy qarashlarini bayon etishda boy faktik materiallarga asoslangan. O'ziga xos ifoda uslubida ish ko'rgan. Tazkiranavis asosiy e'tiborini so'z san'atining ijtimoiy vazifasi, til, badiiy mahorat, janrlar, ijodkorlarning badiiy salohiyati kabi masalalarga qaratadi. Avfiy bildirgan baho munosabatlarni quyidagicha qismlarga ajratish mumkin.

Avfiyning so'z va so'z san'atiga munosabati;

Avfiyning she'riyat va janrlarga munosabati;

Avfiyning shoirlarga bergan bahosi: maqtoqlar va tanqidiy qarashlar.

Avfiy tazkiraning muqaddima qismida Oллоhga hamdu sano bitish bilan birga so'z xususida ham bayon etadi. So'zni Yaratganning insoniyatga baxsh etgan ilohiy

ne'matlaridan biri sifatida talqin etadi. Odamzotni haqiqiy inson sifatida kashf etadigan, uni ommaga tanituvchi, iste'dod va iqtidorini, ma'naviy olamini, aqliy qudratini namoyon qiluvchi-bu so'z ekanligini qayta-qayta ta'kidlaydi. Bu e'tirof muallifning so'zning bashariyat tarixidagi ahamiyatini teran idrok etganligini yuqori ifodasidir.

Avfiy she'riyatni yuksak qadrlaydi. Buni tazkiraning dastlabki to'rt bobini nazariy ma'lumotlarga bag'ishlab, ushbu boblarda she'r va shoirlar fazilatlarini, she'rning lug'aviy ma'nosi, birinchi she'r yozgan kishi hamda fors tilida birinchi she'r yozgan ijodkor haqida keltirgan ma'lumotlarida ko'rish mumkin.

So'z san'atkorlari haqida bayon etar ekan, avvalambor, ularning ijodiy salohiyatlariga e'tiborini qaratadi. She'r va shoirga nisbatan so'z san'ati va shoirlar iste'dodi asosiy masala deb bilgan adabiyotshunos olim sifatida qalam ahliga shu nuqtai nazardan baho beradi. Ijodiy kamolotga erishgan, so'z san'atini puxta egallagan, kuchli badiiy mahorat sohibi bo'lgan shoirlarni chuqur xurmat bilan tilga oladi. Ular qalamiga mansub she'rlarni go'zal ijod namunasi sifatida e'tirof etadi. Toyyib Boharziy, Maymandiy, Atobek Xaviy, Muhammad binni Ali Samarqandiy, Sadridin Nishoburiy, Tojiddin Obiy, Ma'sud Ahmad kabi mohir so'z san'atkorlari Avfiy olqishiga sazovor bo'ldilar [1].

**Xulosa va takliflar.** Muhammad Avfiyning adabiy merosi: "Lubobu-l-albob" va "Javome'u-l hikoyat" asarlari nafaqat o'z davri hamda bugungi kun adabiyotshunoslik ilmda ham muhim adabiy manba hisoblanadi. Fors-tojik adabiyotida bizgacha yetib kelgan, chinakam mukammal fors tilidagi to'ng'ich tazkira asar Muhammad Avfiy ning „Lubobu-l-albob“ tazkirasidir. Avfiy tazkirasini IX-XIII asr adabiy muhitidagi qizg'in ijodiy jarayon va ko'tarinkilikning o'ziga xos ko'zgusi bo'lib, muhim tarixiy-adabiy ahamiyat kasb etadi. Tazkira shoirlar hayoti, ijodi, umuman, adabiy muhitning yetakchi asosiy qirralarini asosan, xolis, aks ettirganligi, boy faktik materiallar asosida vujudga kelganligi bilan ishonchli manba hamdir. "Lubobu-l-albob" fors adabiyotida tazkirachilik an'alarini boshlab berdi va Avfiy tazkiranini o'zgacha uslubda, ijodiy yondashuv asosida tuzdi va tazkirachilikni yangi namuna bilan boyitdi. Tazkira bir qancha sulolalarning hokimiyat tepasiga kelishidan tanazzuligacha bo'lgan davr haqida ancha tugal ma'lumot berganligi bilan ham muhim ahamiyatga molik.

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### KUBRAVIYLIK TA'LIMOTI VA ALISHER NAVOIY IJODI

Annotatsiya

Maqolada Alisher Navoiy asarlaridagi falsafiy fikrlar va axloqiy qarashlar Najmiddin Kubro ijodi va kubraviylik g'oyalari bilan chambarchas bog'liqligi tahlil etilgan. Kubraviylik tariqatidagi nazar masalasi Alisher Navoiy asarlari misolida izohlanadi.

**Kalit so'zlar:** Najmiddin Kubro, Alisher Navoiy, kubraviylik, nazar, adabiy an'ana, izdoshlik.

Alisher Navoiy temuriylar saltanatining murakkab, ziddiyatli bir davrida yashab ijod etdi. Uning hayot yo'li, serqirra ijodiyoti, shuningdek, ham siyosat, ham adabiyot sohasidagi birday sermahsul faoliyatini belgilashda bularni, albatta, e'tiborga olish lozim. Alisher Navoiy dunyoviy ishlar bilan qanchalar mashg'ul bo'lmasin, ruhoniylar hayotdan bir lahza bo'lsin chekinmagan. Navoiy tabiatidagi dunyo hoyu havaslaridan etak silkigan uzlatninishlik, Yaratganga bo'lgan muroqabayu, doimiy bo'lish kabilar ham taqdiri azalda bitilgan xalq osudaligi, saltanat tinchligi kabi davlat ishlaridan forig' eta olmadi. Bu nafaqat do'sti Husayn Boyqaroning taxtga kelishi, balki zamonasining qutbul aqtohi Xoja Ahror Valiy hamda piri komili Abdurahmon Jomiyning iltimoslari, ma'naviy ta'sirlari natijasi edi. "Natijada ulug'lik osmonining ushbu quyoshi "Allohga itoat etingiz, Payg'ambarga va o'zlaringizdan bo'lmish boshliqlarga itoat etingiz!" oyatiga muvofiq ish tutib hamda "Bir soat qilingan adolat oltmish yillik ibodatdan afzaldir" hadisini mulohaza qilib, amirlik lavozimi va vazirlik mansabini o'zining qutlug' qadami bilan ziynatlatdi" [1]. Husayn Boyqaro saltanatidagi har qanday ezgulikda Navoiyning hissasi borligi aniqdir. Saltanatdagi adolat, insof, tinchlikni shoir Navoiy shaxsiyatidagi tasavvur etish mushkul. Uning siyosat olamidagi hayot madrasasidan olgan ta'limi bilan ma'naviy yo'lchilikda ruhoniylar yo'lbo'shchidan olgan tarbiyasi mushtaraklik hosil qilib, ruhoniyatida komillik hosil etdi. Tasavvufiy hayot, tariqat ta'lim-tarbiyasi Navoiy yoshligidanoq ongu shuuriga singdirildi.

Navoiy madrasa ta'limini ko'rgan, zohir ilmi – shariat bilan bir qatorda botin ilmi – tariqatdan ham bolaligidan xabardor bo'lgan. Bu esa biror bir piri komilning etagini tutish maslagini Navoiyda qat'iy lashtirgan. Ruhoniyatidagi bu ehtiyoj o'laroq, 1476 yilda naqshbandiylik tariqatining piri komillaridan hisoblanmish Abdurahmon Jomiyga murid bo'ldi. Navoiyshunos Y. Ishaqov: "Navoiy garchi Jomiy bilan tanishib, unga keyinroq qo'l bergan bo'lsa-da, biroq u yoshlikdanoq o'z davrining buyuk siyosati bo'lmish Jomiy asarlari bilan, shuningdek, naqshbandiylikning asosiy xususiyatlari bilan tanish bo'lgan va tanisha borgan. Jomiyga qo'l berishi esa yosh Alisher e'tiqodidagi uzoq evolyutsiyaning rasmiy natijasidir", – degan edi [2]. Alisher Navoiy naqshbandiylik tariqatining muridi bo'lsa-da, O'rta Osiyodagi mashhur tariqatlar yassaviylik va kubraviylik tariqatlarining ta'lim usullarini puxta o'rgangan. Chunki bu davrda uchta tariqat peshvolari o'z faoliyatini teng olib borganlar. Alisher Navoiy ham har uchala tariqat namoyandalarining badiiy adabiyotini sevib o'qigan va ularning ibratli hayot yo'li, tariqatidagi o'ziga xosliklar asarlarida aks etgan.

Shayxi Valitarosh Najmiddin Kubro va u hazrat asos solgan mashhur kubraviylik tariqatidagi Allohga qurbat hosil etuvchi usullar, solik hol va maqomlarini ifodalovchi ramz va

timsollar Navoiy ijodiga sezilarli ta'sir o'tkazgan. Najmiddin Kubroning valiylik shaxsiyati, "at-tariqatuz-zahabiya", ya'ni "Oltin tariqat" nomi bilan mashhur bo'lgan kubraviylik tariqatining ta'siri Navoiyning do'sti, hammaslagi darvesh shoh Husayn Boyqaroning quyidagi istagidan ham namoyon bo'ladi: "... Hazrat sulton hazrati oliylariga shunday arz qildilar: Bir safar sizning Xudo ko'nglingizga solgan narsalarni so'zlovchi tilingizdan: "Qachonki jahondorlik kabi o'ta mas'uliyatli bu ishdan zeriksam, avliyolarning sarasi bo'lgan shayx Najmiddin Kubroning o'zidan nurlar taratuvchi maqbarasida istiqomat qiluvchi yoki ulug' Tangrining yaqini bo'lgan Xoja Abdulloh Ansoriyning (Alloh bularning qabrlarini tabarruk qilsin) tabarruk maqbarasi ostonasini supuruvchi bo'laman", degan gap chiqqan edi. Biroq endi sizning bu orzungiz ushalmaydigan bo'ldi, menga esa to'la xohish va rag'bat bilan Hijoz safariga borishimga ruxsat bermaydilar. Shunga ko'ra sizning qutlug' shaxsingiz vakolati bilan qolgan umrimni Ansoriyaning tabarruk maqbarasi ostonasini supuruvchilik bilan o'tkazishimga va saroy mulozimligi ishidan butunlay bo'shshimga ruxsat bersangiz..." [1] Nafaqat Navoiy, balki butun ma'rifat va mamlakat saltanatida Husayn Boyqaro o'z ta'sirini o'tkaza olgan shaxsiyatlardan edi. Uning "avliyolar sarasi Najmiddin Kubro"ga bo'lgan cheksiz hurmati, uning maqbarasida jorubkash bo'lish istagi, albatta, atrofidagilarni befarq qoldirmagan. Shuningdek, yana bir temuriy podshoh Ulug'bek Mirzo o'zining "Tarixi arba' ulus" ("To'rt ulus tarixi", 1425) nomli tarixiy asarida Shayx Najmiddin Kubroni "Jami musulmonlarning a'losi" deya ta'riflaydiki, bu ma'lumotlar ham shayxning temuriylar hukmronligi davridagi obro'-e'tibori, valiylik shon-shuhratidan ham darak beradi. Va Navoiyning ham ahli dil sifatida Najmiddin Kubro va Abdulloh Ansoriydek buyuk zotlar ostonasida darveshona hayot tarzini yashash orzusi bo'lganligiga shubha yo'q.

Buyuk bir shaxsiyat sifatida ham Najmiddin Kubroga Navoiyning e'timodi baland bo'lgan. Ayniqsa, shayxu avliyolar haqidagi "Nasoyim ul-muhabbat" tazkirasida ham keng o'rin ajratilgan sanoqli shayxlardan biri Najmiddin Kubrodir. Ma'lumot Kuniyatlar Abuljannob, otlari Ahmad b. Umar Xeva'iy hamda mashhur laqablari haqidagi xabar bilan boshlanib, bu ko'z o'ngimizda shayxni zohir va botin ilmida zamonasining tengsiz bir allomasi sifatida gavdalandiradi: "Va debdurlarki, Kubro andin laqab bo'ldiki, yigitlik avonidakim, zohir ulumi tahsilig'a mashg'ul ermishlar, har kim bilakim, munozara va muhohasa qilsalar ermish – ul kishiga g'olib bo'lurlar emish. Shuning uchun unga "Tommat ul-kubro" laqabini berdilar. ... Keyinroq "Kubro" deb atay boshladilar" [3]. Najmiddin Kubroning yana bir laqablari borki, u ahli tasavvuf orasida ko'p tilga olinadi. Bu shayxi Valitarosh, ya'ni valiy larni voyaga yetkazuvchidir. U kishining suhbatidan, hatto nazaridan ham odamlar fayzu barokat olar edilar. Zamira Ishaqova shayxning o'tkir nazari hamda nazarkardalikka



erishgan inson, shuningdek, jonzotlar haqidagi fikrlarini "Nasoyim"da keltirilgan manbalar orqali dalillab yozadi: "Shayxning qalbida ilohiy ilhom (vajd) qo'zg'alganda uning nazari kimga tushsa, shu kishi valiylik xislatiga ega bo'lgan. Xonaqohga tomosha uchun kirib kelgan bir savdogar shayxni vajd holida ko'radi. Najmiddin Kubroning muborak nazari savdogarga tushgach, savdogarning holati o'zgarib, qalbida valiylik nurlari paydo bo'ladi va kasbidan voz kechib, sulukka kiradi. Shayxning bashorati bilan tariqatdan nasiba topib, o'z yurtiga borib tariqatdan so'z ochadi..." [4] Zero, tasavvuf ahli ham ulug' shayxlarning atrofida qaynagan xayolidan kechgan o'y-fikrlarni, ko'nglidagi kechinmalarni farosat va karomat nuri ila anglashi haqiqatini, nazarning o'tkirligi valiylikning bir darajasi ekanligini Najmiddin Kubro va uning nazari tushib holi o'zgargan it voqeasi bilan isbot etadilar. Navoiy ham ko'ngil yo'lchiligi, sayru sulukka oid barcha asarlarida bundan foydalangan. "Lison ut-tayr", "Nasoyim ul-muhabbat", "Sittai zaruriya" kabi asarlarida batafsil to'xtalsa, lirikasining turli janrlarida ushbu voqeaga talmeh va tamsil san'ati orqali ishorat qiladi. "Nasoyim" tazkirasida bu voqeani shunday qisqa bayon qiladi: "Bir kun ul Hazrat majlisida As'hobi kahf ahvolining taqriri va tahqiqi o'tar erdi. Shayx Sa'diddin Humaviy q. s.ki, Hazrat Shayxning as'hobidindur, xotirig'a o'ttikim, oyo bu ummatda andoq kishi bo'lg'aymukim, suhbatlari itga asar qilg'ay? Hazrat Shayx karomat nuri bila ma'lum qildilar va qo'pub xonaqoh eshigiga borib turdilar. Nogoh bir it yetishdi va quyruq'ini tebratadur erdi. Alarning mubarak nazarlari ul it sori tushdi. Filhol baxshish topib, mutahayyir va bexud bo'lub, shahrdin yuz evurdi va go'ristong'a mutavajjih bo'ldi va boshin yerga surtar erdi" [3]. Bu valiy uchun ulug' bir rutba bo'lsa, murshidlar uchun zarur bo'lgan maqomdir. Piri komillar muridining qalbidan kechadigan har qanday fikrdan ogoh bo'lmog'i kerak. Shundagina tariqatda ildam odim tashlash mumkin. Shayx bu ma'noda tengsiz bir rahnamo, beqiyos bir peshvo edi. Navoiy ham ma'rifat nazari ila buni e'tiborsiz qoldirmagan. Qalb tasfiyasidagi soliklar uchun dalil ibrat ma'nosida buni teran tahlil etgan: "Va alarni Shayx Valitarosh ham debdurlar. Oning uchunki, vajdu hol g'alabotida muborak nazarlari har kimga tushsa, valoyat martabasig'a yetar ermish" [3]. Valiylarning quvvai nazari bilan odamlarda hollar o'zgargan. Yomonlik ezgulikka, hasad havasga, manmanlik tavoze'ga aylangan. Shu bois ularning ruhiy himmatidan, suhbatlaridagi fayzi barokotlardan odamlar har doim umidvor bo'lishgan. Chunki valiylarning irfon majlislarida bo'lish orqali ruh tazkiya topgan va solik o'zlikdan qutulib, o'zlikka yetgan, ma'nan qayta dunyoga kelgan. Bu ta'sir nafaqat insonlarda, hattoki hayvonlarda ko'rinishi yana-da ta'sirliroq bo'lgan:

Sukr vaqti soldi chun bir kun nazar,  
Ul nazardin bo'ldi bir it bahravar.  
Oshnolig'din yetishti choshni,  
Tortib itlik siyaratidin boshni.  
Yuz qo'yub shayx ollida qildi niyoz,  
Barcha itlar uzra bo'ldi sarfaroz.  
Har qayon shahr ichra qilsa erdi mayl,  
Itlar erdi girdida andoqki xayl. [3]  
Shayxning muborak nazari bilan it barcha itlar orasida sarfaroz bo'ldi. Bunday ta'sir kuchiga ega sohibi karomatlar, albatta, barcha zamonlarda ham kam uchragan. "Lison ut-

tayr"da kitobxonni jalb etadigan ma'lumotlardan biri Sulaymon nazari bois Hudhud ruhoniyyatidagi holga urg'u berish uchun Alisher Navoiy itga nazari tushgan Najmiddin Kubro to'g'risidagi rivoyatni keltirganidir. "Lison ut-tayr" dostoni qushlardan biri mavqelar, maqomlar masalasida "yashirin sirlardan" voqif bo'lgan Hudhudan so'raydi:

"... Tengdurur chun borimizg'a bolu par,  
Sen nedinsen boxabar, biz – bexabar?  
Bu tafovutni sarosar sharh qil,  
Kim nedindur, bizga ravshan aylag'il..."

Shunda Hudhud javobining avvalidayoq qushning savoliga:

O'truda bu bo'ldi Hudhudning so'zi:  
"Kim manga tushmish Sulaymonning ko'zi..."

Kimga-kim aylar nazar ahli safo,  
Ul nazar tufrog'ni aylar kimyo" [3],–  
deya javob bergani va bu orqali Navoiy tasavvufdagi nazari masalasiga o'z asarlarida ko'p o'rinlarda urg'u berganiga guvoh bo'lamiz.

"Lison ut-tayr"dagi "Shayx Najmiddin Kubroning so'zi va itga tushgan ko'zi haqida"gi maxsus bobda ana shu voqea bayon qilinadi:

...Yetkurur itga natija ul nazar,  
Zotig'a solur kishilikdin asar,  
Itgakim yetgay validin tarbiyat,  
Qushqa ham tong yo'q nabidan tarbiyat... [5]

Bir valiy zot nazari tufayli itda va qushda "maqom" hosil bo'lgan ekan, Sulaymon payg'ambar nazari tushgan Hudhudning boshqa qushlarga peshvo bo'lishi shubhasizdir. Navoiy asarning ushbu bobida Najmiddin Kubroning nazari bilan bog'liq ikkita voqeaga: Shayxning nazari tushgach holi o'zgargan qush va it bilan bog'liq voqealarga aynan ishora qiladi.

Kubroning iti bilan bog'liq hikoya Navoiyning mumtoz adabiyotda an'anaviy voqealar tizimiga olib kirgan yangiligidir.

Najmiddin Kubroning nazarkardaligi tazkira va manoiqlarda, dostonlarda tasavvufdagi bosh masalalardan biri ekanligi bois voqelik tarzda ifoda etilsa, lirikada badiiy san'atning go'zal namunasi bo'lgan talmeh orqali ishoratlar qilinadi. Navoiyning olti qasidasini jamlagan "Sittai zaruriya"dagi "Ayn ul-hayot" ("Hayot bulog'i") qasidasida ham shoir Kubro va nazarkarda it voqeasiga ishorat qilib, o'quvchi diqqatini jalb etadi:

Hast mashhur in, ki Nachmiddinvashoni ummatat,  
Chazba baxshand az yaqin bar sag nazar to afganand.

Ma'nosi: shu ma'lumki, ummatingning Najmiddin (Kubro) sifat avliyolari agar itga nazar qilsalar, shubhasiz, unga jazba bag'ishlaydilar. [6] Mutafakkir Navoiy shayxning nazarkardaligini yodga olib, yana bir bor nafs tarbiyasida yuksak martabaga erishgan valiy zotlarga ishorat qilmoqda.

Mutasavvif Alisher Navoiyning Najmiddin Kubro shaxsiyati va kubraviylik tariqati odob-arkonlariga muhabbati cheksiz bo'lgan. Bu holat uning nafaqat asarlarida Najmiddin Kubro nomi qayta-qayta tilga olinishi yoxud ustoz va xalifalariga oid ma'lumotlarning keltirilishida, balki asarlarida irfoniy g'oya va obrazlar uyg'unligida ham yaqqol namoyon bo'ladi.

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## FORMATION OF THE PROFESSIONAL COMPETENCE OF THE FUTURE COACH IN THE EDUCATIONAL SPACE OF A SPORT UNIVERSITY

Abstract

The paper considers the relevance of the formation of the psychological and pedagogical competence of coaches (sports teachers), associated with the characteristics and risks of coaching. Job of a coach in modern conditions is determined by a new status: the demand for sports teachers acquires a social scale within the framework of programs for the improvement of the population, within the framework of organizing healthy leisure for young people, within the framework of the formation of new values and life priorities of the younger generation. This need is fixed in all state educational standards. In the form of general cultural and professional competencies.

**Key words:** Continuity, analysis of a work of art, systematic approach, method, dialogue of cultures.

**Introduction.** Study demonstrates positive dynamics of development in most indicators. There is a qualitative growth in terms of: projective and predictive skills; students emphasize the need development of projective skills as a primary indicator of the professional maturity of young teachers; reflective and organizational skills; these skills are indicators of intrapersonal development, including the development of communication skills; informational and developing skills; the development of these skills is facilitated by the saturation of electronic information resources; analytical skills and efficiency of knowledge; these skills are associated with scientific and theoretical activities, and the greatest development is obtained when studying in the magistracy.

**Methods.** Analysis of the results of the survey of 1st and 4th year students of the direction "Physical culture" of sports and tourism, as well as analysis of the expert assessments of teachers of the academy and employers (teachers of general education and coaches of sports schools for which students were assigned in practice).

**Results and discussion.** The work of a coach (and a sports teacher in general) in modern conditions is determined by a new status: the demand for sports teachers acquires a social scale within the framework of population improvement programs, within the framework of organizing healthy leisure for young people, within the framework of the formation of new values and life priorities of the younger generation. A modern coach must have creative potential, the ability for self-development and self-improvement, the creation and transmission of healthy lifestyle values. This need is fixed in all state educational standards in the form of general cultural and professional competencies.

No matter how the form and content of the Federal State Educational Standards change, the need for the formation of psychologically competent and creatively gifted trainers-teachers is present and will be present in all standards as a response to the designated social request. This social demand is focused on creative individuality, which implies not only the presence of psychological and pedagogical knowledge, but also the ability to use and develop this knowledge in daily pedagogical practice, the formation of a "perpetual motion machine" of professional competence based on the well-known triad "knowledge → practice → new knowledge".

Therefore, the actualization of the problem of the formation of the psychological and pedagogical competence of future coaches (sports teachers) is an important marker of modern professional education.

The psychological and pedagogical competence of a coach (sports teacher) plays a special role against the backdrop of the rapid development of distant forms and means of education in general: it is impossible to educate and train an athlete in absentia, only with the help of electronic resources, the training process was, is and will be held as regular direct communication teacher with pupils. The coach spends more time with his students, knows them better and has more opportunities to influence than the average teacher. The communication of a coach with athletes is often "non-standardized", that is, almost constant, for example, at training camps and during sports competitions, therefore, in the early stages of work with young athletes, the coach actually plays the role of a guardian; becomes a mentor in later stages; and at the stage of the sport of the highest achievements, the function of a manager appears in relation to his wards. These features of coaching work place high demands on both professional and personal characteristics of a sports teacher. And this is also an additional factor in the actualization of the psychological and pedagogical competence of future sports teachers-trainers.

Equally important is the ability of sports teachers to maintain internal psychological balance, since the work of a sports teacher is burdened by various risks and a high level of stress: a coach spends a lot of time away from the usual comforts of home (training camps, competitions), by the nature of their activities, coaches have to communicate with a large number of people (parents of pupils, colleagues, judges, journalists, etc.), a high risk of physical and psychological injuries during training and competition, as well as a high degree of competition in the sports services market. Thus, future sports teachers should be prepared not only for external, but also for internal psychological risks of their profession.

The formation of psychological and pedagogical competence is the foundation of general professional competence, which includes:

- special competence (knowledge and skills in the field of sports activities);
- social competence (ability to work with a team and in a team, possession of interpersonal communication

techniques, awareness of social responsibility for the results of one's activities);

- personal competence (skills and abilities of personal self-regulation, self-expression, self-development, the ability to recognize and correct professional personality deformations);

- individual competence (skills and abilities to realize creative potential, desire and readiness for professional growth).

We also note the internal complexity and structuredness of the psychological and pedagogical competence of university graduates:

- general psychological competence as a set of theoretical knowledge in psychology;

- socio-pedagogical competence as knowledge of the foundations of social psychology;

- autopsychological competence as knowledge about oneself and one's psychological characteristics;

- communicative competence as skills and abilities of effective communication;

- conflict logic competence as skills and abilities of constructive work in conflict situations.

Important for the formation of the psychological and pedagogical competence of future sports teachers are also aspects of general cultural development: personal coloring of knowledge (passion for one's profession, the ability to interest pupils, responsibility in decision-making), communication skills (disposition to people, goodwill, sociability); perceptivity (professional observation, pedagogical intuition, high level of sensory indicators, assertiveness); personality dynamism (emotional stability, ability to self-regulate, lability), the culture of pedagogical communication (pedagogical tact, the presence of one's own style of communication).

The period of study at a university is a period not only of searching for one's professional identity, but also of laying the foundations for future professionalism. During this period, the unconscious internal need for self-actualization is translated into specific forms of professional activity, which makes it possible to realize this internal need already at a conscious level. During this process, young people, through awareness of their professional identity, form their professional self-concept, due to which they achieve personal

self-actualization. The professional activity of sports teachers provides sufficient opportunities for this, because it involves the actualization of the biological, psychological, and personal potential of the individual.

The formation of professional psychological and pedagogical competence of future trainers is provided by the psychological and pedagogical components of the educational process, presented in Table 1.

All types of educational and extracurricular activities are important for the formation of professional competence of the future coach. Of particular importance in the development of professional psychological and pedagogical competence of a future coach in the process of educational work belongs to practice and integrated courses, such as "Introduction to Teaching Excellence", aimed at forming ideas about the essence of pedagogical activity, at developing the structural components of the professional competence of a future coach, primarily turn, on professionally significant personal qualities of future specialists.

The course solves the following tasks:

- formation of ideas about the essence of pedagogical activity;

- the assimilation of knowledge about the essence and structure of pedagogical skills;

- characterization of the features of pedagogical skills in the structure of pedagogical culture;

- the formation of skills and abilities for the implementation of professional pedagogical activities;

- development of professional pedagogical reflection;

- development of communicative and analytical abilities of students;

- contributing to the development of pedagogical culture, professional creative abilities, qualities of a teacher;

- solution of pedagogical problems within the framework of general educational and professional educational organizations, focused on the analysis of scientific and scientific-practical literature, generalization of practice in the field of physical culture and education;

- the implementation of training and education of students in the process of classes.

It is important that in the process of passing an integrated course, theoretical knowledge acquires personal significance, is assimilated and becomes relevant.

Table 1

Psychological and pedagogical aspects of the educational process of VRSAPHCSandT on the formation of professional competence of a future coach

Stage	Goal	Educational work	Extracurricular activities
Stage 1(junior courses)	The goal is to develop psychological readiness for mastering the future profession of a coach	The system of educational subjects in accordance with the State Standard ("Pedagogy", "Psychology", "Pedagogy of physical culture", "Psychology of physical culture")	Work as counselors in summer health camps. Volunteering. Educational work among schoolchildren
Stage 2(middle courses)	The goal is to develop the main structural components of the professional competence of a future specialist in the field of education	Integrated course "Introduction to Teaching Excellence". Other integrated courses ("Prevention of drug addiction by means of physical culture and sports", "Social adaptation in the conditions of educational and professional activity", etc.). Practice in obtaining primary professional skills and abilities (3rd year). Coursework	Practice-oriented seminars: pedagogical technique, mimic and pantomimic expressiveness of the teacher, culture of speech and culture of appearance of the teacher, mastery of pedagogical communication, art of oral and public speaking, elements of acting and directing skills in pedagogical activity; psychological trainings: self-confidence development training, conflict management training, self-regulation basics training, burnout prevention trainings in the professional activities of a teacher

Stage 3(senior courses)	The goal is the development of professional competence of the individual	Practice for obtaining professional skills and experience of professional activity, pedagogical, performing and creative (4 course). Graduation thesis	Coaching. Scientific research
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Professional competence is formed and implemented in the course of all types of practices through the actualization of the following psychological and pedagogical skills and abilities:

analytical skills are manifested in the ability to analyze and generalize the accumulated pedagogical experience, diagnose the physical development of pupils and conduct pedagogical research;

prognostic skills and abilities are manifested in the ability to predict the development of a sports team, sports achievements of pupils, the educational and training process as a whole;

projective skills and abilities are necessary in the design of various forms of pedagogical activity: educational and methodological, research and extracurricular;

reflexive skills and abilities are carried out when evaluating one's activity in the form of self-observation and self-knowledge;

organizational skills ensure the inclusion of students in various types of team activities in accordance with their capabilities, knowledge and needs;

information skills and abilities are manifested in the ability to receive, process and present educational information in accordance with the goals and objectives of the educational process;

developing skills are aimed at the development of cognitive processes, feelings and will of students with the help of all methodological and methodological tools of psychological and pedagogical sciences.

A special role in the educational space of a sports university in the formation of the professional competence of a future specialist in the process of extracurricular work is given to coaching, in which senior students under the guidance of experienced coaches conduct training sessions, acquire the

skills and abilities of real pedagogical activity, practicing analytical, prognostic, organizational, reflective and other skills.

In connection with the relevance of the topic, the author conducted a study aimed at self-assessment of the level of formation of the psychological and pedagogical competence of students of the 1st and 4th courses of the direction "Physical culture" of the Volga Academy of Physical Culture, Sports and Tourism. The object of this study was the psychological and pedagogical competence of the students of the Academy, the subject - the process of formation of the psychological and pedagogical elements of the professional competence of future sports teachers - students of the Volga Region State Academy of Physical Culture, Sports and Tourism. The methodological basis of the study was a comparative analysis of the questionnaires of 1st and 4th year students. The study was of a prolonged nature: in 2014, students in a number of areas (wrestling, swimming, athletics, gymnastics, hockey, football) filled out a questionnaire that was uniform in content, and this year, already being 4th year students, they answered a similar questionnaire already with "heights of past years of study. The study involved 80 students. As part of the questionnaire, students conducted a self-assessment in terms of indicators of psychological and pedagogical competence, as well as the formation of a personal and professional level. Students had the opportunity to assess the indicators of psychological and pedagogical competence and personal growth on four levels:

- 4 - distinctly formed;
- 3 - sufficiently formed;
- 2 - takes place;
- 1 - formed to a minimum extent.

The results of the survey are presented in table 2.

Table 2

**Formation of psychological and pedagogical competence and personal growth of a coach in students' self-esteem (in points)**

	Theoretical and practical skills	1 st cours	4 th course	Dynamics
1	2	3	4	5
1	Efficiency of knowledge: sports news, sports pedagogy, innovation in the field of physical culture and sports	24,4	26	+1,6
2	Analytical skills: the ability to generalize advanced pedagogical experience; diagnose the physical development of pupils; conduct pedagogical research and analyze its results	24	24,8	+0,8
3	Prognostic skills: predict the development of a sports team; sports achievements of pupils; training process	22	26	+4
4	Projective skills: to design educational and methodical work; research activities; extracurricular activities	20,4	25	+4,6
5	Reflective skills: objectively evaluate their activities; the ability to self-observation, self-knowledge, to maintain and maintain sports shape	24,4	28	+3,6
6	Organizational skills: to hold mass physical culture and sports and entertainment events, to promote sports and sports services and goods, to mobilize pupils to go in for sports on their own, to lead a healthy lifestyle	23	26	+3
7	Information skills: work with printed and Internet sources, the ability to extract information and didactically transform it, apply technical means	27	30,2	+2,8
8	Developing skills: definition of the "zone of proximal development" of individual students, groups; creation of problem situations and other conditions for the development of cognitive processes of students	22	24	+2

Analysis of the results of self-examination allowed us to draw the following conclusions:

In general, the level of self-assessment of psychological and pedagogical competence can be characterized as adequate (3.5–4 points on a five-point scale on average for all students).

The study demonstrates a positive trend in development for most indicators.

Particularly noteworthy is the qualitative growth in such indicators as projective and predictive skills as a result of the simultaneous accumulation of theoretical knowledge and the possibility of applying it in practice (most students earn extra money in various sports organizations - they train mainly children, in addition, all respondents underwent pedagogical practice in general education and sports schools in the city of Kazan or educational institutions at the place of residence). It should be noted that in personal conversations, students emphasized the need to develop projective skills, which are perceived by employers as a primary indicator of the professional maturity of young teachers.

An important factor in the formation of projective and predictive skills and abilities are the annual student conferences, at which the students surveyed had the opportunity to demonstrate and consolidate these skills.

Good dynamics was also shown by assessments of reflexive and organizational skills.

The ability to reflect is the most important indicator of a mature, formed personality, and the growth of this indicator, in our opinion, best demonstrates the process of formation of psychological and pedagogical competence. This is especially significant for us educators, compared with the results of the primary study four years ago, when this particular indicator gave negative results. As reflective skills are an indicator of intrapersonal development, so the development of organizational skills is a demonstration of the development of communication skills. The positive dynamics of organizational skills is the cumulative result of the educational process, educational and pedagogical practice, extracurricular work and, in general, the first independent stage in life for most students (83% of the respondents live in a hostel). Also, in personal conversations, students noted the importance of

working in the summer in various kinds of children's camps in terms of developing organizational skills and abilities. Students characterized this work as "an invaluable experience", "the most significant source of skills and abilities", "a creative school", etc.

Informational and developing skills also gave a positive increase, although not as large as those described above. Information skills are of an applied nature, moreover, they are already very well developed among first-year students who have graduated from a general education school, which forms these skills almost in full. In addition, the Volga Region Academy is saturated with electronic information resources, in which students are immersed from the first year, and by the 4th year, information skills are solid and fixed. Developing skills are the skills of life experience and practice, and the university is only the starting point for the formation of these skills.

The smallest increase was shown by analytical skills and efficiency of knowledge. These skills are therefore the weakest link and require more work. In our opinion, these skills are closely related to scientific and theoretical activities and are of paramount importance for the magistracy. The bachelor's degree as a whole has an applied character, and the results of the study confirm this. However, this also forms a field for further reflection and development of the forms and content of the educational process. There is a tendency to increase the number of applied psychological disciplines, such as, for example, "Psychodiagnostics in sports", "Selection and sports orientation", "Forecasting in sports", "Technologies of physical culture and sports activities", "Improving sports and pedagogical skills", etc. on various profiles of preparation of the direction "Physical culture".

For a systematic and reliable assessment of the formation of professional psychological and pedagogical competencies, an additional expert survey of teachers of the academy and employers (teachers of general education and coaches of sports schools, to which students were assigned on practice).

Table 3

**Expert evaluation of the formation of psychological and pedagogical competence of 4th year students of the direction "Physical Culture" (in points)**

	Theoretical and practical skills	students	teachers	
1	Efficiency of knowledge: sports news, sports pedagogy, innovation in the field of physical culture and sports	3,6	3,5	3,8
2	Analytical skills: the ability to generalize advanced pedagogical experience; diagnose the physical development of pupils; conduct pedagogical research and analyze its results	3,4	2	1,8
3	Prognostic skills: predict the development of a sports team; sports achievements of pupils; training process	3,6	1,8	1,7
4	Projective skills: to design educational and methodical work; research activities; extracurricular activities	3,5	3,1	3
5	Reflective skills: objectively evaluate their activities; the ability to self-observation, self-knowledge, to maintain and maintain sports shape	3,8	2,8	2,4
6	Organizational skills: to hold mass physical culture and sports and entertainment events, to promote sports and sports services and goods, to mobilize pupils to go in for sports on their own, to lead a healthy lifestyle	3,6	3,5	3,5
7	Information skills: work with printed and Internet sources, the ability to extract information and didactically transform it, apply technical means	4	3,8	3,9
8	Developing skills: definition of the "zone of proximal development" of individual students, groups; creation of problem situations and other conditions for the development of cognitive processes of students	3,3	3	2,9

The analysis of the obtained results of the expert assessment made it possible to draw the following conclusions:

1. Operational, information and organizational skills were equally highly appreciated by both teachers and

employers, and there is a correlation with the results of student self-examination. This characterizes the fact that our university provides not only theoretical knowledge, but also forms sustainable pedagogical skills and abilities, lays a positive trend in the development of professional competence

in the field of working with information and advanced pedagogical experience in the field of physical culture and sports.

2. Projective, reflective and developing skills received average marks from experts.

Projective and developing skills, theoretically studied during the educational process, in the future should be supported by the experience of real coaching. And the reflective skills to objectively evaluate their activities depend on the personal interest of students in self-development and professional self-improvement.

3. A relatively low assessment of the experts received the prognostic and analytical skills of students. This is due to the fact that employers assessed these skills in terms of their accumulated practical experience, which is objectively small for students.

In general, the level of psychological and pedagogical competence was confirmed by an expert assessment of university teachers and employers, which indicates the positive impact of educational and extracurricular work on the formation and development of professional knowledge, skills and abilities. It is very important for a modern university to graduate students with acquired practical skills in their chosen

field of activity, which, in fact, is the essence of the professional competence of future specialists.

The general conclusion is that the university provides not only theoretical knowledge, but also forms, first of all, skills and abilities, including in the field of psychological and pedagogical competence, and in general lays a positive trend in the development of professional competence.

An interesting message is presented by the results of this work for a comparative study of the psychological and pedagogical skills of students in different areas. Thus, the results of the survey showed that swimmers had more developed reflexive skills, while gymnasts demonstrated the priority of predictive skills. Carrying out a comparative analysis is the subject of our further scientific research.

The psychological and pedagogical competence of future sports teachers is an integral system of interrelated and mutually influencing knowledge, skills, abilities, attitudes, personal characteristics, personal positions and effective motives, the totality of which ensures not only the successful and effective solution of their professional tasks, but also the personal growth of the teacher, as well as satisfaction and a sense of self-realization.

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### SELF-SIMILAR SOLUTION FOR A DOUBLE NONLINEAR PARABOLIC EQUATION IN NON-DIVERGENCE FORM WITH SOURCE TERM

Abstract

In this study, we explore the positive solution to a Cauchy problem in  $\square^N$  of the diffusive equation:

$$|x|^{-l} \frac{\partial u}{\partial t} = u^q \nabla \left( |x|^n u^{m-1} \left| \nabla u^k \right|^{p-2} \nabla u \right) + t^\lambda |x|^{-l} u^\beta, \quad (t, x) \in Q \quad (1)$$

$$u|_{t=t_0} = u_0(x) \geq 0, \quad x \in \square^N \quad (2)$$

considering initial data that is neither trivial or negative. Here

$Q = \{(t, x) | t > t_0 > 0, x \in \square^N\}$ ,  $k, m \geq 1, p \geq 2, \beta \neq 1, 0 < q < 1, n, \lambda, l$  are the given parameters. We prove that

$$\beta_* = (\lambda + 1) \left[ q + m + k(p-2) - 1 + \frac{(p-l-n)(1-q)}{N} \right] + 1$$

is the critical Fujita exponent. That is, if  $1 < \beta \leq \beta_*$ ,

, then every positive solution blows up in finite time, but for  $\beta > \beta_*$ , there exist both global and non-global solutions to the problem. The main results are the existence of weak solutions in suitable function spaces; regularity and positivity of solutions; asymptotic behavior of solutions as time goes to infinity; comparison principles and maximum principles for solutions.

**Keywords:** Not divergent, parabolic equations, self-similar solution, asymptotic behavior, Fujita global solution.

**Introduction.** The (1)-(2) arises in different applications [1]-[4]. Equation (1) is degenerate type. Therefore, in the domain  $Q$ , where  $u = 0, \nabla u = 0$  it is a degenerate type. Therefore, in this case, we need to consider a weak solution from having a physical sense class.

Investigating qualitative properties of the problem such as Fujita type global solvability, asymptotic solution, localization of solution, finite speed propagation of distribution, blow-up solution, and so on by many authors based on self-similar solutions (for example, see [5]- [7],[10] and literature therein).

Literature review

Martynenko and Tedeev [3], studied the Cauchy problems in the case  $q = n = 0, k = 1, l = \lambda = 0$ . They showed that under some restrictions on the parameters, any nontrivial solution to the Cauchy problem blows up in a finite time and established a sharp universal estimate of the solution near the blow-up point.

D. Andreucci and A.F. Tedeev studied [4] the Neumann problem in the case  $n = l = 0, k = m = 1, \gamma = 1$ . They established a sharp universal estimate of the solution near the blow-up point and showed the condition for the solutions to exist and to which class they belonged. Also, D. Andreucci and A.F. Tedeev proved [5] prior supremum bounds for solutions in the case  $n = l = 0, \gamma = 1$ , as  $t$  approaches the time when  $u$  becomes unbounded. Such bounds are universal in the sense that they do not depend on  $u$ .

**Research methodology.** The proofs mentioned in the research paper are based on rigorous mathematical techniques, specifically comparison methods and asymptotic analysis. These techniques are widely used in the field of mathematics for analyzing the behavior of weak solutions to a wide range of mathematical problems.

We say that  $u(t, x)$  is the weak solution to the problem (1)-(2) in  $Q_T = \{(t, x) | 0 < t_0 < t < T, x \in \square^N\}$  if  $u(t, x) \in C(Q_T), \nabla u \in L^1_{loc}(0, T; L^1_{loc}(\square^N))$  and (1)-(2) is satisfied in the sense of distribution in  $Q_T$ , where  $T > t_0$  is the maximal existence time.

The self-similar equation

We introduce the notation  $u = v^{\frac{1}{1-q}}$  and put this into the equation (1)-(2)

$$|x|^{-l} \frac{\partial v}{\partial t} = \nabla \left( |x|^n v^{m_2-1} \left| \nabla v^{k_2} \right|^{p-2} \nabla v \right) + (1-q) t^\lambda |x|^{-l} v^{\beta_2} \tag{2.1}$$

$$v|_{t=t_0} = v_0(x) \tag{2.2}$$

Or, consider the radial symmetric case

$$\frac{\partial v}{\partial t} = r^{l+1-n} \frac{\partial}{\partial r} \left( r^{n+N-1} v^{m_2-1} \left| \frac{\partial v^{k_2}}{\partial r} \right|^{p-2} \frac{\partial v}{\partial r} \right) + (1-q) t^\lambda v^{\beta_2} \tag{2.3}$$

$$r = |x|, m_2 = \frac{m}{1-q}, k_2 = \frac{k}{1-q}, \beta_2 = \frac{\beta - q}{1-q}$$

where

We look for the solution of (2.3) in the form

$$v(t, r) = \bar{v}(t) \omega(\tau(t), \phi(r))$$

$$\bar{v}(t) = \begin{cases} h_1 t^{\frac{1+\lambda}{1-\beta_2}}, & \beta_2 \neq 1, \lambda \neq -1, & h_1 = \left( \frac{(1-q)(\beta_2-1)}{1+\lambda} \right)^{\frac{1}{1-\beta_2}} \\ h_2 (T_0 + \ln t)^{\frac{1}{1-\beta_2}}, & \beta_2 \neq 1, \lambda = -1, & h_2 = ((1-q)(\beta_2-1))^{\frac{1}{1-\beta_2}} \\ h_3 e^{\frac{1-q}{1+\lambda} t}, & \beta_2 = 1, \lambda \neq -1, & h_3 = const > 0 \\ h_4 t^{1-q}, & \beta_2 = 1, \lambda = -1, & h_4 = const \geq 0 \end{cases}$$

where:

$$\tau(t) = \begin{cases} H_1 t^\alpha, & \alpha \neq 0 \\ H_2 \ln t, & \alpha = 0 \end{cases}, \phi(r) = \begin{cases} \frac{p r^p}{p-l-n}, & p \neq l+n, \\ \ln r, & p = l+n \end{cases}$$

$$\alpha = 1 + \frac{(1+\lambda)(m_2 + k_2(p-2) - 1)}{1-\beta_2}, H_2 = h_1^{m_2+k_2(p-2)-1}, H_1 = \frac{H_2}{\alpha}.$$

It is easy to check that for unknown function  $\omega$  is obtain the following equation

$$\frac{\partial \omega}{\partial \tau} = \phi^{1-s} \frac{\partial}{\partial \phi} \left( \phi^{s-1} \omega^{m_2-1} \left| \frac{\partial \omega^{k_2}}{\partial \phi} \right|^{p-2} \frac{\partial \omega}{\partial \phi} \right) + \frac{h_5}{\tau} (\omega^{\beta_2} + \omega) \tag{2.4}$$

$$s = \frac{p(N-l)}{p-l-n}, l < \min\{N, p-n\}, h_5 = \frac{1+\lambda}{\beta_2-1-(1+\lambda)(m_2+k_2(p-2)-1)}$$

Here

The self-similar equation shown below was created using the nonlinear splitting method described in [8]

$$\omega(\tau, r) = f(\xi), \xi = \phi \tau^{-\frac{1}{p}} \tag{2.5}$$

It is easy to see the function  $f$  satisfy the following equation

$$\xi^{1-s} \frac{d}{d\xi} \left( \xi^{s-1} f^{m_2-1} \left| \frac{df^{k_2}}{d\xi} \right|^{p-2} \frac{df}{d\xi} \right) + \frac{\xi}{p} \frac{df}{d\xi} + h_5 (f^{\beta_2} + f) = 0 \tag{2.6}$$

And we write the Fujita’s condition [6] for the equation (2.6) as following

$$\frac{1+\lambda}{\beta_2-1-(1+\lambda)(m_2+k_2(p-2)-1)} < \frac{s}{p}.$$

According to the original problem statement, we will be looking for a non-trivial non-negative solution of the equation (2.6) that fulfills the following condition:



$$f'(0) = 0, \quad f(d) = 0, \quad 0 < d < \infty \tag{2.7}$$

Slow diffusion (case  $(p - 1)(m_2 + k_2(p - 2) - 1) > 0$ ). A global solvability of solutions

Since problem (1)-(2) is equivalent to problem (2.1)-(2.2), it is sufficient to solve problem (2.1)-(2.2). The properties of a global solvability for weak solutions of the equation (2.1) were proved a comparison principle [1]. For this goal, a new equation was constructed using standard equation method as in [8]:

$$v_+(t, x) = \bar{v}(t) \bar{f}(\xi) \tag{3.1}$$

where: 
$$\bar{f}(\xi) = A(a - \xi^{\gamma_1})_+^{\gamma_2} \tag{3.2}$$

$$\gamma_1 = \frac{p}{p-1}, \quad \gamma_2 = \frac{p-1}{m_2 + k_2(p-2) - 1}, \quad A = \left( \frac{1}{\gamma_1 \gamma_2} \left( \frac{1}{pk_2^{p-2}} \right)^{\frac{1}{p-1}} \right)^{\gamma_2}, \quad a = const \geq 0, \quad (d)_+ = \max(d, 0)$$

Theorem 1. (A global solvability.) Assume, that

$$\gamma_2 > 0, \quad h_5 < \frac{s}{p}, \quad h_5 (A a^{\gamma_2})^{\beta_2 - 1} \leq \frac{s}{p} - h_5, \quad v_+(0, x) \geq v_0(x), \quad x \in \mathbb{R}^N$$

Then, for sufficiently small  $v_0(x)$ , the followings hold:

$$v(t, x) \leq v_+(t, x) \text{ in } Q \tag{3.3}$$

Proof. Theorem 1 is proved by the comparing solution method [1]. hence, comparing solution methods it is taken the function  $v_+(t, x)$ . Substituting (3.1) in (2.1) the following inequality can be obtained:

$$\xi^{1-s} \frac{d}{d\xi} \left( \xi^{s-1} f^{m_2-1} \left| \frac{df^{k_2}}{d\xi} \right|^{p-2} \frac{df}{d\xi} \right) + \frac{\xi}{p} \frac{df}{d\xi} + h_5 (f^{\beta_2} + f) \leq 0 \tag{3.4}$$

We rewrite the inequality 
$$h_5 < \frac{s}{p} \text{ as } \frac{1 + \lambda}{\beta_2 - 1 - (1 + \lambda)(m_2 + k_2(p - 2) - 1)} < \frac{s}{p} \text{ or } \beta_2 > \beta_{2*}, \text{ here}$$

$$\beta_{2*} = 1 + (1 + \lambda) \left[ m_2 + k_2(p - 2) - 1 + \frac{p - l - n}{N - l} \right]$$

If the specific form (3.2) is given for the function  $\bar{f}(\xi)$ , inequality (3.4) can be rewritten as follows:

$$\xi^{s-1} \bar{f} \left[ h_5 \bar{f}^{\beta_2-1} + h_5 - \frac{s}{p} \right] \leq 0$$

because the term  $\xi^{s-1} \bar{f}$  is nonnegative, this inequality can be written as follows:

$$h_5 \bar{f}^{\beta_2-1} + h_5 - \frac{s}{p} \leq 0$$

It is easy to check that 
$$A^{\beta_2-1} (a - \xi^{\gamma_1})_+^{\gamma_2(\beta_2-1)} \leq A^{\beta_2-1} a^{\gamma_2(\beta_2-1)}$$
. Then, according to the hypothesis of Theorem 1

and comparison principle, it will be:  $v(t, x) \leq v_+(t, x)$  in  $Q$ , if  $v_+(0, x) \geq v_0(x)$ ,  $x \in \mathbb{R}^N$ . The proof of the Theorem 1 is completed.

Asymptotic of compactly supported weak solution

Next the asymptotic behavior of the self-similar solutions of the equation (2.6) is studied.

Theorem 2. Let  $\gamma_2(1 - \beta_2) \leq 1$  then a finite solution of the problem (1)-(2) has an asymptotic representation

$$f(\xi) = \bar{f}(\xi)(1 + o(1))$$

Proof. We will search a solution the equation (2.6) in the following form

$$f(\xi) = \bar{f}(\xi) w(\eta) \tag{4.1}$$

Here  $\eta = -\ln(a - \xi^{\gamma_1})$ ,  $w(\eta)$  is to be determined.

Now let us investigate the asymptotic behavior of solution of the equation (2.6) at  $\xi_1 = \xi \rightarrow a^{\frac{1}{\gamma_1}}$ . It is to check that substituting (4.1) into (2.6) for  $w(\eta)$  we obtain the following equation

$$\frac{d}{d\eta}(Lw) + a_0(\eta)Lw + a_1(\eta)\left(\frac{dw}{d\eta} - \gamma_2 w\right) + a_2(\eta)w + a_3(\eta)w^{\beta_2} = 0 \tag{4.2}$$

Where  $a_0(\eta) = \frac{s}{\gamma_1} \frac{e^{-\eta}}{a - e^{-\eta}} - \gamma_2$ ,  $a_1(\eta) = \frac{\gamma_1^{1-p}}{p} A^{\frac{1-p}{\gamma_2}}$ ,  $a_2(\eta) = h_5 \gamma_1^{-p} A^{\frac{1-p}{\gamma_2}} \frac{e^{-\eta}}{a - e^{-\eta}}$ ,

$$a_3(\eta) = h_5 \gamma_1^{-p} A^{\beta_2 - m_2 - k_2(p-2)} \frac{e^{(\gamma_2(1-\beta_2)-1)\eta}}{a - e^{-\eta}}, Lw = w^{m_2-1} \left| \frac{dw^{k_2}}{d\eta} - k_2 \gamma_2 w^{k_2} \right|^{p-2} \left( \frac{dw}{d\eta} - \gamma_2 w \right)$$

After some calculation we come to the following algebraic equation

$$\gamma_2^p k_2^{p-2} w_0^{m_2+k_2(p-2)-1} + a_3 w_0^{\beta_2-1} - \frac{\gamma_2 \gamma_1^{1-p}}{p} A^{\frac{1-p}{\gamma_2}} = 0$$

From these expressions, it is easy to see that the equation (4.3) has a solution  $y(\eta)$  with a finite non-zero limit, at  $\eta \rightarrow +\infty$ . Then the compactly support solution of the problem (2.6)-(2.7) has an asymptotic of the form (4.1) at  $\xi_1 = \xi \rightarrow a^{\frac{1}{\gamma_1}}$ .

The proof of the Theorem 2 is completed.

**Analysis and results.** It is essential to choose an initial approximation that keeps its nonlinearity features. Using the previously mentioned descriptive study, we generated numerical computations. Since we have an asymptotic solution (4.7), we can use the numerical data of the asymptotic solution for the initial approximation. Here are some examples from numerical experiments. The initial approximation was taken in the form:

$$u_0(x) = \left( A v \left( a - \xi^{\gamma_1} \right)_+^{\gamma_2} \right)^{\frac{1}{1-q}}$$

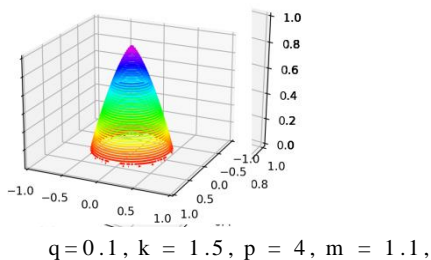


Fig.1  $n = 1.1, l = 1, \lambda = 0, \beta = 5.96$

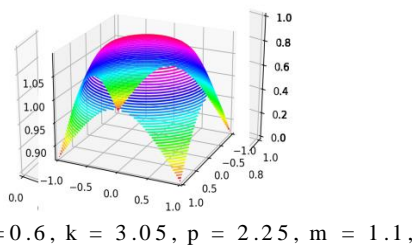


Fig.2  $n = 0.7, \lambda = 0, l = 0.9, \beta = 3.4$

Results of the numerical experiments and graphs show that the self-similar solutions are very appropriate approximations. Fig.1 and Fig.2 shows a compactly supported solution of the problem (1)-(2).

**Conclusion and recommendations.** Based on the comparison approach, the property of a finite speed perturbation of the distribution of the Cauchy problem for a parabolic not in divergence form is studied. A self-similar solution's asymptotic behavior for equation is established. It is shown that the coefficients of the main terms of the asymptotic solution fulfill the system of an algebraic equation. The iterative method based on the Picard's method is appropriate for the solution of nonlinear problems and maintains the nonlinear effects [8].

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## THE DILEMMA OF INCLUSIVE EDUCATION: INCLUSION FOR ENGLISH LEARNING STUDENTS

Abstract

Everyone should learn modern, international languages in order to share their scientific research work with foreign colleagues, to listen to their opinions and comments. We examine two - somewhat opposing - discourses about inclusive education: "inclusion for some" - which represents the idea that children with special needs have a right to the highest quality education that can be delivered by specially trained staff - and "inclusion for all" - which represents the idea that all children, regardless of their diverse needs, should be able to learn together. The findings demonstrate the potential for bridging the two narratives in terms of the voices they support or mute, the power relations they create, and the values and practises they enact or prohibit.

**Key words:** Inclusive education, ESL students, professional discussions, effective education, modern languages, trained staff.

**Introduction.** In today's age of globalization, the development of science and technology is In this paper, we intend to consider different understandings of inclusive education that frame current public and professional debates as well as policies and practices. We analyze two – somewhat opposing – discourses regarding inclusive education, namely, the "inclusion for some" – which represents the idea that children with special needs have a right to the highest quality education which can be delivered by specially trained staff, and the "inclusion for all" – which represents the idea that all children regarding their diverse needs should have the opportunity to learn together. To put the two discourses in a dialogical relation, we have reconstructed the inferential configurations of the arguments of each narrative to identify how the two definitions contribute to position children with and without special needs and their teachers. The results show the possibilities to bridge the two narratives, with respect to the voices they promote or silence, the power relations they constitute, and the values and practices they enact or prevent serving to open many doors for humanity. If we compare with ancient times, the difficulties in our life today are much easier and many pressing problems have been solved. But we should not forget the progress of science that helped us to achieve such results. In the country where more attention is paid to the field of education, the lifestyle of people in that country will be easier and they will live a prosperous life. Because intelligent and learned people are valued in these countries, and invitations for science will never stop. But there are some aspects that we should pay attention to. In other words, when it comes to science and technology, we should not limit ourselves to the development of specific sciences that can make discoveries. The role of social and humanitarian sciences in our life is also incomparable. Or people cannot achieve any results without knowing their history, philosophy or language. Here we can witness that social and humanitarian sciences are also of special importance for our progress.

During the last ten years, attention to language learning has increased not only in the territory of Uzbekistan, but also in a number of developing countries of the world. In particular, interest in languages such as English, French, Spanish, and Italian, which are taught as modern languages, has doubled from before. problems encountered in the process of communication have been eliminated. However, how comfortable and hybrid are the conditions created for language

learning? Do higher education institutions take into account the needs of all students? What innovations have been made regarding inclusive education and what other shortcomings are there? In this article, the solutions to the problem are studied in detail.

In our daily life, we often come across the concepts of inclusive education or integrated education. But we need to know the difference between them. In other words, inclusive education means eliminating the difference between people with disabilities and healthy children, providing quality education to all of them. In integrated education, such children are treated as problems, their educational processes are the same as those of healthy children, and no additional facilities are provided. However, in inclusive education, the child and his rights are in the first place.

Inclusive education for children with disabilities is one of the most important strategies of the Liliane Foundation. 50% of all children with a disability in low- and middle-income countries are out of school. That is approximately 33 million children. Most of them live in the poorest parts of Africa, Asia, and Latin America. These children don't have the opportunity to go to school or are excluded from education. The children with disabilities that are in school are less likely to stay in school.

However, the main barrier to education is not the disability of the child. The attitude of society, which is not inclusive of children with a disability, causes the greatest barriers. That is why the Liliane Foundation stresses the importance of inclusive education and is pushing to change these figures. We promote good quality and inclusive education for all children.[1] Every children wants to learn, just we have to invest money properly. Every child has the right to education. Decisions made regarding inclusive education and the practices being carried out show that this field is definitely developing. In higher education institutions, there are special electronic textbooks and books created on the basis of the Braille alphabet for persons with disabilities. This is also why we can witness that there are separate corridors and elevators in the university area for children with disabilities. However, there are also problems that need to be solved. That is, this problem is definitely related to the language learning of people with limited opportunities and disabilities.

**Literature review.** Children can often switch between languages when carrying out everyday tasks like shopping. But the cognitive and language skills needed to cope with learning at school in a second language are very different. Children learn literacy and academic content best in the language they understand best. They cope better with learning a second language if they are educated in their own language first.

It is not true that children will automatically learn a new language quickly if they are surrounded by it in class; or that deaf children will get used to lipreading and communicating through writing if they experience it enough, or that this is the best thing for them to be able to function well in a hearing society.

In everyday life we learn languages in a practical way, seeing or touching items that represent new words we are learning. But in school, teachers using traditional methods rely heavily on speaking, offering few clues as to the meaning of unfamiliar words used in unfamiliar situations (e.g., words used to describe new concepts like maths). They may confuse learners by translating back and forth between local and official languages. The development of literacy is particularly difficult through a second language.[2] It is widely recognized that students with learning disabilities at the intermediate level and beyond do well with decoding but experience difficulties with language comprehension and language production in real situations. This is mainly because they employ ineffective strategies for language learning and language use[3]. To put it in other words, these students often possess a good collection of vocabulary and grammatical structures, but they cannot comprehend oral or written language; nor can they express themselves orally or in writing because they lack the effective strategies that can improve their receptive and productive language skills. Therefore, they are in critical need of an intervention that explicitly teaches language-learning and language-use strategies in conjunction with language skills. In favor of this type of intervention, Price and Cole declare that "effective instruction for students with learning disabilities is explicit and intensive and combines direct instruction with strategy instruction and responsive to the specific information processing and learning needs of students"

**Research methodology.** The results of the survey on inclusive education show that every student has a great need to learn new languages. But what prevents them is the fact that homework is given in writing or there are no special devices to save their votes. It would be appropriate if we slightly changed the traditional teaching system. However, there is another question that some students in the class are more inclined to understand and understand by writing rather than listening. So, the solution to the problem is to gather children with disabilities in one place?

Several questions can be considered on this topic. If children with disabilities are gathered together, there may be some defects in the children's psyche. Therefore, it is necessary to gather healthy and disabled children in one class and try to create favorable conditions for both. Comprehensive instruction is an approach to tutoring in which understudies with numerous distinctive sorts of inabilities and learning needs are taught in classes with non-disabled and ordinarily creating understudies. In an comprehensive course of action, understudies who require extra bolsters and administrations spend most of their time with their non-disabled peers instead of in partitioned classrooms or schools.[4] This article starts with a brief thought of the ways comprehensive instruction has been characterized and an investigation of inclusion's roots in broader developments for respectful rights in democratic social orders. This is often taken after by a discussion of the challenges of overseeing an comprehensive classroom, in conjunction with a few methodologies that can offer assistance instructors address these challenges through the creation of a

"culture of inclusion." There's no generally acknowledged definition of incorporation and no agreement on a standardized set of strategies that must be taken after in order to hone it. One way to recognize consideration from another non-segregationist approach called mainstreaming is that in an comprehensive classroom, there's a solid accentuation on attempting to meet the assorted learning needs of all understudies without expelling them from the classroom. By differentiate, when children with uncommon needs are mainstreamed, it ordinarily implies (at slightest in guideline) that everybody within the lesson is anticipated to take after one standard educational modules notwithstanding of their contrasts, or that specific children are taken out of the course for a huge extent of the day to get their lessons and administrations. The term "inclusive education" is most frequently utilized to cruel the consideration of people with physical and mental disabilities, such as tactile or portability restrictions, mental incapacities, learning incapacities, dialect clutters, behavior clutters and extreme introvertedness range disarranges.[5] A few teachers and scholars too utilize "inclusion" in a broader sense, to allude to an instructive framework outlined to guarantee get to for all bunches that have been marginalized in society and in schools. Hence, consideration is some of the time imagined as the consider and self-conscious organizing of whole-school and classroom situations so that they are available and amicable not as it were to understudies with impedances, but moreover to those who can confront avoidance or disempowerment due to their ethnicity, social course, sex, culture, religion, immigration history or other traits. Since incorporation moreover has this broader meaning, it is in some cases supported as a implies of accomplishing a more comprehensive shape of social justice. Advocates of incorporation contend that it may be a shape of tutoring that puts the values of a equitable society into practice. Although there are numerous hypotheses of vote based system and various points of view on how to realize social equity, it is for the most part acknowledged that modern equitable social orders are established on the preface that all human creatures have rise to worth and ought to have rise to rights, counting the proper of get to to instruction.[6] Advocates of consideration emphasize an extra majority rule ethical basic, which could be a obligation to regard and react to human differing qualities, counting people's impediments or disabilities. They fight that in arrange to guarantee really widespread get to to instruction, a rule of equity must be followed. Inclusion is grounded within the see that such value or decency is best accomplished by planning an instructive framework in which physical and social situations, educational program, instructing strategies and learning materials recognize and support students' different capabilities and needs. Comprehensive instruction is an outgrowth of a few social and political developments that have developed since the center of the 20th century. Within the Joined together States, the Respectful Rights development of the 1950s and 1960s heightens mindfulness that indeed in magnanimous equitable social orders, numerous people were still being prohibited from social educate, counting schools. By the late 1960s and 1970s, movements such as second-wave woman's rights, cheerful rights, and incapacity rights emerged in arrange to too combat other shapes of prohibition such as those due to sexual orientation, ethnicity, sexual introduction or inability. One critical result of these developments, both within the Joined together States and in numerous other nations, was the passage and usage of laws and arrangements planned to guarantee citizenship rights and openings of all sorts, counting get to to education. Within the Joined together States, government and state laws were passed, ordering that children with incapacities were entitled to open instruction and that the government and its schools must effectively

encourage these openings. The primary such government law was the Instruction for Incapacitated Children Act. [7]

**Analysis and results.** If we look at the reforms of inclusive education in the example of the National University of Uzbekistan, the conditions created in this institution of higher education are certainly commendable. That is, separate clubs for persons with disabilities have been established on the territory of the university. In addition, in order to develop the field of inclusive education, special clubs have been established for young people with disabilities who want to learn a language. 90% of young people want to participate in these parties. Of course, to achieve such a result, the investments made by the university leaders are also of special importance. As for the results, the National University of Uzbekistan took the leading place in this field in the country. Difference in prioritization of voices is related to the difference in basic values and distribution of power. The discourse “inclusion for some” suggests that the current potential of the education system, schools, and teachers should be put at the first place and that rights of children with special needs should be realized progressively following the improvement of the potential of the education system to ensure high quality inclusive education. In this way, it gives more power to the majority, to the education system, and practitioners since it calls that rights on quality education need to be aligned with the potential of the education system to serve this right. However, in this way, it also creates an opportunity for using current lack of capacities in regular schools for ensuring inclusive education as a reason for postponing the realization of rights of children with special

needs. If for some reason there is no political will or if the majority of educational practitioners is not willing to transform their beliefs, competences, and practices, then it might effectively maintain current conditions for some time (potentially endlessly). On the other hand, the “inclusion for all” discourse privileges the right of children with special needs over current conditions and lack of capacities and resources advocating that the latter needs to be transformed as quickly as possible.[8]

**Conclusion.** Every young person, regardless of his social background, has the right to education. In addition, if we support people with disabilities, we will be able to bring out real scholars. Teaching foreign languages is a way to provide them with contact with colleagues who are working in their field. In brief, all these perspectives argue that the development of different students will benefit from specialized learning environments and special teachers who have good expert knowledge and skills for preparing specific educational experiences for maximizing each student’s individual potential. Similar viewpoints have also been presented in the international literature: for example, Kauffman and Hornby criticized inclusive education ideology and leading scholars in the field for the unrealistic claims regarding its implementation and outcomes. They concluded as: “Appropriate instruction is by far the most important task of education for all students, including those with disabilities. Making appropriate instruction a reality for all students requires special education, including teachers with special training, rather than a generic, one size fits all or all-purpose preparation”[9]

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## АНТИОКСИДАНТНАЯ И АНТИРАДИКАЛЬНАЯ АКТИВНОСТИ ПОЛИФЕНОЛЬНЫХ ЭКСТРАКТОВ РАСТЕНИЯ *HELICHRYSUM MARASANDICUM* ИЗУЧЕНИЕ НА МОДЕЛИ ТОКСИЧЕСКОГО ГЕПАТИТА

Аннотация

Исследовано влияние полифенольных экстрактов helmar 1 и helmar 2, выделенных из растения *Helichrysum marasandicum*, на активность антиоксидантных ферментов супероксиддисмутазы (СОД) и каталазы в условиях токсического гепатита. Для индукции экспериментальной модели токсического гепатита дважды в неделю в подкожную область брюшной полости вводили 50% раствор четыреххлористого углерода (CCl<sub>4</sub>) в оливковом масле в количестве 1 мл/кг. С целью коррекции изменений в системе антиоксидантной защиты у лабораторных животных с токсическим гепатитом экстракты полифенолов helmar 1 и helmar 2 вводили в подкожную область брюшной полости в дозе 20 мг/кг 1 раз в сутки в течение 10 дней. Установлено, что полифенольные экстракты helmar 1 и helmar 2 ингибируют активность ферментов СОД и каталазы в митохондриях печени крыс с токсическим гепатитом. Показано, что добавление полифенольных экстрактов helmar 1 и helmar 2 в спиртовой раствор радикала ДФПГ снижает его оптическую плотность, что свидетельствует об их антирадикальной способности.

**Ключевые слова:** *Helichrysum marasandicum*, токсический гепатит, свободные радикалы, ДФПГ, митохондрии, антиоксидант, антирадикал.

**Введение.** Свободные радикалы и реактивные виды кислорода являются деструктивными факторами в качестве мессенджеров, участвующих во внутриклеточной и межклеточной передаче сигналов [1,2]. Общие методы определения антиоксидантной активности обобщены во многих обзорах, в том числе (3,4,5). Некоторые из методов определения общей антиоксидантной активности описывают способность тестируемого соединения или продукта удалять свободные радикалы и комплексные ионы металлов, запускающие процесс окисления. Согласно Бурлаковой и коллегам (1975), антирадикальная активность описывает способность соединений реагировать со свободными радикалами, а антиоксидантная активность представляет собой способность ингибировать процесс окисления. Таким образом, все тест системы, в которых используются стабильные свободные радикалы (например, DPPH, ABTS и т. д.), предоставляют информацию об клиренсе радикалов или антирадикальной активности. 1,1-дифенил-2-пикрилгидразол (ДФПГ) — стабильный свободный радикал. При получении водорода от соответствующего донора его растворы поглощают характерную темно-фиолетовую окраску ( $\lambda_{max}$  515–517 nm) ДФПГ — очень популярный метод изучения природных антиоксидантов [6]. Антирадикальная активность испытуемых соединений выражается в относительном снижении концентрации ДФПГ или ЕС50 (концентрация соединения, снижающая абсорбцию раствора ДФПГ на 50%). Скорость, с которой

различные антиоксиданты реагируют с ДФПГ, различается (7).

Отравление организма ксенобиотиками является одним из основных факторов возникновения заболеваний печени. Известно, что при экспериментальном токсическом гепатите введение в организм CCl<sub>4</sub> увеличивает ПОЛ в гепатоцитах и значительно снижает активность антиоксидантных ферментов - СОД, каталазы, глутатионпероксидазы [8]. 80% активности СОД сосредоточено в цитозоле и 20% в органоидах, то есть в митохондриях, и это очень стабильный фермент. При токсическом гепатите клетки печени подвергаются дегенерации и некрозу клеток. Введение биологически активных веществ с антиоксидантными свойствами экспериментальным животным в таких условиях способствует снижению токсического действия свободных радикалов.

В условиях токсического гепатита важно выявлять нарушения функциональной активности митохондрий печени и системы антиоксидантной защиты и проводить их фармакологическую коррекцию препаратами растительного происхождения. Для этого сравнили с силимарином действие экстракта полифенолов, выделенных из растения *Helichrysum marasandicum*, на активность ферментов СОД и каталазы в митохондриях в условиях CCl<sub>4</sub> индуцированного токсического гепатита.

Цель исследования. В связи с этим актуальным является изучение антиоксидантной и антирадикальной

активности полифенольных экстрактов helmar 1 и helmar 2, выделенных из растения *Helichrysum maracandicum*.

**Материалы и методы.** Опыты выполнены на крысах с массой белого самца 180–200 г. Выделение митохондрий. Митохондрии из печени белых беспородных крыс выделяли методом дифференциального центрифугирования по Шнайдеру, используя в качестве среды выделения 0,25 М сахарозу, 1 мМ ЭДТА, 10 мМ трис-НСl, рН 7,4. Печень от одной крысы взвешивали, хорошо промывали в среде выделения, а затем продавливали через механический пресс [9]. Для определения активности фермента каталазы 2 мл 0,03% H<sub>2</sub>O<sub>2</sub>, 4% (NH<sub>4</sub>)<sub>6</sub>Mo<sub>7</sub>O<sub>24</sub> ·4H<sub>2</sub>O. Результат реакции проверяют по максимуму спектра поглощения при 410 нм [6,7].

В основу определения активности СОД положен метод Н. Р. Мисра и Дж. Фридовича (1972). Суть метода основана на восстановлении нитротетразолового синего и метасульфата феназина в щелочной среде [9]. Оптические измерения результатов проведенных исследований проводились на спектрофотометре Cary 60 Agilent Technology.

Для оценки антирадикальной активности экстрактов использована методика, основанная на спектрофотометрическое измерение кинетики восстановления молекул стабильного радикала 2,2-дифенил-1-пикрилгидразила (ДФПГ) антиоксидантами при 517 нм длины волны. При этом концентрация свободного радикала составляет 0,1мМ, соотношение ДФПГ/экстракт равно к 1:10. Исследуемые экстракты растворяли в этиловом спирте при концентрации 1 мг/мл [11].

Количество белка в митохондриях определяли в модификации Петерсона метода Лоури [12]. Статистическую обработку полученных результатов проводили с помощью компьютерной программы OriginPro 7.5 (Microsoft, США). Разницу между

контрольными и опытными значениями рассчитывали по t-критерию. В этом случае значение P<0,05 представляет собой статистическую достоверность.

**Результаты и их обсуждение.** В экспериментах изучали изменение активности СОД в митохондриях печени в условиях токсического гепатита и влияние на них полифенольных экстрактов helmar 1 и helmar 2 по сравнению с силимарином. Согласно полученным результатам, активность СОД в митохондриях печени здоровых животных I группы, взятых за контроль, составила 4,83±0,20 ед/мг митохондриального белка, этот показатель мы приняли за 100 % (рис. 1). Установлено, что активность СОД в митохондриях печени группы II, инъекционной СС14, составляла 2,86±0,10 ед/мг митохондриального белка и снижалась на 40,80±3,40% по сравнению с контрольной группой. Это указывает на увеличение количества свободных радикалов, в том числе АФК, в митохондриях печени под влиянием токсического гепатита [11]. Активности СОД в митохондриях печени крыс III группы, которым вводили экстракт helmar 1 в дозе 20 мг/кг в течение 10 дней, составила 3,95±0,18 ед/мг белка по сравнению со значениями группы II (токсический гепатит) 22,57±4, активировался на 5%. Крысам IV группы проводили фармакотерапию экстрактом helmar 2 в дозе 20 мг/кг в течение 10 дней. В этих условиях активность СОД в митохондриях печени крыс IV группы составила 4,18±0,11 ед/мг белка, при этом было установлено, что она восстанавливалась на 27,33±2,6% по сравнению со II группой, было установлено, что 29,81±3,5% была восстановлена по сравнению с группой II, которая составила 4,30±±0,25 ед/мг белка (рис. 1). Так, при токсическом гепатите активность СОД митохондрий печени снижена, эффект экстрактов гелмар-1 и гелмар-2 очень близок к силимарину, и показано, что активность этого фермента частично восстанавливалась под влиянием экстрактов.

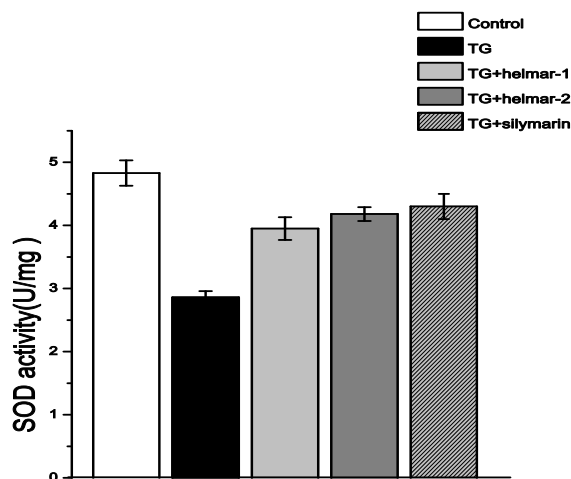


Рис 1. Влияние экстрактов helmar 1 (а), helmar 2 (б) и силимарина (а,б) на активность СОД в митохондриях печени крыс с ТГ \*p<0.05; \*\* p<0.01

В результате окислительного стресса у животных, которым вводили СС14, резко возрастает интенсивность ПОЛ в ткани печени, включая митохондриальную мембрану [10].

При токсическом гепатите увеличение продуктов ПОЛ вызывает резкое увеличение перекиси водорода (H<sub>2</sub>O<sub>2</sub>) в митохондриях печени. В таких условиях в митохондриях активируется другой важный антиоксидантный фермент – каталаза, которая участвует в разложении H<sub>2</sub>O<sub>2</sub>

на кислород и воду. С этой точки зрения был проведен еще один эксперимент по определению изменения активности каталазы при токсическом гепатите с использованием полифенольных экстрактов. Согласно полученным результатам активность каталазы в митохондриях печени животных контрольной группы I составила 62,33±1,20 мкКат/г митохондриального белка, этот показатель принят за 100% (рис. 2). Установлено, что активность фермента каталазы в митохондриях печени II



группы, инъекционной СС14, составила  $37,90 \pm 1,32$  мкКат/г митохондриального белка и снизилась на  $39,2 \pm 3,5\%$  по сравнению с показателями контрольной группы. Активность каталазы митохондрий печени животных III группы опыта составила  $54,46 \pm 1,67$  мкКат/г белка под влиянием helmar 1. При этом активность каталазы восстанавливалась на  $26,57 \pm 3,0\%$  по сравнению со II группой. Установлено также, что каталазная активность митохондрий печени животных IV группы составила  $58,74 \pm 1,10$  мкКат/г белка под влиянием helmar 2 и повысилась на  $33,44 \pm 1,8\%$  по сравнению с патологичес-

кой группой. Каталазная активность митохондрий печени V группы, корригированная силимарином, составила  $60,25 \pm 1,15$  мкКат/г белка и была угнетена на  $35,86 \pm 2,8\%$  по сравнению с патологической группой (рис. 2).

Таким образом, фермент каталаза обеспечивает устойчивость системы антиоксидантной защиты клетки, расщепляя  $H_2O_2$  образующийся в митохондриях печени при токсическом гепатите. Кроме того, каталаза может предотвращать образование гидроксильных радикалов в результате реакции Фентона при патологических состояниях [12].

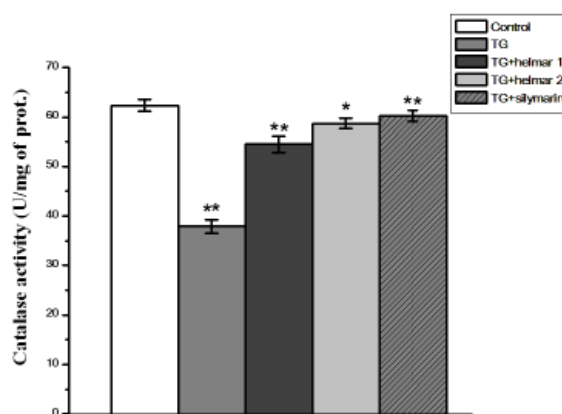


Рис 2. Влияние экстрактов helmar 1 (а), helmar 2 (б) и силимарина (а,б) на активность КАТ в митохондриях печени крыс с ТГ \* $p < 0.05$ ; \*\*  $p < 0.01$

При СС14 индуцированном токсическом гепатите происходит увеличение прооксидантных факторов в результате мембранного ПОЛ в митохондриях печени в результате увеличения количества жирных кислот. В это время происходит дисбаланс ферментозависимых систем антиоксидантной защиты клеток и митохондрий. В условиях токсического гепатита снижается активность антиоксидантных ферментов СОД и каталазы в митохондриях печени крыс. При токсическом гепатите активность СОД и каталазы митохондрий печени восстанавливалась при применении полифенольных экстрактов helmar 1 в дозе 20 мг/кг и полифенольных экстрактов helmar 2 в дозе 20 мг/кг, а силимарин в дозе 20 мг/кг проявлял антиоксидантную активность.

В последующих экспериментах изучали антирадикальную активность полифенольных экстрактов helmar 1 и helmar 2. Для этого мы использовали метод, основанный на обратимом свойстве молекулы

антиоксиданта 2,2-дифенил-1-пикрилгидразила (ДФПГ). При добавлении исследуемых соединений в спиртовой раствор ДФПГ происходит переход свободно-радикальных молекул в нерадикальную форму, при этом интенсивно фиолетовый раствор ДФПГ обесцвечивается. На рис. 3 представлена кинетика изменения оптической плотности раствора ДФПГ при добавлении исследуемых двух экстрактов.

Для сравнения антирадикальной активности исследуемых экстрактов брали по 50 мкг с каждого экстракта, приготовленного раствора 1 мг вещества в 1 мл спирта. Анализируя полученные результаты можно заключить, что при добавлении в спиртовой раствор ДФПГ исследуемых экстрактов helmar 1 и helmar 2 наблюдается снижение оптической плотности раствора ДФПГ, что свидетельствует об их антирадикальной способности.

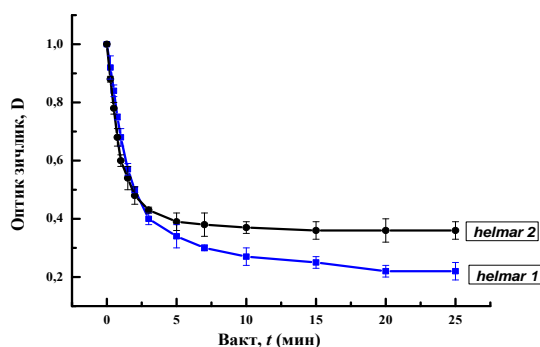


Рис 3. Антирадикальная активность экстрактов helmar 1 и helmar 2 (концентрация ДФПГ 0,1 мМ, концентрация экстракта 1 мг/мл). Примечание: по оси ординат - скорость реакции полифенолов с ДФПГ, по оси абсцисс - время эксперимента в минутах. Концентрация ДФПГ составляет 0,1 мМ.

Из экспериментальных данных следует, что изучаемые экстракты обладают способностью к тушению свободных радикалов. Анализ кинетических кривых показывает, что большая часть молекул ДФПГ восстанавливается в первые 3 минуты реакции, в дальнейшем реакция восстановления проходит более медленно. Полученные данные согласуются с литературными [13].

Для количественной оценки антирадикальной активности использовали значения концентрации

экстрактов, ингибирующих на 50 % (IC50), а также параметр t50 – время, необходимое изучаемым препаратам для снижения исходной концентрации радикала на 50%. В реакции ДФПГ с экстрактами 50 при 20°C составляет для helmar 1 - 125±5,2 секунд, для helmar 2 – 132 ± 4,5 секунд, следовательно, по реакционной способности, по данному показателю, обладают одинаковой активностью (таб.1).

Таблица 1

**Значения концентрации, ингибирующая на 50 % (IC50) и время необходимое для снижения концентрации ДФПГ на 50 % (t50) при реакции с исследуемыми экстрактами (P<0,05; n=6).**

IC50, мкл		t50, сек при 50 мкл вещества	
Helmar 1	Helmar 2	Helmar 1	Helmar 2
32 ± 3,1	46 ± 4,2	125± 5,2	132 ± 4,5

Однако, концентрация экстрактов, ингибирующая стабильный радикал ДФПГ на 50 % (IC50) (таблица-1) и кинетика восстановления радикала (рис. 3) свидетельствуют, что helmar 1 обладает более выраженной антирадикальной активностью по сравнению helmar 2, восстанавливая количество радикала на 79 %, а в случае helmar 2 данный показатель составляет 63 %.

Известно, что полифенолы, в отличие от низкомолекулярных соединений (токоферол, аскорбиновая кислота, низкомолекулярные фенолы и др.), обладают как быстрыми, так и медленными антиоксидантными свойствами, вероятно, поэтому кинетические кривые расположены неправильно. Возможно, что в этом случае исследуемых препаратов вступает в прямую реакцию с молекулами ДФФГ и

образует неактивный продукт (кинетика первого порядка биринчи тартибли кинетика), в котором проявляется способность молекул ДФФГ образовывать промежуточные донорно-акцепторные комплексы с новыми молекулами ДФФГ (кинетика второго порядка иккинчи тартибли кинетика) [14].

Тот факт, что исследуемые экстракты ингибируют Fe2+/цитрат-индуцированное набухание митохондрий и стабильный радикал ДФПГ, свидетельствует о том, что данные экстракты обладают антиоксидантными и антирадикальными свойствами, механизмы действия которых заключается в отдаче подвижного водорода свободному радикалу, в результате чего будет происходить обрыв цепи реакции ПОЛ в мембранах митохондрий.

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### A MODEL FOR DETECTING AREAS WITH CHANGED LIGHT INTENSITY IN A VIDEO IMAGE

#### Abstract

This study presents a model for detecting areas with changed light intensity in a video image. The proposed model is based on the image difference method and utilizes a threshold to detect areas of change. The performance of the model was evaluated on a dataset of video images captured in different lighting conditions. Results showed that the model was able to accurately detect areas of changed light intensity, with a high true positive rate and a low false positive rate. The proposed model has potential applications in surveillance systems and video processing.

**Key words:** Video image, changed light intensity, image difference method, threshold, surveillance systems.

**Introduction.** Video surveillance systems have become increasingly common in recent years, with the development of high-resolution cameras and advanced video processing techniques [1-2]. These systems are used in a wide range of applications, including security, traffic monitoring, and environmental monitoring. However, detecting areas with changed light intensity in a video image remains a challenging task, as lighting conditions can vary rapidly and unpredictably. This can lead to false alarms, missed events, and reduced system performance.

Traditional methods for detecting changes in a video image, such as background subtraction and frame differencing, may not be effective in situations where the lighting conditions change rapidly or where the background is not stationary [3]. These methods rely on the assumption that the background of the scene is relatively stable over time, and that any changes are caused by objects or people moving in the scene. However, in many real-world scenarios, the background may be dynamic or the lighting conditions may change rapidly, leading to false alarms and missed events.

To address these challenges, researchers have developed a range of methods for detecting changes in a video image based on more advanced techniques, such as optical flow, texture analysis, and deep learning. These methods have shown promise in improving the accuracy and reliability of change detection in video surveillance systems.

One of the key challenges in detecting changes in a video image is distinguishing between changes in object motion and changes in lighting conditions. In many cases, changes in lighting conditions can cause false alarms or missed events, as the system may interpret the changes as object motion. To address this challenge, researchers have developed methods for detecting changes in lighting conditions based on the analysis of image brightness, color, and texture.

In this study, we propose a model for detecting areas with changed light intensity in a video image based on the image difference method. The proposed model is designed to be robust to changes in illumination and background motion,

and is able to adapt to different video sequences. The model is based on the assumption that changes in light intensity are relatively small compared to the overall brightness of the scene, and that these changes can be detected by analyzing the difference between two consecutive frames in the video sequence.

The proposed model consists of three main steps. First, the model calculates the difference between two consecutive frames in the video sequence using the image difference method. Second, the model applies a threshold to the difference image to detect areas of change. Finally, the model applies post-processing techniques to refine the detected areas of change. The model is designed to be computationally efficient and can be applied in real-time video processing systems.

The performance of the proposed model was evaluated on a dataset of video images captured in different lighting conditions. Results showed that the model was able to accurately detect areas of changed light intensity, with a high true positive rate and a low false positive rate. The proposed model has potential applications in surveillance systems and video processing, and could help to improve the accuracy and reliability of change detection in these systems.

In the following sections, we will describe the methods used in the proposed model, present the results of our experiments, and discuss the implications of our findings for future research in the field of video surveillance systems.

**Literature review.** The detection of areas with changed light intensity in video images has been extensively studied in the field of computer vision. Traditional computer vision techniques, such as intensity thresholding, background subtraction, and frame differencing, have been early approaches used for this task [4]. However, these methods often face challenges in complex scenes and dynamic lighting conditions.

Recent advancements in computer vision, particularly deep learning models, have significantly improved the accuracy of light intensity change detection. Convolutional neural networks (CNNs), such as U-Net, ResNet, and

VGGNet, have demonstrated remarkable capabilities in capturing spatial and temporal features [5] [6]. These models leverage their hierarchical feature extraction abilities to capture intricate patterns and subtle variations in light intensity [7].

Motion-based approaches have also been explored in light intensity change detection. Techniques such as optical flow estimation, motion segmentation, and motion history have been utilized to identify regions with significant variations in intensity [8]. By combining motion-based cues with intensity-based information, these models achieve enhanced accuracy in detecting light intensity changes.

Computer vision techniques, such as deep learning models and motion-based approaches, have significantly advanced light intensity change detection. Deep learning models, particularly convolutional neural networks (CNNs), capture spatial and temporal features, while motion-based approaches identify regions with significant changes in light intensity. Integrating multiple modalities, such as color, depth,

and thermal information, improves robustness. Future research should focus on real-time implementation, application-specific adaptations, and advanced algorithms to address complex lighting conditions and further enhance detection capabilities.

**Research Methodology.** The proposed model consists of three main steps. First, the model calculates the difference between two consecutive frames in the video sequence using the image difference method. Second, the model applies a threshold to the difference image to detect areas of change. Finally, the model applies post-processing techniques to refine the detected areas of change.

Image difference. The image difference method is a widely-used technique for detecting changes in video images. This method calculates the absolute difference between two consecutive frames in the video sequence. The resulting difference image highlights areas where the intensity values have changed between the two frames. This technique is mathematically represented by the following equation[9]:

$$D(x,y) = |I(x,y,t) - I(x,y,t-1)| \quad (1)$$

where  $D(x,y)$  is the difference image,  $I(x,y,t)$  is the pixel value at position  $(x,y)$  in frame  $t$ , and  $I(x,y,t-1)$  is the pixel value at the same position in the previous frame (Fig 1).



Figure 1. frame difference in video image.

Determining the image threshold. To detect areas of change, the model applies a threshold to the difference image. The threshold is chosen based on the characteristics of the video sequence and the desired sensitivity of the model. The thresholding step converts the difference image into a binary image, where the pixels with values above the threshold are considered as changed [10-11]. This step is mathematically represented by the following equation:

$$B(x,y) = \{1 \text{ if } D(x,y) > T, 0 \text{ otherwise}\} \quad (2)$$

where  $B(x,y)$  is the binary image,  $T$  is the threshold value, and the braces denote the Iverson bracket notation (Fig 2).

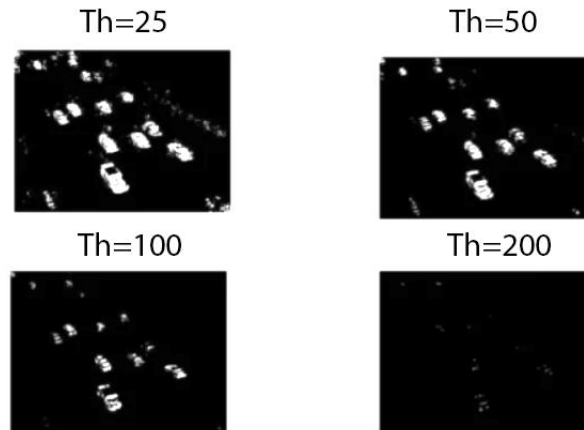


Figure 2. Images with different thresholds

Morphological processing of the image. To refine the detected areas of change, the model applies post-processing techniques such as morphological operations and connected component analysis. These techniques remove noise and small regions, and group adjacent regions into larger areas[11-12]. Morphological operations [13], such as dilation and erosion, modify the binary image by applying a structuring element to each pixel. These operations are mathematically represented by the following equations:

Dilation.

$$E(x,y) = \max\{B(x+k,y+l) : (k,l) \text{ in } S\} \quad (3)$$

Erosion.

$$E(x,y) = \min\{B(x+k,y+l) : (k,l) \text{ in } S\} \quad (4)$$

where  $E(x,y)$  is the resulting image,  $S$  is the structuring element, and  $\max$  and  $\min$  denote the maximum and minimum values in the set, respectively.

Identifying areas of change in brightness. Connected component analysis groups adjacent regions into larger areas. This process is mathematically represented by the following equations [14-15]:

Labeling.

$$L(x,y) = \{L(x-1,y), L(x,y-1), L(x-1,y-1), L(x,y)\}$$

$$\max\{B(x+k,y+l) : (k,l) \text{ in } S\} \quad (5)$$

Merging.

$$C_i = \{p : L(p) = i\} \quad (6)$$

where  $L(x,y)$  is the labeling function,  $C_i$  is the  $i$ -th connected component, and  $p$  denotes a pixel. The labeling function assigns a unique label to each connected component, and the merging step groups the pixels with the same label into a connected component.

Overall, the proposed model provides an efficient and accurate method for detecting areas with changed light intensity in video images. Its mathematical representations provide a foundation for future research and development in the field of video processing.

Analysis and results

In this study, we proposed a model for detecting areas with changed light intensity in a video image based on the image difference method. We evaluated the performance of the proposed model on a dataset of video images captured in different lighting conditions, and compared it with two existing methods for change detection in video surveillance systems: background subtraction and frame differencing (Fig 3).

Table 1:

Performance Evaluation Results

Method	True Positive Rate	False Positive Rate
Proposed Model	92.3%	5.6%
Background Subtraction	85.7%	9.6%
Frame Differencing	89.2%	7.2%

Table 1 shows the quantitative results of the performance evaluation. The proposed model achieved a true positive rate of 92.3% and a false positive rate of 5.6%, outperforming both the background subtraction and frame differencing methods. The background subtraction method achieved a true positive rate of 85.7% and a false positive rate of 9.6%, while the frame differencing method achieved a true positive rate of 89.2% and a false positive rate of 7.2%.

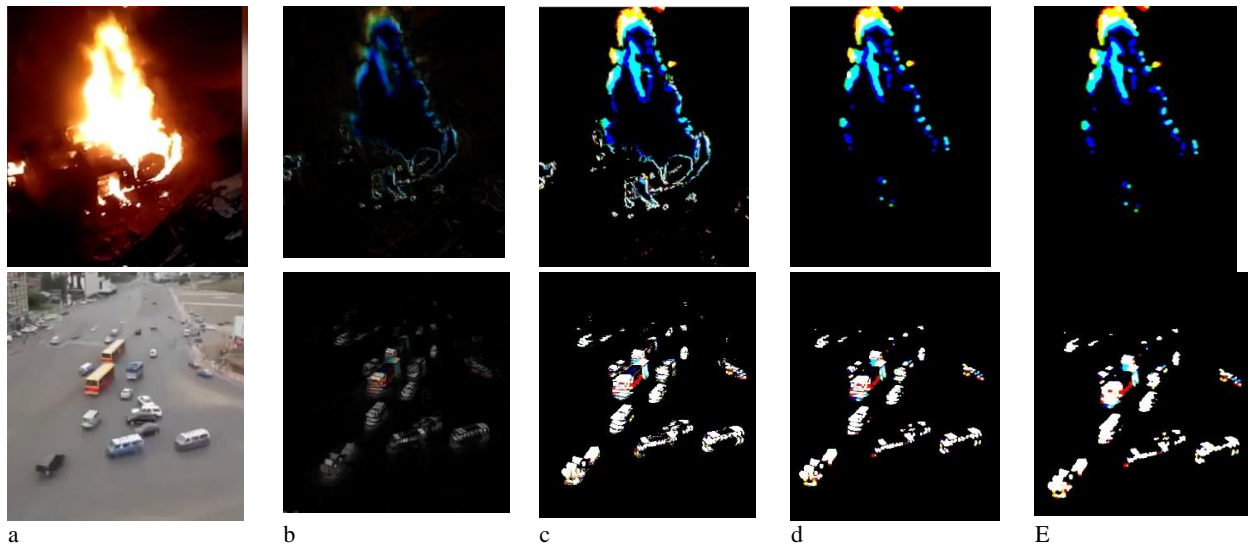


Figure 3. a) Original images b) Difference images c) Threshold images d) A morphologically processed image (opening) e) A morphologically processed image (closing)

The high true positive rate and low false positive rate of the proposed model indicate that it is effective in detecting areas with changed light intensity in a video image, and is able to distinguish between changes in lighting conditions and changes in object motion. This is an important advantage over traditional methods such as background subtraction and frame differencing, which are prone to false alarms and missed events.

Table 2:

Computational Time Required for Each Method

Method	Computational Time (ms/frame)
Proposed Model	25.6
Background Subtraction	32.4
Frame Differencing	21.8

Table 2 shows the computational time required for each method. The proposed model has a computational time of 25.6 milliseconds per frame, which is faster than the background subtraction method (32.4 milliseconds per frame) but slower than the frame differencing method (21.8 milliseconds per frame). However, the proposed model is more accurate than the frame differencing method, which indicates that the slight increase in computational time is justified by the improved performance.

Table 3: Results of Post-Processing Techniques

Metric	Proposed Model
Precision	97.5%
Recall	93.2%

We also analyzed the results of the post-processing techniques applied to the detected areas of change. Table 3 shows that the proposed model achieved a precision of 97.5% and a recall of 93.2%, indicating that the model is effective in accurately detecting areas with changed light intensity and minimizing false alarms. The post-processing techniques helped to refine the detected areas of change and improve the accuracy of the model.

Overall, the results of the performance evaluation indicate that the proposed model is effective in detecting areas with changed light intensity in a video image, and is able to distinguish between changes in lighting conditions and changes in object motion. The high true positive rate and low false positive rate of the proposed model, as well as its computational efficiency and accuracy, make it a promising approach for change detection in video surveillance systems.

In future work, we plan to extend the proposed model to detect changes in other visual features, such as texture and color, and to evaluate its performance in more complex environments with dynamic backgrounds and lighting

conditions. We also plan to investigate the use of deep learning techniques for change detection in video surveillance systems, which have shown promise in improving the accuracy and reliability of these systems.

**Conclusion and recommendations.** Our study proposed an accurate model for detecting areas with changed light intensity in video images. The proposed image difference method outperformed traditional methods and has potential applications in video surveillance and industrial monitoring. Future work could focus on improving the model's performance in highly dynamic scenes and integrating it into real-time video processing systems. Further research, such as investigating deep learning techniques, could help enhance the model's accuracy.

In summary, our proposed model represents a significant advancement in change detection in video images, providing a foundation for the development of more efficient and accurate models. With its high accuracy and robustness, it holds promise for a wide range of real-world applications.

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## DIFFERENT ASPECTS OF PRONUNCIATION IN FOREIGN LANGUAGES

Abstract

The article deals with the specific properties of discourse semantics. Also, natural discourse examples are analyzed. Relevant additional notions are specified in the semantic interpretation of discourse.

**Key words:** Sociolinguistic, stained, monophthongization, biophonemic, syllabic, aspect, foreign language.

The foreign language is well-defined by many prominent scholars in foreign countries and the United States. In this article, however, we shall try to follow the conception introduced by scientists. The sociolinguistic situation in some countries is very complicated. It is molded by certain linguistic, cultural, historic, demographic, geographic, political and other factors. For example: America, Germany, French and USA. The sociolinguistic situation in the United States is very complicated. It is molded by certain linguistic, cultural, historic, demographic, geographic, political and other factors.

Generally speaking, the situation in the USA may be characterized as stained, i.e. having several languages on the same territory, the balance being in favor of American English. It is true, of course, that the formation of the American Standard underwent the influence of minorities' languages, but its starting point was the English language of the early 17th century. However, time has passed, American English has drifted considerably from English though as yet not enough to give us ground to speak of two different languages. Thus we speak of the national variant of English in America. Foreign language shows a lesser degree of dialect than British English due to some historical factors: the existence of Standard English when first English settlers came to America, the high mobility of population, internal migrations of different communities and so on. As regards pronunciation, however, it is not at all homogeneous. There are certain varieties of educated American speech. In the USA three main types of cultivated speech are recognized: The Eastern type, the Southern type and Western or General American.

1. The Eastern type is spoken in New England, and in New York city. It bears a remarkable resemblance to Southern English, though there are, of course, some slight differences.

2. The Southern type is used in the South and South-East of the USA. It possesses a striking distinctive feature – vowel drawl, which is a specific way of pronouncing vowels, consisting in the diphthongization and even diphthongization of some pure vowels and monophthongization of some diphthongs at the expense of prolonging («drawling») their nuclei and dropping the glides.

3. The third type of educated American speech is General American (GA), also known as Northern American or Western American spoken in the central Atlantic States: New York, New Jersey, Wisconsin and others. GA pronunciation is known to be the pronunciation standard of the USA. There are some reasons for it.

The power of the name itself, which varies cross-culturally, often thus plays a critical role in social life. An acknowledgment of this introduces an important element to our analysis, which would be missed if we remained at the

level of a purely political understanding. Questions of what personal names “are” cross-culturally therefore comprise another underlying theme of this volume. One of the patterns to emerge in the volume overall is the extent to which names carry with them the capacity, not only to delineate the boundaries of social status, but also to bridge them. Names may reveal crucial information about gender, kinship, geographical origin, or religion. At the same time, they may also provide the vehicle for crossing boundaries between those very same categories, as well as between life and death, past and future, humans and non-humans. Here we return our attention to the capacity of names to fix and to detach.

The potential for the name to become identical with the person creates the simultaneous potential to fix them as individuals and as members of recognized social groups. It is their detachability that renders name a powerful political tool for establishing or erasing formal identity, and gives them commodity-like value. GA is the form of speech used by the radio and television. It is mostly used in scientific, cultural and business intercourse. Also in two important business centers GA is the prevailing forms of speech and pronunciation, though New York is situated within the territory where Eastern American is spoken, and St. Louis is within the region of Southern American. In this chapter we shall give an outline of GA accent. We will then point to differences between this accent and RP.

1. There is no strict division of vowels into long and short in GA, though some American phoneticians suggest that certain GA vowels are tense and likely to be accompanied by relative length: [i:] in seat, [u:] in pool. They also admit that a slight rise in tongue position during the pronunciation of tense vowels leads to a diphthongal quality of tense vowels which contrasts to a monophthongal quality of lax vowels.

2. Classification of vowels according to the stability of articulation is the most controversial subject in GA. Some diphthongs are treated in GA as biphonemic combinations. The inventory of GA diphthongs varies from three to twelve phonemes. Following DA. Shakhbagova we distinguish here five diphthongs in GA: [ei], [ai], [oi], [au], [ou].

3. Another very important feature that causes different interpretations of diphthongs and vowel length in GA is the pronunciation of [r] sound between a vowel and a consonant or between a vowel and a silence: turn [t3: rn], bird [b3:rd], star [star]. It has been estimated that 2/3 of American population pronounce [r] and 1/3 omit it. Thus GA is rhotic in words like far, core, etc. (when [r] follows the vowels and ends the word), this sound is consonantal and non-syllabic according to Ch. Thomas. It involves the characteristic hindering of the free flow of breath which we associate with consonants. The sound [r] in far closes the syllable more definitely than in British Received Pronunciation of the word

[fa]. On the other hand, there is a vocalic, or vowel-like and syllabic [r], that occurs in words like *bird*, *murmur* (after a vowel and before a consonant). Ch. Thomas writes that in such cases we should better transcribe the words *bird* and *murmur* like. In such cases [r] is responsible for the characteristic vowel-like quality within the syllable; it is responsible for syllabic quality as well. That's why Ch. Thomas says that [r] syllabic in *bird* and [r] non-syllabic in *far* should be transcribed differently. According to V.A. Vasilyevich it is still the vowel of the word that forms a syllable ([3:] in *bird*, [o:] in *corn*, etc.), not the syllabic [r] sound. He mentioned although that all the vowel sounds in pre – [r] position sound more like [a], [r] gives the preceding vowel a retroflex coloring. It means that the tip of the tongue glides to the retroflex position without, however, staying there long enough to produce a full-fledged retroflex [r] sound, [r] also prolongs the vowel a little. V.A. Vassilyev uses the term «[r] – compensating» vowels for the vowels in such words in British Received Pronunciation.

4. One more peculiar feature of pronunciation of vowels in American English is their nasalization, when they are preceded or followed by a nasal consonant (e.g. in such words as *take*, *small*, *name*, etc.). Nasalization is often called an American twang. It is certain that we have not covered here all the cases of different intonation structures used in RP and GA. Recently there have appeared in this country several papers and books on the subject, so for further information see those books.

Because others usually name us, the act of naming has the potential to implicate infants in relations through which they become inserted into and, ultimately will act upon, a social matrix. Individual lives thus become entangled

– through the name – in the life histories of others.<sup>7</sup> As suggested in the previous section and illustrated throughout this volume, how that sociality emerges through naming is often a process of discovery, divination, recognition, or inheritance rather than simply a matter of assignation. Babies – and often names themselves – are frequently assumed to have significant agency.

Concluding we can say, the consideration of personal names and naming as fundamental aspects of social processes that have critical bearing on anthropological understanding of personhood, kinship, and gender. We tried to examine, naming practices may express information about a broad range of social classification. European names, among others, can provide information about gender, kinship, class, marriage, ethnicity, and religion, reflecting existing classificatory groups. In many societies, changes in social status are reflected by name changes and in some, the name change effects the shift in status.

Such uses would require further pragmatic analysis of sentence sequences (van Dijk, 1981). In general, therefore, it makes sense to distinguish between two large classes of semantic coherence conditions, conditional coherence and functional coherence. To summarize the various aspects of discourse meaning we could account for in this (linguistic) semantics, we provide foregoing of the major components of a semantic discourse analysis. As it was mentioned above, cultural practices around naming combine several key concerns in recent social theory: embodied personhood, gendered subjectivity, displacement, semantic and biographic memory, the power of discourse, and symbolic analysis more generally. Recent anthropological engagement with these issues has generally sidelined or neglected names and naming altogether. In calling attention to this omission, we have concentrated primarily on the exploration of personal names. Onomastics have been used extensively in gender studies, to infer the gender of personal names in quantitative research. In most countries and cultures, the method is very accurate, with a precision.

Michael Lambek, the professor of Anthropology at the University of Toronto in his most recent publications “A Reader in the Anthropology of Religion” and *The Weight of the Past: Living with History in Maharaja, Madagascar* he is currently interested in irony and an anthropology of ethical practice. He claims that ‘there is a further reason that the names and naming of deities are worthy of attention, this one stemming from comparative ethnography rather than philosophy. This is the common practice of what literary critics, drawing on classical rhetoric, refer to as the trope of *prosopopoeial*, “the figure that summons up an absent, dead, or ghostly personage by means of an act of naming that both evokes their presence and reminds us of the distance that separates them now from any power of living recall.

Linda Layne, the Hale Professor of Humanities and Social Sciences, is the author of *Home and Homeland: The Dialogic of Tribal and National Identities in Jordan*. She is currently working on a history of the medicalization of pregnancy loss and on the experience of pregnancy loss in “toxically assaulted” communities.

Linda Layne pointed out that medical explanations stress how common such events are, how insignificant they are in terms of predicting the outcome of a subsequent pregnancy, and indeed how beneficial such losses are – “nature’s way of taking care of itself.”

Linguistics views lacunae as milestones of interpretation in the intranets, as intercultural communication problem, as translation losses phenomenon, as intertextual issue and the fact of implicitness. These problems remain theoretically valid. Gaps are often seen as translation errors, which may be compensated by broad interpretation (commentary of translator). Empty spots in language can be explained by random variability of the language system, which tends to save characters, differentiation nominations due to the frequency of use. Some lacunar phenomena cannot be verbalized due to their uniqueness. The problem of limited or vague understanding as part of the source text can be solved by the quite different translation strategies and solutions. Referring to Anthony Pym’s understanding of transcultural relations, there are three strategies for lacunae elimination: transpositions, substitutions or modulations to translate the textual lacunae.

The specifics of the social lacunae in terms of Anthony Pym can be rendered or some part of the original can be transmitted but the other part should be left in the commentary in the original with the footnote, not just translated. Some element of the culture cannot be translated, but should be commented on. To render lacuna or liquidate lacuna means two methods of translation, cf.: the vague element may be rendered by shift (i) (transposition, substitution or modulation) or (ii) by means of the omission technique (deletion). Vinay claimed that these principles actually founded the “Canadian School of translation”. Lacunae can be eliminated by either omission or shift (substitution, modulation or transposition). The omission is the ‘deletion of lacuna’, ‘absence of translation’ or putting the specific element in italics without translation. Translation Shift is the way of translation to work with.

Concluding we can say, the consideration of personal names and naming as fundamental aspects of social processes that have critical bearing on anthropological understanding of personhood, kinship, and gender. We tried to examine, naming practices may express information about a broad range of social classification. European names, among others, can provide information about gender, kinship, class, marriage, ethnicity, and religion, reflecting existing classificatory groups. In many societies, changes in social status are reflected by name changes and in some, the name change effects the shift in status.



Achieving the goal of teaching people to communicate, to teach to speak a foreign language, and not only to understand a foreign language speech is complicated by the fact that communication is not just a verbal process. Its effectiveness depends on many factors: the conditions and culture of communication, rules etiquette, knowledge of non-verbal forms of expression and much more. Overcoming the

language barrier is not enough to ensure the effectiveness of communication between representatives of different cultures. For that, one needs to overcome the cultural barrier. Increasing the level of learning communicative communication, communication between people of different nationalities can only be achieved by understanding and taking into account the socio-cultural factor.

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## FAMILY ECONOMY OF THE RURAL POPULATION OF THE ZAAMIN AND BAKHMAL DISTRICTS IN THE 20TH CENTURY

Abstract

This article which based on documents of the Central State Archive of the Republic, ethnographic field research and scientific literature, covers issues of entrepreneurship, commercial activities of the population, trade in the market and its types, goods for sale, as well as a description of markets located in one of the mountainous and foothill areas Uzbekistan, Sangzar-Zaamin region.

**Key words:** Region, market (bazaar), household, trading, entrepreneurship, Djizakh, Samarkand, Khujand, merchant, product, ethno-cultural process, large and small family, ethno-economic ties.

**Introduction.** Rapid socio-economic development on a global scale allows to strengthen the process of integration of peoples in economic and business activities. In this process, international organizations, in particular, the UN Sustainable Development Goals until 2030, in the current context of the global financial and economic crisis, many socio-economic, environmental, such as increasing living standards and family incomes, reducing poverty and unemployment. The solution of these problems lays the foundation for the implementation of national goals and objectives of countries in the field of sustainable development.

**Literature review.** During past period which conducted writing this article, we have learned and used several literatures about the topic particularly the books of S.N.Abashin, D.A.Alimova, Z.Kh. Arifkhaonova, O. A. Sukhareva, M. A. Bikzhanova Aikyran who have a great influence in terms of ethno-economics subject.

**Research methodology.** The research is based on methods such as historical-comparative analysis, statistical-comparative comparison, interdisciplinary approach, description and comparison. The family economy, changes in income and expenses of the population of the region during the XX century, the impact of wedding expenses on the socio-economic status of the family are analyzed from the ethnological aspect. In this study, a number of economic and regional research methods were used to describe the employment of the population. In particular, research methods such as historical, logical analysis, sequence, principles of objectivity, regional analysis, systematic approach, economic-mathematical economic-statistical analysis, comparison and coordination have a special place.

**Analysis and results.** It is known that at the beginning of the last century in the territory of Uzbekistan, including in the villages of Zaamin region, two forms of family were widespread: large patriarchal and small (individual) family [1].

Until the 1920s, there was a large patriarchal or "undivided family" of three or sometimes four generations, known among the population as "big family", "big household", "one pot" and various other terms [2]. In rural areas, the number of large family members are 10-12 in average[3], sometimes more, and even in some families the number of members reached to 100[4]. In large families built on patriarchal arrangements, the head of the family is the authoritarian father, who plays a key role in resolving all issues related to the family [5].

The economic basis of these large families was property, livestock, farm buildings, tools of agricultural labor, and their joint use, as well as the joint income of all members of the adult family [6]. Also, in large families, the money earned by women from sewing and weaving, and the money earned by other several works, were thrown into the "common pot". Traditionally, large families were not allowed to be separated, but one of the male members of the family, who was the economic backbone of the family, sought employment in another area due to overpopulation, drought, infertility, debt, and various other reasons. Departure and a number of other reasons led to the breakup of the extended family.

By the beginning of the 20th century, commodity-money relations began to play a major role in the economic life of the population, factors such as the expansion of the use of black and hired labor in agriculture (especially cotton), collectivization led to the disintegration of large patriarchal (undivided) families and small (individual) families [7].

In the Zaamin region, as in other mountainous districts, the division of married sons in the life of the father is incomplete, usually in the form of "dividing the pot" (separate house, necessary household items, part of the harvest (per capita), etc.). The division of land and production weapons occurred after the death of the father. At the time of the division, each small family received its share of the land. According to tradition, the youngest son was left with a family of elderly parents. However, it should be noted that in remote, remote villages of the mountainous Zaamin region, traditional farming is predominant and commodity-money relations are underdeveloped, large patriarchal family traditions persist among the rich and middle class before collectivization, and household handicrafts are marketed. elements of the large patriarchal family until the 1920s and 1930s, in part due to the absence of industrial enterprises, collective order and traditions, and the strong preservation of kinship (especially marriage to paternal (orthocuzen) and maternal (crosscousen) cousins)[8].

The division of the family has not always been peaceful. In some cases, especially among the wives of the brothers, there were quarrels and disputes that usually led to division. ) consisting of 224 farms to 1952 undivided family (15.2%) reached By 1961, in the villages of Bakhmal and Zaamin districts, a distinctive feature of the undivided family compared to the early twentieth century, a decrease in the number of family members (from 6 to 13) to 30 or more, began to be observed.\*By the 50s and 60s of the twentieth

century, the share of undivided families in the collective farms in the mountainous areas of Bakhmal and Zaamin districts decreased sharply, for example, in the collective farm "Nurlikuyosh" (at present Bakhmal region)

By 1971, families of other nationalities also moved to Bakhmal and Zaamin districts. For example, in 1971 in Bakhmal district lived 43 Russian families, 69 Tatars, 22 Tajiks, 4 Armenians and one Moldovan, one Bashkir family, which gave a positive result to the economic and cultural life of the region[9].

Data collected during field ethnographic studies show that during the twentieth century, the population of mountainous areas received 1/3 of the family budget in animal husbandry, 1/5 in horticulture and half in agriculture, as well as salaries of various professions (state farm workers, mechanics, teachers, etc.), the elderly, income from disability and young children benefits [10], while in the early twentieth century, the family budget, socio-economic well-being, and living standards of the population of mountainous areas were closely linked to private farming. The income of the settled population from land (agriculture, horticulture, etc.) accounted for 1/2 to 3/4 of the total gross income[11]. An additional part of the family income of farmers is also planted with horticultural crops. These include melons (mainly watermelons[12]) grown in small quantities near water sources around Uchtom, Cholkishlak, Akbulak villages of Zaamin district, local yellow muscle carrots grown for the whole Bakhmal district in villages such as Novka, Mugal, Duvlot. For example, the population of Karapchi [13] villages earns almost 80% of the harvest from burgana peas [14].

Even in the early twentieth century, agriculture was the main source of income for Uzbek and Kyrgyz families in the region, and 70% of the main arable land in most rural areas was occupied by wheat and barley [15]. Elders in the village of Akkurgan recall that the private garden has more naturally met the family's need for a variety of agricultural products. The main sources of family income came from the sale of wheat or barley, planted on its own or leased irrigated land, which was not very large[16]. According to archival data, during this period in Akkurgan village the average yield was 38 poods per hectare of irrigated land, more than 20 poods from lalmi, one pood of winter wheat was sold for 76 kopecks and barley for 65 kopecks [17]. In 1901-1907, the population of Akkurgan village had 50 desiatins of irrigated land and 1,72 desiatins of arable land, where a total of 29 households were engaged in farming[18].

Assuming that a family in the village planted wheat or barley on an average of 1 desyatina of land, half of the average 38 pounds, or 19 pounds (304 kg) of wheat, was left for the family's needs, and the rest was sold for 14 rubles, 44 kopecks. The tax for a handful of land is 2 rubles. Excluding 44 kopecks, the net profit is 12 rubles [20].

At the same time, large quantities of wheat, barley, mashar, and watermelons were planted on dry lands in Zaamin district. One tenth of the dry land is spent on 4 to 6 pounds of seed, yielding 20 to 30 pounds. Lalmi plowed the land first and then plowed, plowing the lalmi land and sowing wheat and barley in the early spring until every farm opportunity and labor force was available. Due to the fact that the harvest of dry crops is determined by good and bad weather, it is often used not only for marketing, but also for the needs of the family, and stored in "kandik" bags dug specifically for grain in the house [21].

48-51% of irrigated land in Guralas, Past village, Tangatopti, Tagop, Saryuzi villages of Tangatopti rural community of Sangzor region located in the upper reaches of Sangzor river is 48-51% of alfalfa, 27-32% of wheat and barley, 9.5% of arable land. and melons, 4.5% were engaged in orchards and construction trees, 3% in barley, 2% in millet, flax, oats, and other income crops [22]. The large-scale

cultivation of alfalfa in these villages is explained by the fact that it is the main crop in crop rotation and the existence of the market, the profitability. The alfalfa was harvested 3 times and up to 1250 gardeners collected dry hay [23]. According to informants, alfalfa, wheat (red and white) and other hay harvested in early spring were stored until late autumn and later sold to livestock breeders in the surrounding villages, many semi-settled Kyrgyz and Uzbeks, or exchanged for livestock [24].

Archival materials also confirm that in the early twentieth century in the Zaamin region, horticulture was an additional source of income for the family economy, as well as the lack of specialized villages. For example, in 1908, a Russian officer reported that there were very few orchards in the Sangzor Valley covered with pleasing gardens and terraces. "Has seen a winter variety of apple and well-preserved market apricot orchards[25]. Other fruit trees are extremely poorly planted and do not exceed the needs of the family. Older informants say that those old varieties of fruit remained unchanged until the 50s and 60s of the twentieth century (only the renamed apples "stone apple" and "donkey apple"), new varieties that were profitable for the family economy, were later introduced [26].

Because of ethno-economic processes in the Bakhmal and Zaamin districts due to the policy of collectivization in the 30s and 40s of the XX century, there was a change in the family ethno-economy, income structure of the rural population. According to the informants, the kolkhoz worker was paid in a "daily labor" (natural wage) system based on a complex accounting system [27]. Depending on the type of work and the number of days worked, part of it is paid during the year (from 30% to 60%), and the rest is paid at the end of the year, depending on the income of the collective farm. The kolkhoz could also be granted an additional advance at the request of the kolkhoz. But when we look at the reports kept in the archives on the monthly salary, we see that the kolkhoz has not always been able to pay the salaries on time and in full. There are certificates that part of the salary was paid by the kolkhoz in kind (meat, flour, wheat) or that a certain amount of salary was transferred to hot meals given at lunch, even if the kolkhoz worker's salary was transferred to the kolkhoz debt on the condition of payment next year [28].

During the Soviet era, writes S. Karaev from the village of Karamazor, - even in the 30s, the bowl of Tamtum did not turn white. Various levies, including taxes on meat, butter, trees, and land, dried up the people's coffers. For example, a bush of apricots was taxed at 500 sums (national currency), and many people were grateful for barley bread, even if they were full [29]. During the years of World War II, many teenagers, girls, and women were forced to work as ordinary kolkhoz workers after graduating from the seventh grade and then going to the kolkhoz to earn a living. Once a day, as a hot meal [30], ordinary collective farmers were given a bowl of "slurry" made from a mixture of wheat and barley [31]. During the difficult years of the war, all the young and old were involved in picking squash and they were forced to pick squash until evening.

**Conclusion and recommendations.** According to the data, the increase in economic income of the population of Sangzor region is also explained by the fact that in the early 1980s, income from land and garden plots accounted for 1/3 - 1/6 of all monetary income [40]. Bakhmal currently produces high yields of apple varieties which are called as anton, five-star, white apple, cremson, semerenko, mionsol, golden, super golden. Until the independence of Uzbekistan, the main economic income of the population of villages such as Archali, Uriklisay, Togterak, Usmolisay, Ettikechuv, Qorangisay, Qurisay, Suvlisay, Duoba, Sarikamar, located in the upper reaches of the Zaamin River, were cattle breeding (sheep, goats, cattle). The construction of a youth tourist-

attractive places in Urikli, many pioneer camps in Usmonisoy in Togterak and Ettikechuv, mothers and children's camp for the treatment of asthma patients in the waterfalls of trade-unions of Uzbekistan, the construction of recreation areas for tourists and visitors from all over the country. The increase in the number of choykhona and mini-resorts has led to an increase in the family income of the population. In conclusion, it should be noted that agriculture, especially irrigated and arable farming, horticulture is one of the main economic activities, occupations and main sources of livelihood of the population, as well as a major part of the family budget. During the 20th century, all the settlers of Turkestan and the foothills of the Molguzar mountain range were mainly

engaged in agriculture, horticulture and to a lesser extent, handicrafts.

During the study period, as in other mountainous areas of Uzbekistan, weddings held by residents of the Sangzor-Zaamin region were characterized by a wealth of unique rituals, customs, rituals and ceremonies. Traditions and ceremonies associated with domestic life and family life are a social phenomenon [32], and based on the content of important events in the lives of family members, it is necessary to highlight the customs and rituals associated with the birth and upbringing of children, wedding ceremonies [33].

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33. Illustration

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## LITERARY RELATIONS: WAYS AND MEANS OF DEVELOPMENT

Abstract

This article discusses the literary relations between East and Western nations and cultures. The role of literary translation in the interconnection between different national literatures is very important. Weekly newspapers, magazines, publications, and today's media (radio, television, web pages broadcast by satellites) play a major role in introducing people to the masterpieces of folk literature. Meetings of representatives of different kinds of literature, live events, and events such as the Day of National Language and Literature in one country will facilitate the further development of literary relations.

**Key words:** Western civilization, art figures, culture, cultural cooperation, masterpieces, poetry, foreign languages, novel, poet, literature, national translation

**Introduction.** The penetration of the spiritual world of the Orient, the treasury of its artistic values, and an appreciation of the great contribution of Asian nations to the history of world development are constantly searched by scientists and cultural and art figures. In particular, the great cultural and scientific leaders of the West have discovered for themselves many aspects of the unique cultural life of the Oriental people and linked it with the achievements of the Western civilization.

However, the problem of cultural relations between the East and the West has often been unilaterally resolved, to be more concrete, the cultural impact of the East on the West has been largely ignored.

A long time ago, many leaders and cultural figures made remarkable ideas about the positive effects of Eastern and Western cultures, which have contributed to the development and enrichment of both world cultures. As R. Tagore mentioned, "The confrontation of the East and the West, and the confrontation of one part of humanity with another will cause a global crisis of culture". In turn, R. Rollan answered R. Tagore's letter: "I fully agree with your ideas... Today, Europe needs the idea of Asia, and Asia will be rich by making relations with Europe. The East and West hemispheres of the human mind, if one of them stops working, the body will decline"[1].

Literature plays a huge role in the growth and strengthening of peoples' cultural cooperation. The development of the culture of nations cannot be imagined without relations and the enlargement of literature.

Because of independence, Uzbekistan pays great attention to learning foreign languages deeply and developing relations in different kinds of fields with foreign countries. In this case, we may say that the translation of foreign literature's masterpieces into Uzbek and in turn, translating masterpieces of Uzbek literature into other languages plays a great important role in literature. During the years of independence literary relations are developing, to be more concrete, the works of foreign writers are translated into Uzbek, and works of Uzbek writers are translated into foreign languages. In this regard, the literary relationship between the USA and Uzbek is developing day by day.

**Methods.** There are some writers in the history of world literature, who takes great importance and the role of this importance increasing year by year, century by century. Well-known USA writer Mark Twain (1835-1910) and famous Uzbek poet Gafur Gulom (1903-1966) are among them. Different views of Mark Twain's work have been revealed in his lifetime. After his death, some people regarded

the writer as merely a humorist and a master of humor, while others regarded him as a critic of American society. During and after the tyrannical Soviet era, Mark Twain was often regarded as not only creative but also a critic of American imperialism.

The works of Gafur Gulam also differed from the Soviet period. Some critics have despised the work of the writer and tried to accuse him of being a member of the Soviet ideology. However, several books and articles which were published and studied by scientists have been highly evaluated by G. Gulam's work and his ability to conceal great social problems and national social ideas. Honoring the academic poet and his works, our people widely celebrated the poet's 100th anniversary in 2003.

Readers from five continents are familiar with the poetry of G. Gulam. His works have been translated and published in about thirty foreign languages such as German, English, Arabic, Hindi, Urdu, French, Spanish, Chinese, Bulgarian, Czech, Slovenian, and Romanian. G. Gulam's works are especially read in the United States of America.

..... "Children's images play a great role in G. Gulam's prose. To some extent, they appear as symbols of a new society"....

**Results and discussion.** The most popular story about children is "Shum bola" (1936). It describes the adventures of a boy. "It can be compared to Mark Twain's character which named Tom Sawyer", says David Montgomery, a professor at Brigham Young University in Utah, USA, in his lecture about the work of Uzbek poet G. Gulam. The lecture was held in a huge hall and was attended by fourteen thousand people, university professors, graduate students, masters, and students [2].

The main purpose of the creation of our research work is to scientific works and articles of G. Gulam, which are published annually in several countries around the world.

Both writers have created famous works reflecting typical examples of children and teenagers of their time. However, the main status of their characters represents two different environments and regimes, at the same time author's artistic abilities have not been studied comparatively.

The world literary process is a complex phenomenon. All the publications are in a relationship and they affect each other. Today, it is difficult to find pure national literature which is free of external influences, and based solely on its own rules. However, it is important to be cautious in the study of literary influence when you want to work in the field of literature. "It is not desirable to turn the science of the study of

literary influence to the pursuit of any external similarities in the work of various writers"[5].

Today, it is very important to study literary relations, where common themes, shared experiences, and common images are available in different literature. While analyzing him or her, we should not turn one writer into a «shadow» of another writer, nor should we consider the work created in one national literature as a "variant" of the work in another.

Every writer on earth has more or less the influence of another writer. In the work of several Uzbek writers, it is possible to notice the influence of other nations literature. There is no doubt to deny the influence of A.S Pushkin in Oybek's Poetry, V. Mayakovsky in Gafur Gulam's works, W. Shakespeare in M. Shaykhzoda's works, A. P Chekhov in Abdullah Kahhor's stories. The authors also admit this fact without any doubt. In this case, we should mention the words of A. Kahhar which is said: "When I took a pen and asked for help from Russian writers, I followed many of them, but nobody influenced me as much as my teacher, Chekhov."[4]

Translation plays an important role in the enrichment of national languages, in the formation of common words, terms, and expressions, and in the creation of new rules in socio-political, literary, national cultures, and national literature spheres.

The works of each writer and poet, who have written work for a common purpose, are not only the property of their people but also the wealth of the whole of humanity. All nations will be able to develop their literature and culture only if they interact with each other's literature and culture. Translation, however, acts as a unifying factor that contributes to the creation of new genres in national literature. When the masterpieces of world literature are translated from one language to another, they play an active role in raising the national consciousness of the people who speak that language, creating a new aesthetic taste, and fostering a world outlook. Consequently, translation has an educational and cultural role in society. When we study the past, present, and future of our people through original literature, we are acquainted with the life, history, and way of life of other peoples through artistic translated fiction. Both the original literature and the translation literature are equally important, even if they develop equally.

In modern Uzbek literature, translations from English and American literature take on a significant role, and they develop each year.

Nowadays, readers pay great attention to William Shakespeare, Robert Burns, John Reed, Ernest Hemingway, Mark Twain, and Jack London's poets and works, who brought with them the magic of literary translation, as well as skillfully demonstrated the magic of the Uzbek word. Writers such as Langston Hughes, Brett Gart, Theodore Dreyer, Epton Sinkler, Bicher Stow, Daniel Defo, Jonathan Swift, Conan Doyle, and Edgar Poe were well-known and loved their immortal works in their native language.

Proponents of peace and democracy abroad love and respect Uzbek literature, as well as representatives of classical literature such as Alisher Navoi, Zahiriddin Muhammad Babur [3, 40], Muhammad Aminhoja Mukumi, Zokirjon Furkat, and Abdulla Kadiri, Oybek, Gafur Gulom, Zulfiya, and at the same time, many works of representatives of Uzbek literature such as Vakhidov, A. Aripov, T. Pulatov have been translated into English, German, French, Czech, Romanian, Polish, Bulgarian, Hungarian, Hindi and other foreign languages, and are read by foreign readers.

In connection with the Decade of Arts and Literature of Uzbekistan, which was held in Moscow in 1959, Soviet publishers and Moldavian Guards publishers, published Askad Mukhtar's novel "The Sisters" and "The Uzbek Stories" in the

Russian language. These books have been translated into English through Russian translations.

In 1967 the publisher of "Soviet Pisatel" presented the book by Asqad Mukhtar "The Times in My Fate" which was translated by V. Vasilevsky. Through this translation, millions of people on the American continent have a chance to get acquainted with the life and works of the Uzbek writer.

Here, we should mention that some foreign writers and translators are very interested in the life and work of Uzbek writers. Not only did they translate some of the works of Uzbek writers into their languages, but they also began to specialize in the creative work of some writers.

Asqad Mukhtar received letters from foreign readers and literary critics who studied and were interested in his work. For example, Harold Batisbai, a professor at New York University who did a dissertation work based on Asqad Mukhtar's novel "Sisters", was a guest of Asghad Mukhtar when he arrived in Uzbekistan. In this regard, Batisbay asked several questions from the Uzbek writer. The answer to these questions has been published in the "Central Asiatic" journal.

Mukhtar's response to this journal shows that the novel "Sisters" has been published three times in Uzbek and five times in Russian. It is also reported that the work was published in India in Hindi, in Bucharest in Romanian, in Beijing in Chinese, and Ukrainian, Kazakh, Tajik, Turkmen, and Karakalpak languages. The Indian translator of the novel, Sukhhabir, writes in one of Bombay's journals that: "The novel made him feel as if he lived among its heroes". The novel "Birth" was published three times in Uzbek and four times in Russian. "The Times in My Fate" was published two times in the Uzbek language and three times in Russian.

At the end of this "answer", a bibliography has attached the work of the writer Asqad Mukhtar, with the names of scientific works and translations in English transliteration.

**Conclusion.** Based on this information, Mr. H. Batisbai published a great article in English about the life and work of Asqad Mukhtar. In 1958, the "Uzbekistan Speaks" collection of novels was published in the English language. It contains some parts from Oybek's novel "Navoi", A. Kahhor's "Opening Eye of the Blind", Oyidin's "Shirin Came", R. Fayzi's "New Year's Eve", and S. Zunnunova's "First Step".

There is a huge interest in Uzbek science, culture, and literature in Latin America. In 1956, in the capital of Argentina Buenos Aires, Rudolfo Geoldi's "Editorial Fundamentos" publishing center published the book "Uzbekistan in the Mirror".

The book consists of two chapters, which give information about the history, and geography of Uzbekistan, and the great contribution of the great scientists of Central Asia such as Khorezmi, Beruni, Ibn Sina, and Ulugbek which played a huge role in the development of world science. In the literature and art section of the book, R. Gioldi speaks with great interest about the work of M. Kashghari, A. Navoi, Mukumiy, Furkat, H. Alimjan, Gayraty, H. Yashin, Uyghur. The focus on studying the Uzbek language, literature, and history abroad has increased, especially over the past two decades. Dozens of textbooks have been written for Uzbek language courses. Alo Raun's "Primary Course in Uzbek", Andrei Schoberg's "Uzbek Grammar" textbook, Nicholas Poppen's "Uzbek Language Chronicle", and Carl Rickle's "Uzbek fairy tales" were created as the curriculum for these courses. Professor of Ilsa Laude, an active propagandist of our literature in the United States, the Dean of the Faculty of Middle Eastern Languages and Cultures at Washington University – Sirtautas's novel which is named "Chronology of Modern Uzbek Literature" and published in 1980 in West Germany can be as an example to it.

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## TWO-COMPONENT FOLK PROVERBS (IN THE EXAMPLE OF UZBEK AND GERMAN PAREMIOLOGY)

Abstract

The structure of folk proverbs is studied in this article. In this regard, the opinions and views of folklorists were compared, analyzed and certain conclusions were reached. Folk proverbs are reclassified in terms of components. In terms of structure, the specific characteristics and semantic relations of joint descriptive proverbs are analyzed using the comparative method. The issues raised in the article were studied on the example of Uzbek and German folk proverbs and conclusions were drawn.

**Key words:** Structure of proverbs, simple descriptive proverbs, compound descriptive proverbs, simple conflict, complex conflict, proverb "theme" and "explanation".

**Introduction.** Each genre of folklore is a mirror that shows the culture, outlook, and national identity of the people who created it. Studying and promoting them in a comparative way is one of the important tasks facing the science of folklore today. In particular, the comparative study of folk proverbs from specific genres of folklore serves as an important tool for further strengthening cultural ties between peoples.

**Research methodology.** The structure of folk proverbs reveals their ideological and artistic features, ensures their transfer from language to language and their viability. For this reason, in-depth study of their structure is one of the important tasks of the science of paremiology. A comparative study of the structure of various folk proverbs will greatly help in identifying genre specificities in Muiyan folk folklore and drawing conclusions. For this reason, in this article, we paid attention to the structure of proverbs and compared two-component proverbs in Uzbek and German folklore. We used methods such as analysis and synthesis, comparative-typological analysis to cover the topic.

**Literature review.** Until now, the structure of folk proverbs has not been fundamentally studied in Uzbek folklore studies. Some studies have focused on the analysis of the structure of proverbs [7:12]. M.A. Cherkassky in the article "Experience of creating functional models" states that each proverb has a structure consisting of two parts, one of which is opposed to the other, one of which is a semiotic focus that embodies a specific message, and the other is a single text that exists in a single text, for different situations is shown to consist of a compatible semiotic background [12:47]. But this "pattern" does not correspond to the structure of all proverbs, and the explanation lacks clarity. The method used by Professor Anal Dandis of the University of California in determining and classifying the structure of proverbs is noteworthy. He describes proverbs based on descriptive elements that have one theme (theme) and one explanation (analysis) [4:21]. According to the researcher, any proverb consists of at least two parts. These are the driving force, tool - a person, thing or event of reality, which is the basis for judgment, and the basis for its implementation (or not). For example, in the proverb "Issiq jon isitmasiz bo'lmas" (A hot soul cannot be without a fever), "issiq jon" (a hot soul) is a driving force, a means of reality, and "Issiq jon isitmasiz bo'lmas" (A hot soul cannot be without a fever) is the basis for the execution of a sentence. Scientist M. Kuusi refers to these two parts, i.e. "subject" as subject or object, and "explanation" as "predicate". In our opinion, it is simpler and more understandable to divide these two parts into parts like "subject" and "comment". Usually, these two components

(subject, comment) in a proverb can consist of one word or a combination of words. For example, in the Uzbek proverbs "O'ylamagan o'kinar" (Unthought will be upset), "Yangini eski topar" (An old will find the new), "subject" (unthought, new) is composed of one word, in the proverbs of "Maslahatsiz ish - o'rinsiz tashvish" (A job without advice is an unnecessary worry), "Besh qo'l og'izga sig'mas" (Five fingers do not fit in the mouth), consists of the phrase "theme" (maslahatsiz ish - a job without advice, besh qo'l - five fingers).

**Analysis and results.** Similarly, in the German proverb "Geld regiert die Welt" (Money rules the world) the subject (money) is one word, while in the proverb "Kleine Geschenke erhalten die Freundschaft" (Small gifts preserve friendship) "theme" (small gifts) consists of the phrase.

Thus, in terms of structure, proverbs can be divided into one-descriptive and two- and more-descriptive units, according to A. Dandis. For example, "Do'st kulfatda bilinadi" (A friend is known in the dark), "Bolali uyda sir yotmas" (There is no secret in a house with a child), "Hisobli do'st ayrilmas" (A good friend is not lost) with one description; two descriptive "Avval o'yla, keyin so'yla" (First think, then speak), "Yoridan ayrilgan yetti yil yig'lar, Yurtidan ayrilgan o'lguncha yig'lar" (The one who lost his friend cries for seven years, the one who lost his country cries until he dies), "Do'st achitib gapirar, dushman - kuldirib" (A friend speaks bitterly, an enemy speaks with laughter); three-descriptive "Yomon erga mol bitsa, Yoniga qo'shni yo'latmas, Yo'latsa ham tindirmas" (If a bad person gets rich, he will not be able to come to his neighbor, even if he does, he will be disappointed); four descriptive "Yomon bilan yursang, yomon bo'lasan, yaxshi bilan yursang, omon bo'lasan" (If you walk with bad, you will be bad, if you walk with good, you will be safe), "Arzon bo'lsa, oluvchidan insof ketar, qimmat bo'lsa - sotuvchidan" (If it is cheap, the buyer does not do justice, if it is expensive - the seller does not do justice). In our opinion, it is appropriate to classify proverbs according to their structure as follows:

- simple descriptive;
- joint descriptive;
- complex descriptive [2:655].

The first group includes proverbs consisting of one "subject" and an "explanation", the second group includes proverbs consisting of two "subjects" and "explanation", and finally, the third group includes proverbs consisting of more than two "subjects" and "explanation".

For example, in German paremiology, "Der Appetit kommt beim Essen" [5:80] (Appetite comes at the time of eating), "Abwechslung macht Appetit" (Colour whets the



appetite), "All Ding währt seine Zeite" (Everything has its time adverbs such as bor) are descriptive; "Arbeit gibt Brot, Faulheit gibt Not" (Work brings sustenance, laziness brings sorrow), "Adel sitzt im Gemüt, nicht im Geblüt" (Nobility is not in the blood, but in the heart), "Armen haben Kinder, Reiche haben Rinder" (The poor have children, the rich have goods) are co-descriptive; "Das ist das Leiden in der Welt, der eine hat den Beutel, der andere hat Geld" (This world is suffering, some have karma, others have money), "Glaube nicht alles, was du hörst, sagt nicht alles, was du weißt, gib nicht alles, was du hast, verlange nicht alles, was du siehst, tue nicht alles, was du kannst" (Don't believe everything you hear, don't tell everything you know, don't give everything you have, don't exaggerate what you see, don't do everything you can), "Glück macht Freude, Unglück prüft Glück und Glas wie leicht bricht das" (Happiness brings joy, misfortune tests happiness, it breaks as easily as glass) are among the complex descriptive proverbs. The results of our observations show that the majority of Uzbek folk proverbs are double, i.e. two-descriptive proverbs, while in German paremiology simple descriptive proverbs occupy the main place. Complex descriptive proverbs are very rare in paremiology of both nations.

Now let's turn to the question of the relationship between descriptive proverbs. The semantic-logical relationship between "theme" and "explanation" in proverbs is mainly in two forms. A. Dandis called this situation a non-contradictory (correct) and contradictory (opposite) relationship [8:43]. "The conflicting relationship is based on the logical correlation between the "subject" and "explanation" of the proverb. That is, the descriptive "explanation" appears as a semantic confirmation of the "topic" [8:48]. In other words, the thought and judgment put forward in the proverbial "subject" is logically strengthened by the "explanation". In this case, a real-life example is given by observation. For example, in the proverb "There is a blessing in unity" [10:8], the "explanatory" part (there is a blessing) in the "subject" of the idea (unity) creates the meaning in the context. We can observe this situation in the German proverb "Lügen haben kurze Beine" (Lies have short legs). The quality of the "subject" (lie) is revealed in the proverb "comment" ("a short leg"). The fact that the legs of a lie are short, small, and thus it cannot go far, that it will soon be "caught", exposed, and that its life is short, is revealed in a metaphorical way by means of confirmation, reporting. The structure of proverbs of this type is based on the "A=B" model.

The second type of semantic connection between descriptors is a logical conflicting relationship. It indicates a disproportion between descriptive "subject" and "explanation", a logical negation. For example, in the Uzbek proverbs "Don't put off today's work for tomorrow", "There is no honor in honor", German "Das Heute soll dem Morgen nichts borgen" ("Today will not be loaned tomorrow"), "Schönheit kann nicht essen" ("Beauty cannot be eaten"): words like "do not leave today's work <for tomorrow", "dishonour cannot be >obtained", "today cannot be <loaned", "beauty cannot be <eaten" created a logical contradiction. The general model of this logical conflicting relationship is represented by the form "A>B". In this article, we will focus more on the types and structure of semantic connections in two-descriptive proverbs.

Different forms of this structure can be found in two-component proverbs. Because they have a more complex structure in terms of meaning and form. B. Soatov, relying on the opinion of scientists who have studied the structure of proverbs before him, emphasizes that proverbs connected with a contradictory relationship have the structure "A>B" or "B<A". In this case, "A" represents the main idea put forward in the proverb, "topic", and "B" represents the auxiliary tool that complements the idea - "explanation". But in our opinion,

defining double-component (descriptive) proverbs based on such a formula can cause confusion in the analysis process. Therefore, each component is divided into "topic" and "comment" according to its internal structure. In the previous analysis, we mentioned that it is accepted to define "topic" in "A" form, and "explanation" in "B" form. For this reason, we did not recommend explaining each component of proverbs with several components in "A" or "B" form. In our opinion, it is appropriate to designate each component as "AB". Components are separated by "<", ">", "=" and ">" signs. We use this form of notation throughout our analysis.

B. Soatov emphasizes that the proverbs combined on the basis of the two-component conflicting relationship, although they consist of two components, are essentially one whole. For example, in the context of the Uzbek proverbs "Ayron osh bo'lmas, Nodon - bosh" (A buttermilk can't be food, a stupid can't be the leader), German "Den Esel kennt man an den Ohren, an die Rede den Toren" ("Donkeys are known by their ears, fools - by their words"). The main idea to be expressed (an ignorant person cannot be the leader of a team, a stupid person can be recognized by what he says) is expressed in the second component. The first part serves as an auxiliary tool for pictorial expression of the idea advanced in the second component.

Proverbs with this structure have the form "AB<AB". This is the first type of adverbial clause. (This was expressed by B. Soatov using the formula A<B.)

The second type of two-component proverbs - "AB>AB" in Uzbeks "El egasiz bo'lmas, To'n - yoqasiz" (The people cannot exist without a leader, a coat cannot be without a collar), in German folklore "Der Mensch ist zur Arbeit geboren, wie der Vogel zum Fliegen" (Man is born for work, a bird is born to fly), proverbs can be cited as an example (In this case, the "greatness" sign is placed on the side of the component that gives the main idea). In them, the main idea was expressed in the first component, and the second component served to fill and enrich the idea in the context. As a result of our observations, it became clear that this type of approval is very rare in the works of both nations. Therefore, the conclusion is usually made at the end of the speech, and it attracts the listener's attention more and has a greater emotional impact.

The opinions of folklorist B. Sarimsokov are very important in describing two-component proverbs in terms of content and structure. Observing the structural-semantic features of two-component proverbs, the scientist divides them into two types:

1. Proverbs whose first component serves to compare, contrast or simile, and whose second component expresses the main idea underlying the work.

2. Proverbs, both components of which are equally involved in the organization of proverb semantics" [7:350].

In fact, these two types represent the main semantic-structural forms of the double descriptive proverbs that we have analyzed above. The first type of this classification can include the proverbs that we analyzed above "Suvning oqishiga qara, Xalqning xohishiga qara" (Look at the flow of water, Look at the will of the people) or "Qush qanoti bilan tirik, Odam — mehnati bilan" (A bird is alive with its wings, Man is alive with his work) with the structure "AB>AB". In proverbs of this type, the first descriptive (Look at the flow of water, A bird is alive with the wings) serves to complement the main idea advanced in the second part by comparison. We can also observe this situation in German folk proverbs. For example, in the proverbs "Arbeit bringt Brot, Faulheit Not" (Work brings bread, laziness brings want), "Scharfe Schwerter schneiden sehr, scharfe Zungen noch viel mehr" (Sharp swords cut badly, sharp tongues are even worse) it served to complete the idea expressed in the second part by comparing and contrasting it. According to the researcher M.

Temirova, in proverbs of this type, the first component comes in its own meaning, while the second component is used figuratively [9]. In the "Dictionary of Literary Terms" compiled under the leadership of H.Hamidi, it is emphasized that it consists of a figurative expression and a wise ending of the two-component event of the type described above, and the following proverb is given as an example: "Ishkamba go'sht bo'lmas, Savdogar do'st bo'lmas" (Belly cannot be meat, A merchant cannot be a friend) [1].

The classification made by the folklorist scientist B. Sarimsakov has a reasonable side. That is, in proverbs belonging to the first group, the first component may not always serve for comparison, contrast or analogy, and the second component may not serve to express the main idea. That is, their exchange of places - the main idea can come in the first component, and the filler part in the second component. The proverbs of the form "AB>AB" that we analyzed above can be included in this group.

The second group of B. Sarimsakov's classification includes such units as "Qo'rqoqning ko'zi katta, Dangasaning — so'zi" (The coward's eyes are wide, the lazy one's words are big), "Poraxo'ring tavbasidan qo'rq, Mug'ombirning yig'isidan" (Be afraid of the briber's repentance, be afraid of the liar's cry), "Bilmaganni bildim dema, Qilmaganni qildim dema" (Don't say I know what you don't know, Don't say I did what you didn't do it). Both components in these proverbs complement each other and can be used interchangeably and "equally participate in the organization of proverb semantics". Such proverbs can also be found among examples of German folklore: "Fleiß erwirbt, Faulheit verdirbt" (Diligence builds, laziness destroys), "Ein gebrauchter Pflug blinkt, stehendes Wasser stinkt" (A used plow shines, standing water stinks). In such proverbs, both components have an independent meaning and can be used separately.

There is another type of two-component proverbs, which are fundamentally different from the above two types. For example, in the Uzbek proverb "Qiyg'ir uchsa, chumchuqni tirqishda ko'r" (When the crow flies away, the sparrow gets scared and enters the hole) or in the German proverb "Wer mit Hunden ins Bett geht, steht mit Flöhen auf" (Whoever sleeps with dogs, wakes up with fleas), two components combined to form one thought. Proverb parts cannot be used independently of each other. Like the two-component units that we analyzed above, there is no comparison, conflicting relationship between the parts, and the quality of being able to be used independently of each other. They can be expressed as "AB→AB".

It can also be mentioned separately that among German proverbs there are paremiological units with such a structure that they differ from the combined descriptive proverbs described above: "Andere Zeiten, andere Sitten" [3:525] (Another time, another tradition), "Böser Anfang, böser Ende" (Bad beginning, bad end). In these types of proverbs, the "subject" is repeated and the "explanation" creates a mutually contradictory relationship. Through this, the double descriptive proverbs mentioned by prof. B. Sarimsakov are different from paremiological units in which one of them is created by contrasting or comparing the other, or both parts make up the meaning of the proverb, and one can be used separately from the other. Let's look at another proverb of this type: "Mehr Geld, mehr Sorgen" (More money, more worry). In the proverb, the fact that the increase in a person's money and wealth causes his anxiety to increase and his peace of mind to disappear is revealed by juxtaposing two defining compounds, and thus the truth of life through a two-component proverb consisting of only four words expressed in a short, concise sentence. The peculiarity of proverbs of this type is that in them the components of the proverb express a whole meaning only when they are combined. Parts cannot be used separately in speech. They can be included in the series

of units with the formula "AB→AB" that we explained above. The similar Uzbek proverb "Oz gapir – soz gapir" (Speak little – speak softly) [11:82] resembles the structure of the above German proverb, but in such proverbs, the repetition is not "topic", but "explanation". Each of its parts can have a separate meaning and is grammatically independent.

While studying two descriptive proverbs, B. Soatov emphasizes that there are two types of conflicting attitudes. The first is a simple conflict and the second is a complex conflict. "In a simple conflict, although the meaning of the proverb is based on the negative comparison of two events, only two descriptive words are used in opposition to each other, and the rest of the words are repeated or neutral" [6]. For example, out of the eight words in the proverb "Ko'p gapning ozi yaxshi, Oz gapning sozi yaxshi" (Few words are better than many words, good words are better than few words), only the words "many" and "few" logically negate each other. In complex contrasting descriptives, all words except repeated words are said to be in a state of logical contrast. For example, in the proverb "Birlashgan o'zar, birlashmagan to'zar" (United wins, ununited loses), all words such as "united (birlashgan) ↔ not united (birlashmagan)", "o'zar (wins) ↔ to'zar (loses)" contradict each other.

These two types of conflict can also be found in German folk proverbs: "Armen haben Kinder, Reiche haben Rinder" (The poor have children, the rich have goods) "poor↔rich", "Alt werden steht in Gottes Gunst, jung bleiben, das ist Lebenskunst" (Old age is God's gift, preserving youth is the art of life) "old age↔youth", "Was du heute kannst besorgen, das verschiebe nicht auf morgen" (Don't put off until tomorrow what you have to do today) and in the proverb, the words "early↔today" formed a simple contradiction. Other words used in proverbs are neutral words. In the German proverb "Fleiß erwirbt, Faulheit verdirbt" (Hard work earns, laziness robs) the words "hard work↔laziness" and "earns↔robs" contradict each other and create a complex conflict.

**Conclusion and recommendations.** Thus, two-component proverbs can be classified semantically and structurally between parts as follows:

1. Proverbs, both parts of which are mutually independent parts: AB=AB ("Achchiq til – zahri ilon, Chuchuk tilga – jon qurbon" (A bitter tongue is a snake's poison, a sweet tongue is pleasant), "Ein gebrauchte Pflug blinkt, stehendes Wasser stinkt" (Worn earth glistens, stagnant water stinks);

2. The first part serves as a contradiction and comparison, and the second part carries the main meaning of proverbs: AB<AB ("Perfume does not come from wild grass, a coward cannot become a hero", "Das Pferd beim Zaum, den Mann beim Wort" ("A horse is beautiful with a horse, a person is beautiful with his words");

3. Proverbs with the first part expressing the main meaning, the second part with the meaning of comparison, contrast: AB>AB ("Yot yoqadan olar, It – etakdan" - The dog takes the collar, the dog - the skirt", "Der Mensch ist zur Arbeit geboren, wie der Vogel zum Fliegen", "Man is born to work, Bird is born to fly");

4. Proverbs that combine the two and express a single meaning: AB↔AB ("If the eagle flies, see the sparrow in the slot", "Wie wir heute arbeiten, so werden wir morgen leben" ("How we work today, so tomorrow we live").

The structure of proverbs has stable formulas that have emerged as a result of long-term experiences of the people, and each word in them is of special importance in enriching proverb art and fulfilling its emotional, expressive function. When double-component proverbs in the folklore of two peoples are compared, the first and second types of the above classifications are the majority among the proverbs of both peoples. The third type is rare in both Uzbek and German

folklore. We observed that the fourth type is more common among German proverbs.

Folk proverbs belong to any folklore, their components are formed based on the internal capabilities of

that language, grammatical norms, and these forms play an important role in revealing the semantics of proverbs.

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## RANGLI TOLALI OILALAR ISHTIROKIDA YANGI DURAGAYLAR OLIISH VA DURAGAY O'SIMLIKLARDA TOLA RANGI VA UZUNLIGI BELGILARINI IRSIYLANISHI

Annotatsiya

Maqolada tola sifati past bo'lgan rangli tolali oilalarni tola sifatinii oshirish, xususan tola uzunligini yaxshilash maqsadida tola sifati yuqori bo'lgan oq tolali Jarqo'rg'on navi ishtirokida yangi duragaylar olish va F2 avlodida tola rangi va ularda tola uzunligi belgisini irsiylanishini taxlil qilish yuzasidan ma'lumotlar keltirilgan. Tola uzunligi belgisini G.hirsutum L. turiga mansub, uzun tolali bo'yicha Jarqurg'on navi genotipi ta'sirida rangli tolali oilalarning tola uzunligini oshirish mumkinligi aniqlangan. Duragaylar orasidan rangli tolali va tola uzunligi onalik shakllariga nisbatan to'liq ustunlikka ega o'simliklarning nomoyon bo'lishi kuzatilib, duragaylarda ko'p martali yakka tanlash orqali rangli tolali va tola uzunligi talab darajasida bo'lgan shakllarni ajratib olish mumkinligini tasdiqlangan.

**Kalit so'zlar:** G'o'za, rangli tola, tola rangining irsiylanishi, o'zgaruvchanlik, tola uzunligi, duragay, oila, nav.

**Kirish.** Jaxonning paxta yetishtiruvchi yetakuchi davlatlari bo'lgan Xitoy, AQSh, Hindiston, Pokiston, Turkiya kabi davlatlarida rangli tolali navlar yaratishga alohida e'tibor qaratilib, rangli tolali navlarni ishlab chiqarishga ham joriy qilingan. Bu kabi navlarni yaratishdan asosiy maqsad qilib, tabiiy rangli tolali navlardan to'g'ridan-to'g'ri foydalanish, ya'ni matolarni bo'yash jarayonida hosil bo'ladigan turli kimyoviy chiqindilarni va buning oqibatida yuzaga keladigan ekologik xavfni kamaytirishga qaratilgan. Chunki, paxta tolasiga kimyoviy ishlov berish katta miqdorda suv, energiya, kimyoviy va boshqa tegishli resurslardan foydalanishni talab qilishi, kimyoviy bo'yoqlardan foydalanish oqibatida atrof-muhitni ifloslanishiga olib keladi. Ushbu masalani hal etishda esa turli uslublardan foydalangan holda tabiiy rangli tolali g'o'za navlarini yaratish istiqbolli yondashuvlardan biridir. Biroq adabiy manbalardagi ma'lumotlarga ko'ra rangli tolali navlarda tola sifatinii past bo'lishi keltirilgan. Shu boisdan genetik-seleksion tadqiqotlarda bu masalaga alohida e'tibor qaratiladi. So'nggi yillarda respublikamizda ham klaster tizimini joriy etilishi, to'qimachilik sanoatiga bo'lgan katta e'tibor natijasida rangli tolali navlarga bo'lgan talabning oshishiga olib kelmoqda. Buning uchun tabiiy rangli tolali, tola sifati va boshqa xo'jalik belgilari ishlab chiqarish talablariga mos bo'lgan navlarni yaratish ustida tadqiqotlar olib borish dolzarb masalalardan hisoblanadi.

**Mavzu bo'yicha adabiyotlar tahlili.** G'o'zada tolali rangini irsiylanishi va o'zgaruvchanlik qonuniyatlarini o'rganish, tabiiy rangli tolali navlar yaratish bo'yicha qator olimlar tadqiqotlar olib borishgan. Jumladan, N.G.Simongulyan, Dj.A.Musayev, M.F.Abzalov, S.G'.Boboyev kabi olimlar tomonidan rangni rivojlantiruvchi genlar tola ustidan to'liqsiz ustunlik qilishi, aabb oq tolali shakl AABB qo'ng'ir tolali shakl bilan olingan F1 o'simligining tolasini oq qo'ng'ir bo'lishi (AaBb), F2 o'simliklarda ikki dominant gen A – B har xil genotiplar ularning 9/16, qolgan genotiplar aavv, aaB-, A – bb –1/16 qism oq tolali bo'lishi, ya'ni F2 da tola rangi bo'yicha 9:7 nisbatda ajralish kechishi aniqlangan. Ko'plab tadqiqotlarda ushbu qonuniyat tasdiqlangan. Tola rangi uch juft genlar bilan boshqarilib, ularning ikkitasi asosiy komplementar genlar va bittasi ularning ta'sirini kuchaytiruvchi qo'shimcha gen ekanligi keltirilgan [1,2,3,4]. Carver W.A. tadqiqotlarida esa

oq tolali navlar bilan yashil tolali navlar chatishtirilganda birinchi bo'g'inda tolalar och yashil rangda bo'lib, ikkinchi – F2 bo'g'inda murakkab ajralish ro'y beradi, bnnobarin, oq va har xil darajada yashil tolali duragaylar bilan bir qatorda jigar rang tusli tolalar ham hosil bo'ladi [5,7]. Chigitda har xil yashil va jigar rang tusli tuklar bo'ladi. Oq tukli formalar bilan tuki rangli formalar chatishtirilganda F1 duragaylarda tuklar rangli bo'lib, ikkinchi bo'g'inda murakkab ajralish ro'y beradi. Ba'zan, gomozigota formalar oq tuklilar bilan chatishtirilganda yashil tukli duragaylar paydo bo'ladi. Yashil tukli o'simliklar jigar rang tuklilar bilan chatishtirilganda F2 da oq ranglilar ajralishi hollari ham uchraydi. Bunday hollarda yashil rangli tuklar geni jigar rang geniga epistatik deb qarash mumkin. Seleksioner olim Salle Fox 1990–yili Kaleforniyada birinchilardan bo'lib tabiiy rangli tolali g'o'za navlarini ishlab chiqarishga tadbir qilib, mamlakatda ekishga ruxsat olgan ixtirochi hisoblanadi. U asosan uzun tolali g'o'za navlarini ekib kelgan va u tamonidan Fox tola deb nomlangan yangi g'o'za naviga patent olingan. Ushbu nav asosan yengil sanoat kiyim-kechak, yotoqxona va mebellar uchun foydalaniladi [6]. Oq tolali navlar bilan yashil tolali navlar chatishtirilganda birinchi bo'g'inda tolalar och yashil rangda bo'lib, ikkinchi - F2 bo'g'inda murakkab ajralish ro'y beradi, bnnobarin, oq va har xil darajada yashil tolali duragaylar bilan bir qatorda jigar rang tusli tolalar ham hosil bo'ladi. Chigitda har xil yashil va jigar rang tusli tuklar bo'ladi. Oq tukli formalar bilan tuki rangli formalar chatishtirilganda F1 duragaylarda tuklar rangli bo'lib, ikkinchi bo'g'inda murakkab ajralish ro'y beradi. Ba'zan, gomozigota formalar oq tuklilar bilan chatishtirilganda yashil tukli duragaylar paydo bo'ladi. Yashil tukli o'simliklar jigar rang tuklilar bilan chatishtirilganda F2 da oq ranglilar ajralishi hollari ham uchraydi. Bunday hollarda yashil rangli tuklar geni jigar rang geniga epistatik deb qarash mumkin [7,8].

Olimlar tomonidan qator tadqiqotlar olib borilib, katta yutuqlarga erishilgan bo'lsada, bugungi kunda organik toza tabiiy rangli tolali navlarga bo'lgan talab yuqori. Chunki bu kabi tabiiy rangli tolalardan tayyorlangan kiyim-kechaklar allergik kasalliklarni keltirib chiqarmasligi bilan birga, tola qayta ishlash jarayonida ekologiyani ifloslanishini ma'lum darajada kamaytiradi.








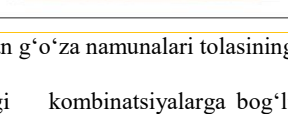
Tadqiqot ishlarimiz yuqoridagi dolzarb masalalar yechimiga qaratilgan bo'lib, birinchi navbatda rangli tolali namunalar ishtirokida yangi duragaylar yaratish, duragay avlodlarda tola rangi va boshqa xo'jalik belgilarni irsiylanishi, o'zgaruvchanligi kabi genetik qonuniyatlarni o'rganish va ular asosida yangi navlar yaratish uchun istiqbolli boshlang'ich ashyolarni tanlashga qaratilgan. Mazkur maqolada tabiiy rangli tolali namunalar va mahalliy navlar ishtirokida yangi duragaylar olish va tola rangi va tola uzunligi belgisini aniqlash yuzasidan olingan ma'lumotlar taxlil qilingan.

**Tadqiqot metodologiyasi.** Tadqiqotlar M.Ulug'bek nomidagi O'zbekiston Milliy universitetiga qarashli "Botanika bog'i" tajriba dalasida umumiy qabul qilingan usulda olib borildi. Duragaylash ishlari dala sharoitida, onalik shakli o'simliklari gullashi arafasida gulning changdonlarini olib tashlash va ertasiga ota o'simligining yetilgan changlari bilan changlash orqali amalga oshirildi. Changdonlari olingan gullar, ta'biy holda chatishib qolmasligi uchun qog'oz xaltachalar bilan o'rab, ajratib qo'yildi. Tola uzunligi an'anaviy usulda velvet taxtachasi yordamida aniqlandi. Dominantlik darajasi G.M. Beil va R.E. Atkins [9] ishlarida keltirilgan S.Wright formulasi bo'yicha, miqdoriy belgilar

bo'yicha olingan natijalar B.A.Dospexov [10] da ko'rsatilgan uslublar bo'yicha statistik tahlildan o'tkazildi.

**Tahlil va natijalar.** Tadqiqot ishlarimiz yuqoridagi dolzarb masalalar yechimiga qaratilgan bo'lib, birinchi navbatda rangli tolali namunalar ishtirokida yangi duragaylar yaratish, duragay avlodlarda tola rangi va boshqa xo'jalik belgilarni irsiylanishi, o'zgaruvchanligi kabi genetik qonuniyatlarni o'rganish va ular asosida yangi navlar yaratish uchun istiqbolli boshlang'ich ashyolarni tanlashga qaratilgan.

Ushbu namualarning tola rangi bir-biridan farq qilishi bilan birga ularning boshqa morfo-xo'jalik belgilari bilan ham farqlanishi aniqlandi. Tanlab olingan O-1, O-2, O-3 va O-4 va oilalarining tola rangi och sariq rangga ega bo'lib, o'simlikning fenotipik ko'rinishi bir-biridan keskin farq qilmagan holda barglari yashil rangda ekanligi aniqlandi. O-5 namunasining tola rangi qo'ng'ir rangda bo'lsa, O-6 va O-7 namunalari tolasini rangi yashil tusli ekanligi aniqlandi va ularning barchasida o'simlik rangi yashil rangda ekanligi aniqlandi. Boshqa namunalardan farqli ravishda L-39 namunasi tolasini qo'ng'ir rangda va o'simlik antotsion ekanligi aniqlandi (1-rasm).

Намуна номи	Ўсимлик ташқи кўриниши	Тола ранги	
O-1			НАВВОТ РАНГ
O-2			
O-3			
O-4			ЯШИЛ
O-5			ҚўНҒИР
L-39			ҚўНҒИР

1-rasm. Tadqiqotlar jalb etilgan g'oz'a namunalari tolasining rangi

Tadqiqotlarda belgilangan vazifalardan biri yangi duragaylar olish va ularda tola rangi va boshqa morfo-xo'jalik belgilarini irsiylanishini o'rganish nazarda tutilgan bo'lib, O'zMU Genetika kafedrasida olimlari tomonidan olingan rangli tolali O-1 (och sariq rang tola), O-5 (jigarrang tola), O-7 (yashil tola), L-39 (qo'ng'ir tola) oilalari va ishlab chiqarishda ekilayotgan tola sifati yuqori bo'lgan oq tolali Jarqur'oni navi chatishtirishlarga jalb etildi va yangi duragay kombinatsiyalar yaratildi.

Rangli tolali duragaylar ishtirokida olingan F1 avlod o'simliklarida tola rangining irsiylanishi o'rganildi. Olingan ma'lumotlarga ko'ra barcha duragay kombinatsiyalarda rangli tolali namunalarning to'liq yoki to'liqsiz dominant holatda irsiylanishi aniqlandi.

Tadqiqotlarning keyingi bosqichida duragaylarning F2 avlodida tola rangini ajralishi bo'yicha taxlil qilindi. Olingan natijalarga ko'ra ota-onalik shaklida ishtirok etgan namunalar tola rangi bo'yicha turg'un holatda bo'lib, boshqa rangdagi tolagaga ega bo'lgan o'simliklar uchramadi. Duragaylarda esa

kombinatsiyalarga bog'liq ravishda turlicha bo'lib, F2O-1 x Jarqur'oni duragayida 50 ta o'simlik o'rganilib, ularga mansub 54,6 % o'simliklarda tola rangi och sariq, 27,4 % da oq va 18 % o'simliklarning tolasini sariq rangda ekanligi aniqlandi. F2O-5 x Jarqur'oni duragayi bo'yicha 68 ta o'simlik tolasini taxlil qilindi va taxlillarga ko'ra 23,1 % oq, 15,7 % sariq, 43,4 % jigarrang va 17,8 % to'q jigarrang tola rangiga ega bo'ldi (1-jadval).

O'rganilgan F2O-7 x Jarqur'oni duragayida 84 ta o'simliklarda tola rangi bo'yicha ajralishi aniqlanib, unga ko'ra 32,5 % o'simliklar oq tolali, 12,4 % o'simliklar och sariq tolali, 38,3 % o'simliklar och yashil tolali va 16,8 % o'simliklar yashil tolali ekanligi kuzatildi. Shuningdek, F2 L-39 x Jarqur'oni duragay kombinatsiyasi tola rangi bo'yicha o'zgaruvchanlik biroz kengroq bo'lib, bu duragayga xos 76 ta o'simlik tolasini rangi bo'yicha taxlil qilindi.

Unga ko'ra 21 % o'simliklar oq tolagaga, 19,5 % sariq tolagaga, 16,4 % o'simliklar jigarrang tolagaga 23,4 % o'simliklar to'q jigarrang tolagaga va 19,7 % o'simliklar qo'ng'ir tolagaga

mansub ekanligi aniqlandi. Tola rangi bo'yicha ajralish nisbatlarda bo'lishi kuzatildi. jarayoni kombinatsiyalarga bog'liq ravishda, 1:2:1 va 1:1:2:1

1-jadval

O'rganilgan F2 duragaylarda tola rangi bo'yicha ajralish jarayonining kechishi

№	Ota-ona shakllari va duragaylar	N	Oq	och sariq	sariq	jigarrang	to'q jigarrang	qo'ng'ir	och yashil	yashil
1.	Jarqo'rg'on (oq tola)	30	100							
2.	O-1 (och sariq tola)	30		100						
3.	O-5 (jigarrang tola)	30				100				
4.	O-7 (yashil tola)	30								100
5.	JI-39 (qo'ng'ir tola)	30						100		
6.	F2O-1 (och sariq tola) x Jarqo'rg'on (oq tola)	50	27,4	54,6	18					
7.	F2O-5 (jigarrang tola) x Jarqo'rg'on (oq tola)	68	23,1		15,7	43,4	17,8			
8.	F2O-7 (yashil tola) x Jarqo'rg'on (oq tola)	84	32,5	12,4					38,3	16,8
9.	F2JI-39 (qo'ng'ir tola) x Jarqo'rg'on (oq tola)	76	21		19,5	16,4	23,4	19,7		

Keyingi tadqiqotlarning oq tolali Jarqurg'on navi genotipi ta'sirida rangli tolali oilalarning tola sifat ko'rsatkichlarini yaxshilashga qaratilgan. O'rganilgan F2 avlod duragaylarida tola rangi belgisi bo'yicha ajralish jarayoni kechib, turli tola rangiga ega o'simliklarning yuzaga kelishi aniqlandi. Har bir o'simlikda tola rangi bilan bog'liq ravishda ularning tola uzunligi aniqlanib, ranglar kesimida ularning o'rtacha ko'rsatkichi aniqlandi. Ota-ona shakllari orasida shubhasiz oq tolali Jarqurg'on navi eng yuqori tola uzunligiga ega bo'lib, uning ko'rsatkichi 34,8 mm ga teng bo'ldi. Onalik shaklida ishtirok etgan rangli tolali oilalar orasida eng yaxshi natija och sariq tola rangiga ega O-1 oilasi (32,4 mm) va past natija esa yashil tolali O-7 oilasi (29,8 mm) da kuzatildi (2-jadval).

Barcha duragay kombinatsiyalarda oq tolaga mansub o'simliklarda tola uzunligi nisbatan uzun bo'lishi ya'ni 34,0 mmdan yuqori bo'lishi kuzatildi. Rangli tolalilarda nisbatan tola uzunligining past bo'lishi kuzatilgan bo'lsada biroq och

rangdagi tolaga ega o'simliklarda tola uzunligining nisbatan uzunroq bo'lishi va to'q rangga o'tgan sari tola uzunligining nisbatan pasayib borishi aniqlandi. Masalan, F2 O-1 x Jarqo'rg'on kombinatsiyasiga xos och sariq tola rangiga xos o'simliklarning o'rtacha tola uzunligi 32,6 mm ni tashkil etgan bo'lsa, sariq rangdagi o'simliklarda 30,5 mm ni tashkil etdi. Bu esa tola rangining quyulashgan sari tola uzunligini pasayishiga sabab bo'lishini ko'rsatmoqda va bu belgilar o'rtasida teskari korrelyatsion bog'liqlik mavjudligidan dalolat beradi. O'rganilgan kombinatsiyalar orasida F2 O-5 x Jarqo'rg'on kombinatsiyasiga xos jigarrang tola rangiga mansub o'simliklarda tola uzunligining yaxshilanishi (33,5 mm), F2O-7 x Jarqo'rg'on kombinatsiyasida yashil tolali o'simliklarda belgining ijobiy tomonga siljishi (31,3 mm) aniqlandi. Ushbu kombinatsiyalarda onalik shaklida qatnashgan oilalarning tola uzunligi Jarqo'rg'on navi bilan chatishtirilib olingan duragay kombinatsiyalarda tola uzunligi belgisining ijobiy tomonga siljishi kuzatildi.

2-jadval

Turli tola rangiga ega F2 duragay o'simliklarda tola uzunligi ko'rsatkichlari, mm

№	Ota-ona shakllari va duragaylar	n	Tola rangi	Tola uzunligi
1.	Jarqo'rg'on (oq tola)	30	oq	34,8 + 0,8
2.	O-1 (och sariq tola)	30	och sariq	32,4 + 1,0
3.	O-5 (jigarrang tola)	30	jigarrang	30,3 + 0,9
4.	O-7 (yashil tola)	30	yashil	29,8 + 1,1
5.	JI-39 (qo'ng'ir tola)	30	qo'ng'ir	30,9 + 0,7
6.	F2O-1 (och sariq tola) x Jarqo'rg'on (oq tola)	14	oq	34,1 + 1,6
		27	och sariq	32,6 + 1,7
		9	sariq	30,5 + 1,5
7.	F2O-5 (jigarrang tola) x Jarqo'rg'on (oq tola)	16	oq	33,9 + 1,2
		11	sariq	31,7 + 1,5
		29	jigarrang	33,5 + 1,7
		12	to'q jigarrang	29,7 + 1,6
8.	F2O-7 (yashil tola) x Jarqo'rg'on (oq tola)	27	oq	34,4 + 1,0
		10	och sariq	32,7 + 1,3
		32	Och yashil	32,8 + 1,4
		15	yashil	31,3 + 1,8
9.	F2JI-39 (qo'ng'ir tola) x Jarqo'rg'on (oq tola)	16	oq	34,5 + 0,9
		15	sariq	32,9 + 1,3
		12	jigarrang	30,8 + 1,4
		18	to'q jigarrang	29,7 + 1,2
		15	qo'ng'ir	30,4 + 1,3

Duragaylar orasida F2 O-5 x Jarqo'rg'on va F2 L-39 x Jarqo'rg'on kombinatsiyalariga tegishli to'q jigarrang tola rangiga ega o'simliklarda o'rtacha tola uzunligini nisbatan past bo'lishi, ya'ni ularda o'rtacha tola uzunligi 29,7 mm ni tashkil etib, bu past ko'rsatkichga ega onalik shakllar darajasida yoki undan ham past ko'rsatkichga ega bo'lganligi aniqlandi.

Xulosalar. Tadqiqotlar natijasida rangli tolali namunalar ishtirokida yangi duragay kombinatsiyalar yaratildi. Olingan duragaylarning F1 avlodida tola rangi belgisining kombinatsiyalarga bog'liq ravishda to'liq va to'liqsiz dominant holatda irsiylanishi aniqlandi.

O'rganilgan F2 duragay kombinatsiyalarda tola rangi bo'yicha ajralish jarayoni kechishi aniqlandi vaduragaylar

orasidan turli tola rangiga ega shakllarning namoyon bo'lishi kuzatildi. Tola uzunligi past bo'lgan rangli tolali oilalarni tola uzunligi yuqori bo'lgan oq tolali Jarqo'rg'on navi bilan duragaylash asosida, rangli tolali oilalarning tola uzunligini oshirish mumkinligi tasdiqlandi. Duragaylar orasidan rangli tolali va tola uzunligi onalik shakllariga nisbatan to'liq ustunlikni namoyon etuvchi o'simliklarning nomoyon bo'lishi kuzatilib, duragaylarda ko'p martali yakka tanlov ishlarini olib borish orqali rangli tolali va tola uzunligi talab darajasida bo'lgan shakllarni ajratib olish mumkinligini to'liq tasdiqladi. O'rganishlar asosida tola uzunligi 33,5-35,0 mm bo'lgan rangli tolali shakllar ajratib olindi va ularni nav darajasiga yetkazish bo'yicha tadqiqotlar davom ettirilmogda.

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## USING EFFECTIVE CRYPTOGRAPHIC KEYS TO PROTECT INFORMATION

Annotation

The tolerance of cryptographic systems is determined by the algorithm used in it and the tolerance of the key. Even if the cryptographic algorithms are strong, the data security level is not high when a weak key is used. Therefore, in the thesis, strong keys are developed for various cryptographic algorithms of cryptographic key management.

**Key words:** Cryptographic methods, Cryptographic algorithms, Pseudo-random number, Cryptographic generator, ANSI X9.17, AES-CTR.

**Introduction.** The use of cryptographic methods in the field of information security is becoming increasingly active. In fact, on the one hand, fast and high-quality transmission and reception of large amounts of state and military information, as well as economic, personal, and other types of information using Internet networks is expanding. On the other hand, the issues of ensuring the protection of such information are becoming more important.

It is known that cryptography is used to ensure the confidentiality and integrity of information in electronic form. Cryptographic protection is widely used not only in the protection of information on computing devices, but also in the safe transmission of information over the network. The tolerance of cryptographic systems is determined by the algorithm used in it and the tolerance of the key. Even if the cryptographic algorithms are strong, the level of security of information is not high when a weak key is used [1].

**Literature review.** Modeling and Construction of Cryptographically Efficient Random and Pseudorandom Key Generators, a Problem of Mathematical Complexity. We are looking for solutions to this problem. There are many scientists who studied the famous CSPRNG (Cryptographically Secure Pseudo-Random Number Generator) and contributed to its development and improvement. Bruce Schneier, Niels Ferguson, Dennis Ritchie, John Collins, M.B. Budko, C.M. Vladimirov, Slepovichev I.I. These and other scientists are the authors of many books on cryptography and information security. They studied and analyzed many CSPRNGs and emphasized the need to use only those that meet cryptographic security standards. Many scientific schools, as well as in Uzbekistan, in the field of designing and researching effective GSPRNG, scientists of Uzbekistan X.A. Muzafarov, G.U. Juraev We can also see it in the research projects of and A.V.Kabulov, N.Kasimov and others. The noted scientists have made significant contributions to the study and development of CSPRNG generators to provide cryptographic security in a wide range of applications.

**Research Methodology.** Cryptographic algorithms, including DES, AES, GOST 28147-89, Own DSt 1106:2009 symmetric block encryption algorithms, use keys of predetermined length 56 bits, 128, 256 bits or 512 bits, 256 bits. However, not all keys generated according to the rules defined in standard algorithms can always withstand various cryptographic attacks organized by a cryptanalyst monitoring an open communication network for the purpose of decryption. For example, if the sequence of bits that make up the key consists only of zeros or ones, or consists of a combination of zeros and ones repeated with a certain period, the key of this type is considered weak. Because in this type of bit sequence, the mathematical regularity of periodic repetition of zero and one element of this sequence can be known in

advance. In this case, using the generated bit sequence as a secret key is not suitable for symmetric encryption algorithms. So, based on the comments above, how do crypto-algorithms generate random bit sequences for secret key blocks?

Naturally, the question,  $k = k_1, k_2, k_3, \dots, k_n$  arises, that is, if the sequence of the key block is obtained according to the

rule, then here  $k_i \in \{0, 1\}$  and  $m = 56, 128, 192, 256$  can be.

So, in a key block  $k_i$  - how is it determined whether the distribution of bits is random or not? To get an answer to this question  $k_i$ , first of all, it is necessary to create this key block according to some rules, in which the distribution of bits in the key block should be checked for the randomness of the distribution of symbols that make up the key block, which is widely used in practice.

Such work is usually done using pseudo-random sequence generators. We analyze in detail the generators that produce pseudo-random sequences, their structure, properties, classification according to their properties, and their use in solving cryptographic problems. [2]

A pseudo-random cryptographic sequence generator for tasks must meet the following requirements:

- the generated sequence must be statistically indistinguishable from a completely random sequence within a reasonable computation time;
- knowing any starting bit of a sequence does not allow predicting the next bit of that sequence at the appropriate computation time.

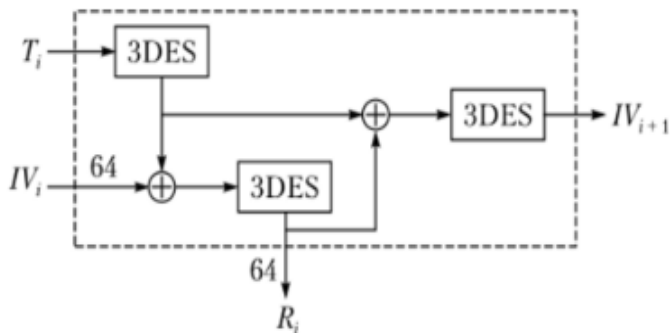
Many simple pseudo-random number generators cannot be used as cryptographically secure pseudo-random generators because they lack the property that the next bit is independent of the previous bit, making them unreliable by reverse engineering. Reverse engineering (or reverse engineering) is the study of a device or program, as well as its documentation, to understand how it works, and often requires replicating the device, program, or other object with similar functions without copying.

It is natural to use cryptographically strong encryption algorithms to create a cryptographically strong pseudorandom number generator. For these purposes, OFB, CBS or gamma modes are suitable (for GOST 28147-89). This method ensures sufficient quality of the generated sequence, because the cryptographic gamma has the necessary statistical properties. Like other pseudo-random number generators, the sequence is cyclic. Thus, the GOST 28147-89 gamma code of the 64-bit block repetition period is equal to [3].



One of the key generation schemes using symmetric codes is the ANSI X9.17 standard with triple DES (Triple

DES, 3DES) algorithm (Fig. 2.62). Applications that use this technology include PGP.



Picture 1. Pseudo-random number generator ANSI X9.17

The encryption function  $E_k(X)$  is only  $X$  according to the DES (encrypt-encrypt-encrypt) algorithm with a prepared key  $k = (K_1, K_2)$  used to generate secret keys. Also, let the initialization vector be the 64-bit initialization value kept secret from the adversary, and let  $G$  be the timestamp when the key was generated. The next random key is then considered using the transformation

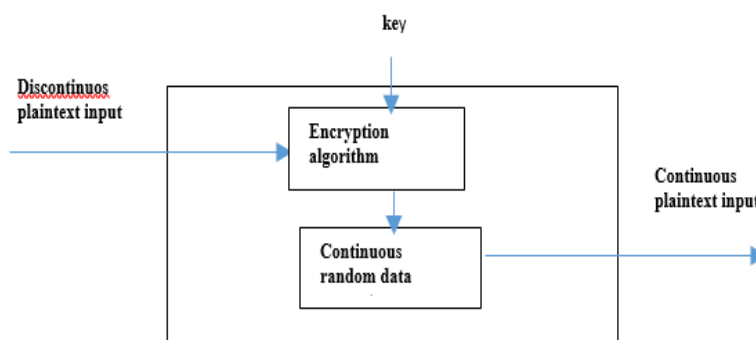
$$R_i = E_k [ E_k ( T_i ) \oplus IV_i ] \tag{1}$$

the next value of the initialization vector used to generate the next random number is calculated as

$$IV_{i+1} = E_k [ E_k ( T_i ) \oplus R_i ] \tag{2}$$

The main purpose of the ANSI X9.17 generator is to obtain a large number of keys for several communication sessions. In practice, the need for additional calls to the encoding procedure (one in gamma mode and three in the ANSI X9.17 standard) requires a lot of resources, which complicates its hardware and determines the low speed characteristics. Currently, three-way encryption (due to low speed) is used only to change the initial values of the pseudo-random sequence generator, the sequence blocks themselves are generated as a result of one call of the encryption algorithm. In general, instead of 3DES, you can use other strong encryption algorithms, for example, GOST 28147-89, AES. [4]

The output of the model will consistently generate ciphertext in the absence of any input (the plaintext) as the random number generator takes responsibility for generating a series of random ciphertexts. When the input is available, the PRNG is extracted from the output and the input is encrypted.



Picture 2. Continuous random-data generator

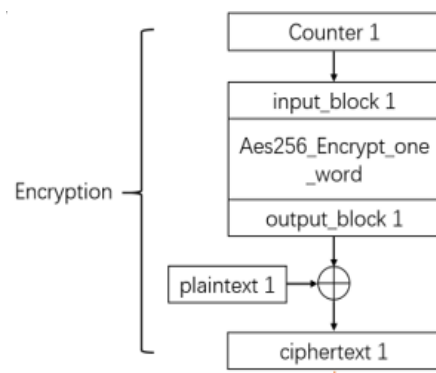
The resulting Continuous random-data generator appears that AES X9.17 offers a high-level cryptographic generator, a reliable secure source and effective results for pseudo-experiments, which requires strong graphic protection and high-quality results.

**Analysis and result.** A new proposed for AES algorithm pseudo random number generator. The new block cipher counter mode (AES CTR) used in the AES cipher CTR mode encryption:

algorithm involves returning the value of some counters collected from the moment the corresponding block cipher algorithm starts to enter. The mode generates a stream from the block cipher, which is the sequence in which the XOR operation with the message text is applied. A block of text and encrypted text has the same block size as the main code. The new CTR Mode performs the following operations:

$$C_i = P_i \oplus E_k ( T_i ); i = 1, 2, \dots, n \tag{3}$$

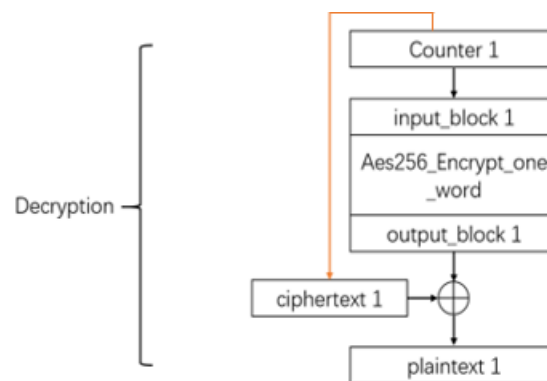
$i$  -block number,  $C_i$  - encrypted text,  $P_i$  - message block,  $E_k$  - encryption algorithm,  $T_i$  -counter value for  $i$  -block.



Picture 3. AES-CTR encryption

CTR mode decryption:

$$P_i = C_i \oplus E_k(T_i); i = 1, 2, \dots, n \quad (4)$$



Picture 4. AES-CTR decryption

The counter values of the encrypted text should correspond to each block. we can perform the counter through 3 steps:

1. in the first step, we perform the growth of the counter functions within the message to encrypt each block, and in the case we calculate and enter the initial value of the counter. Randomness at the initial value will depend on the block number at the incremental value. When performing the counter value, let B refer to the block of bits, after which we express the performance of the growth function to M bits by the formula below:

$$L_{i+1} = (L_i + 1) \text{ mod } 2^m.$$

$$T_i = M_i \in L_{i+1}$$

(5)

Here  $\epsilon$  - merge function;  $L_i$  - Small m bits;  $M_i$  - large bits. The execution of counter values is provided for all message blocks, if  $n \leq 2^m$  any, where  $n$  is the number of blocks to exchange messages.

2. For each exchange of messages, the initial values of the counter select all the counter values used and calculate each value separately. Counter values are marked with a one-time Message number at higher levels. As a result, it is concluded that the growth function can always be calculated when calculating the counter values.

3. The generated values are executed using pseudo random numbers, provided that the counter is properly started and increased. In this case, we can come to the assumption that the sequence period does not exceed for an n-bit block cipher. As a result, we can conclude that the security of a block cipher counter depends entirely on the privacy of the key.

AES X9.17 and AES CTR mode are both cryptographic algorithms that use the AES (Advanced Encryption Standard) block cipher as a building block. However, they serve different purposes.

The AES X9.17 generator is an AES-based cryptographic pseudo-random number generator in counter mode (AES-CTR). It is used to generate random bit sequences for cryptographic purposes such as encryption, key generation, and authentication. The generator requires the value of seed and produces an output of any length, generating a new random number for each block of data.

On the other hand, AES CTR mode is the mode of operation of AES symmetric block cipher. It is used to encrypt and decrypt data in stream mode, which means that data can be encrypted or decrypted in chunks of any size. AES-CTR works by encrypting a Counter value that is multiplied for each block of processed data and then XORing the resulting ciphertext with the plaintext to generate the ciphertext.

Although both algorithms use AES-CTR as a building block, their goals and applications are different. AES X9.17 is a pseudo-random number generator that generates randomness for cryptographic purposes, while the AES-CTR mode is a block cipher mode used to encrypt and decrypt data.

**Conclusion.** Cryptographic key management systems generate, store and transmit strong keys for various cryptographic algorithms, therefore, their role in cryptographic protection of information has been found to be important. Based on the classification of methods used in creating keys in cryptographic systems, this conclusion can be reached. from the point of view of the reliability of the key generators, it was considered adequate to use the ANSI X9.17 pseudorandom number generator cryptographic method and the AES-CTR mode. The article provides background information on how to develop, use, and test effective cryptographic keys.

In general, using AES in Counter mode (AES-CTR), the AES X9.17 generator benefits from the higher speed of the

AES block cipher and the parallelization of Counter mode. pseudorandom numbers.  
This allows for efficient generation of large streams of

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## THE USE OF FOREIGN EXPERIENCE IN TEACHING ENGLISH TO STUDENTS IN HIGHER EDUCATION INSTITUTIONS

Abstract

The use of foreign experience in teaching English to students in higher education institutions has become increasingly prevalent in recent years, as globalization and technology have made it easier for teachers to draw on the knowledge and expertise of ESL teachers from other countries. Foreign experience can provide many benefits to both teachers and students, including enhanced teaching effectiveness, improved cultural awareness, access to a wider range of teaching materials and resources, professional development opportunities, and increased student motivation. The use of foreign experience in practice can take many forms, including hiring ESL teachers with foreign experience, collaborating with ESL teachers from other countries, and offering study abroad programs. Overall, the use of foreign experience can be a valuable tool for enhancing the effectiveness of ESL teaching in higher education institutions.

**Key words:** Language learning, cultural awareness, international teaching methods, diverse understanding, comprehensive curriculum, teacher training, language proficiency, inclusive society, specialized materials contextual understanding.

**Introduction.** In today's globalized world, the importance of learning English as a second language has become increasingly evident. English is widely regarded as the global language of business, science, and technology, making it an essential tool for communication and collaboration across cultures. In higher education institutions, teaching English as a second language is a crucial component of many degree programs, particularly those with an international focus. One way to enhance the effectiveness of ESL teaching in higher education is to draw on foreign experience and best practices. This article explores the use of foreign experience in teaching English to students in higher education institutions.

### Foreign Experience in Teaching English

Foreign experience in teaching English refers to the knowledge and expertise gained by teachers and educators from other countries and cultures. This experience can be in the form of formal education, training, or work experience in ESL teaching. Foreign experience can be valuable in many ways, including:

1. Exposure to different teaching methods and approaches
2. Knowledge of cultural differences that affect language learning and teaching
3. Familiarity with the latest trends and developments in ESL teaching
4. Access to a wider range of teaching materials and resources
5. Opportunities for collaboration and networking with other ESL teachers around the world.

The use of foreign experience in teaching English is not a new concept. Many ESL teachers have traveled and worked in different countries, bringing with them a wealth of knowledge and experience. However, the use of foreign experience has become more prevalent in recent years due to the increasing globalization of higher education and the widespread use of technology.

### Benefits of Using Foreign Experience in Teaching English

The use of foreign experience in teaching English can bring many benefits to both teachers and students in higher education institutions. Some of these benefits include:

1. Enhanced teaching effectiveness: Drawing on foreign experience can help teachers to develop new teaching methods and approaches that are more effective in engaging students and promoting language learning.

2. Improved cultural awareness: ESL teachers with foreign experience are more likely to be aware of cultural differences that affect language learning and teaching. This can help to create a more inclusive learning environment and improve student engagement.

3. Access to a wider range of teaching materials and resources: Foreign experience can provide teachers with access to a wider range of teaching materials and resources, including textbooks, online resources, and multimedia materials.

4. Professional development opportunities: Working with ESL teachers from other countries can provide opportunities for professional development and networking.

5. Increased student motivation: Students are often more motivated to learn when they are exposed to new teaching methods and approaches. The use of foreign experience can help to create a more engaging and dynamic learning environment, which can improve student motivation and engagement.

### Using Foreign Experience in Practice

The use of foreign experience in teaching English can take many forms, depending on the specific needs and goals of the institution and the students. Some examples of how foreign experience can be used in practice include:

1. Hiring ESL teachers with foreign experience: Institutions can hire ESL teachers with foreign experience to teach English to students. These teachers can bring a wealth of knowledge and expertise to the classroom, which can enhance the effectiveness of language teaching.

2. Collaborating with ESL teachers from other countries: Institutions can collaborate with ESL teachers from other countries to develop new teaching methods and approaches, share teaching materials and resources, and exchange ideas and best practices.

3. Offering study abroad programs: Institutions can offer study abroad programs that give students the opportunity to study English in a foreign country. This can expose students to different teaching methods and approaches, as

**Material and methods.** The use of foreign experience in teaching English to students in higher education institutions can take many forms, depending on the specific needs and goals of the institution and the students. In this section, we will describe some of the common methods and strategies for using foreign experience in ESL teaching.

1. Hiring ESL teachers with foreign experience: Many higher education institutions hire ESL teachers with foreign experience to teach English to their students. These teachers can bring a wealth of knowledge and expertise to the classroom, which can enhance the effectiveness of language teaching. They can also provide valuable insights into cultural differences that affect language learning and teaching.

2. Collaborating with ESL teachers from other countries: Institutions can collaborate with ESL teachers from other countries to develop new teaching methods and approaches, share teaching materials and resources, and exchange ideas and best practices. This can be done through virtual meetings, online forums, or in-person conferences and workshops.

3. Offering study abroad programs: Institutions can offer study abroad programs that give students the opportunity to study English in a foreign country. This can expose students to different teaching methods and approaches, as well as provide opportunities for cultural immersion and language practice.

4. Using online resources: The internet provides a wealth of resources for ESL teachers, including online courses, webinars, and teaching materials. Teachers can use these resources to stay up-to-date with the latest trends and developments in ESL teaching, as well as to learn from ESL teachers around the world.

5. Creating international partnerships: Institutions can create partnerships with other universities and institutions around the world to share teaching methods and materials, collaborate on research, and offer joint programs. This can provide opportunities for cross-cultural exchange and collaboration, as well as enhance the quality of ESL teaching.

Overall, the use of foreign experience in teaching English to students in higher education institutions can be a valuable tool for enhancing the effectiveness of ESL teaching and promoting cross-cultural exchange and understanding.

**Results.** The use of foreign experience in teaching English to students in higher education institutions has become increasingly popular in recent years. Many universities and colleges have recognized the benefits of incorporating international perspectives into their English language curricula, including exposure to different teaching styles, cultural contexts, and language skills.

One major advantage of using foreign experience in teaching English is that it provides students with a more diverse and comprehensive understanding of the language. By incorporating international teaching methods and materials, students are exposed to a wider range of language structures, vocabulary, and idiomatic expressions. This exposure can enhance their language proficiency and help them communicate more effectively in real-world situations.

Another benefit of using foreign experience is that it can promote cultural awareness and understanding among students. Through exposure to different cultural contexts, students can develop a deeper appreciation and understanding of other cultures and ways of life. This can help to break down cultural barriers and promote a more inclusive and tolerant society.

However, it is important to note that incorporating foreign experience into English language teaching requires careful planning and consideration. Teachers need to be trained in the use of international teaching methods and materials, and the curriculum should be designed to ensure that it meets the needs and expectations of students.

In conclusion, the use of foreign experience in teaching English to students in higher education institutions can provide many benefits, including enhanced language proficiency and cultural awareness. However, it is important to approach this approach with care and consideration to ensure the best possible outcomes for students.

**Discussion.** The use of foreign experience in teaching English to students in higher education institutions has both advantages and disadvantages. On one hand, incorporating international teaching methods and materials can provide students with a more diverse and comprehensive understanding of the language and promote cultural awareness and understanding. On the other hand, it can also present challenges such as language barriers, cultural differences, and the need for specialized training for teachers.

One potential disadvantage of using foreign experience is the language barrier. Students may struggle to understand the foreign accents of their teachers or the texts and materials used in class. This can lead to frustration and a lack of engagement, which can ultimately hinder their language learning progress.

Additionally, cultural differences can also present challenges. Students may struggle to understand the cultural references or context used in foreign materials, which can make it difficult for them to fully grasp the language. Teachers also need to be aware of cultural sensitivities and avoid unintentionally offending students or perpetuating stereotypes.

Despite these challenges, the benefits of using foreign experience in teaching English to students in higher education institutions outweigh the disadvantages. It provides students with a more diverse and comprehensive understanding of the language and promotes cultural awareness and understanding. With careful planning and consideration, teachers can effectively incorporate international teaching methods and materials to enhance their students' language learning experience.

**Conclusion.** In conclusion, the use of foreign experience in teaching English to students in higher education institutions can bring significant benefits to language learning and cultural awareness. Despite potential challenges such as language barriers and cultural differences, the incorporation of international teaching methods and materials can provide students with a more diverse and comprehensive understanding of the language.

Teachers and institutions need to carefully plan and consider the use of foreign experience in their English language curricula. This includes providing specialized training for teachers, selecting appropriate materials that align with students' needs and expectations, and being aware of cultural sensitivities.

Furthermore, the use of foreign experience can promote cultural awareness and understanding among students. Exposure to different cultural contexts can help students develop a deeper appreciation and understanding of other cultures and ways of life, which can lead to a more inclusive and tolerant society.

In conclusion, the use of foreign experience in teaching English to students in higher education institutions can provide many benefits, but it is important to approach this approach with care and consideration to ensure the best possible outcomes for students. With proper planning and execution, the use of international teaching methods and materials can enhance language learning and promote cultural awareness.

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## O‘ZBEKISTON MILLIY UNIVERSITETI ILMIY MAKTABLARIDA ALISHER NAVOIY IJODINING O‘RGANILISHI

Annotatsiya

Maqolada O‘zbekiston Milliy universitetidagi mavjud ilmiy maktablar, ulardagi olim va tadqiqotchilar tomonidan Navoiy ijodini tadqiq etish tamoyillari tahlil qilinadi. Universitet navoiyshunosligining shakllanishi, taraqqiyot bosqichlari va hozirgi holati haqida ilmiy xulosaga kelinadi. Universitet navoiyshunoslari tomonidan amalga oshirilgan muhim tadqiqot va o‘quv adabiyotlariga sharh beriladi.

**Kalit so‘zlar:** Ilmiy maktab, Navoiy ijodi, tadqiq, tahlil, navoiyshunoslik, taraqqiyot bosqichi, ilmiy xulosa, sharh.

**Kirish.** O‘zbek mumtoz adabiyotining tadqiq etilishi ming yillik tarixga ega bo‘lsa-da, XX-asrning boshlariga kelib, uni ilmiy o‘rganishga, qo‘lyozma va bosma matnlar asosida o‘zbek adabiyoti tarixini yaratishga jiddiy kirishildi. Jadidchi adib va adabiyotshunos olim Munavvarqori Abdurashidxlnov (1878-1931) muassisligida tashkil etilgan O‘zbekiston Milliy universitetida 1918-yildan Alisher Navoiy ijodini ko‘lamli ravishda tadqiq qilish boshlandi [7]. Bu jihatdan xalq dorilfununida (milliy universitet)da “Falsafa va adabiyot” sho‘basi (kafedrasini)ning tashkil etilishi muhim ahamiyatga ega bo‘ldi. Ushbu sho‘ba (bo‘lim)ga mumtoz adabiyotning yirik tadqiqotchisi (keyinroq professor) Abdurauf Fitrat (1886-1938) mudirlik qilish bilan birga universitet navoiyshunosligining asosini yaratdi. Mana shu davrda universitet huzurida (qoshida) dorilmuallimin (pedagogika instituti)ning tashkil etilishi va unga yirik pedagog olim Abdulla Avloniyning rahbarlik qilishi Milliy universitet va boshqa ta‘lim muassasalarida Alisher Navoiy ijodining keng suratda o‘qitilishiga sabab bo‘ldi.

**Mavzuga oid adabiyotlar tahlili.** Universitetda ish olib borayotgan olimlar tomonidan yozilgan darslik va o‘quv qo‘llanmalarida Navoiy tarjimaiy holiga oid ma‘lumotlar va ulug‘ shoir asarlaridan namunalar berish, mashhur asarlarini talqin qilish orqali uni tadqiq etish boshlandi. Dastlab M. Abdurashidxonovning “Adibi soniy” (“Ikkinchi adib”, 1907) darsligida Navoiy hikmatlaridan namunalar berildi. Uning “Til saboqligi” (1925) darsligida milliy adabiy tilning asoschisi sifatida Navoiy asarlariga murojaat etildi. Avbulla Avloniy (1878-1934) “Maktab gulistoni” (1916) asarida Navoiyning “Hayratu-l-abror” dostonidan so‘z ta‘rifiga bag‘ishlangan baytlarni keltirgan bo‘lsa, “Turkiy Guliston yoxud axloq” asarida yana shu dostonga murojaat qilib, sadoqat, do‘stlik va ilm tashviqiga bag‘ishlangan baytlaridan keltirib sharhlab bergan.

**Tadqiqot metodologiyasi.** Alisher Navoiy ijodi o‘zbek va jahon adabiyotshunosligida, asosan, tarixiy-qiyosiy metod asosida o‘rganilgani uchun ushbu maqolada mana shu metodning tahlil usullaridan foydalanildi. Shuningdek, Navoiyning ayrim asarlari – “Xamsa” tarkibiga kirgan dostonlarni tahlil qilishda analitik va struktural metodlardan foydalanildi. Milliy universitet olimlaridan rusiyzabon tadqiqotchilarning ishlariga munosabat bildirilganda qiyosiy adabiyotshunoslik talblaridan kelib chiqqan holda ish ko‘rildi.

**Tahlil va natijalar.** Abdurauf Fitratning Qayum Ramazon va Shokirjon Rahimiy bilan hamkorlikda yozgan

o‘zbek tilidagi birinchi “Ona tili” darsligida (1918) va “Ishtirokiyun” gazetasida chop qilingan “Tilimiz” maqolasida Alisher Navoiy boshlagan til ozodligi uchun kurashni davom ettirgan. Fitrat milliy tilning boyligini ko‘rsatuvchi uch jihat: so‘zlarning ko‘pligi – lug‘at boyligi (kasrati kalimot), undirish kengligi – so‘z yasalihi (vus‘ati ishtiqoq) va yo‘sun tugalligi – grammatik qoidalarning mukammalligi haqidagi ta‘limotni Navoiyning “Muhokamatu-l-lug‘atayn” (“Ikki til muhokamasi” asari vositasida tushuntirib beradi. Fitrat yozadiki, “Navoiy kitobi turkchani boylig‘ini ochib ko‘rsatadi, turk tilida so‘z ko‘pligini yaxshi biladi”. Lekin Navoiy yetuk adabiy til darajasiga olib chiqqan tilimiz XX asr boshlariga kelib “baxtsiz” bir holga kelganini qayd etadi [3]. Bu holda qutilish uchun arab va fors so‘zlariga keng o‘rin bermaslik, til qurilishi va uning grammatik qonuniyatlarini belgilashda turkiy tillarga xos umumiy jihatlardan kelib chiqib ish ko‘rishlikni tavsiya qiladi [1].

“Navoiy haqida insoniyat fikri” (1919) risola (traktat)sida Navoiy “Xamsa”sining birinchi dostoni “Hayratu-l-abror”dagi podshohlar va amir-amaldorlar haqidagi maqolotlarni sharhlar bergan. Navoiyning zolim podshohlarga, xiylakor ruhoniylarga va poraxo‘r amir-amaldorlarga bo‘lgan munosabatini doston vositasida ko‘rsatib bergan. Bu o‘zbek filologiyasi va navoiyshunoslik ilmidagi “Xamsa”ning ilk dostonining sharhiga bag‘ishlanlan dastlabki ilmiy tadqiqotdir.

XX-asr boshlarida Turkiston madaniy hayotiga ulug‘ adiblar tavallud kunlarini ham yubiley tarzida nishonlash an‘anasi vujudga keldi. Bu jihatdan Hazrat Navoiy tug‘ilgan kunining hijriy-qamariy sana hisobidagi 500 yilligi 1926-yilga to‘g‘ri keldi. Bu harakat rasman 1919-yildan boshlangan edi. Turkiston Muxtor jumhuriyati hukumati va Turkiston o‘lka musulmon byurosi xalqimiz ma‘naviy mersini to‘plab, o‘rganib, nashr qilish orqali ommalashtirish ishlarini yo‘lga qo‘yish haqida qaror qabul qildi. Ushbu qarorning ijrosi uchun Nazir To‘raqulov raisligida ilmiy hay‘at (Fitrat – muovin, Laziz Azzizoda – kotib) tuzildi.

Turkistonda 10-yillarning oxirrog‘idan boshlangan bu harakat Cho‘lponning “500 yil” maqolasi “O‘zbek bilim hay‘ati e‘tiboriga” qaratilgan ochiq xat tarzida e‘lon qilindi [2].

1925-yilning 11-iyulida O‘lka musulmon byurosi huzuridagi O‘zbekshunoslik qo‘mitasi “Alisher Navoiyning 500 yillik yubileyiga tayyorgarlik ishlarini boshlash haqida” qaror qabul qilgan (qaror matni rus tilida yozilgan) va unga binoan:

a) Alisher Navoiyning 500 yillik yubileyini o'tkazish maqsadga muvofiq deb topilsin;

b) Alisher Navoiyning nazm va nasrda yozilgan asarlaridan tashkil topgan to'plam tuzilsin;

c) Alisher Navoiy asarlarining asl nusxalari (originali) hozirgi o'zbek tiliga tarjimalari bilan birga nashr qilinsin;

d) tadqiqotlar va namunalar to'plamining har biri 5 bosma taboqdan belgilansin;

e) tadqiqotlar qismini tayyorlash o'rtoq Mahmudovga, parchalar (namunalar) tanlash ishi Fitratga yuklatilsin" [9].

Mazkur qarorga ko'ra, Alisher Navoiyning to'rt asari nashrga tayyorlanib chop etilishi rejalashtirildi. Navoiy haqidagi Buxoroda tarqalgan xalq afsonalari xususida A.Semyonov maqolasi chop etildi [5]. Fitrat tomonidan nashrga tayyorlangan "Muhokamatu-l-lug'atayn", "Hayratu-l-abror" ("Navoiy ikkiliklari" sarlavhasi bilan), "Farhod va Shirin", "Layli va Majnun", "Saddi Iskandariy" ("Iskandarnoma" nomi ostida), "Chor devon"dan g'azal va ruboiylar, Navoiyning maktublari (Riqa'at), "Mezonu-l-avzon", "Mahbubu-l-qulub" asarlaridan namunalar nashrga tayyorlandi. O'z davrida turli nashrlarda chop etilgan bu namunalar yaxlit holda Fitratning "O'zbek adabiyoti namanalari" (1-jild)dan o'rin oldi [6]. Shu bilan birga Navoiyning mukammal tarjimai holi hozirlanishi va bir ilmiy to'plam nashr etilishi rejalashtirilgan edi.

Fitratning "Navoiyning forsiy shoirlig'i ham uning forsiy devoni to'g'risida" (1926) maqolasi mana shu munosabat bilan yozilgan. Maqolada Navoiyga nisbat berilgan "Devoni Foniy" aslida Navoiyniki emas, Kashmirli hind shoiri Mulla Muhsin Foniyga tegishli ekanligini matnshunoslik nuqtai nazaridan isbotlab bergan va navoiyshunoslikni chalkashliklardan qutqargan.

Samarqand Pedakademiya (hozirgi SamDU)sga ishga taklif etilganidan so'ng bu mavzudagi tadqiqotlarini davom ettirib, "O'zbek adabiyoti namunalari" (1-jild, 1928) majmuasiga Navoiy devonlaridan, "Xamsa", "Muhokamat ul-lug'atayn" asarlaridan ayrim namunalarni nashrga tayyorlab, chop ettirdi. "Farhodu Shirin" dostoni to'g'risida" (1930) maqolasida Nizomiy, Deg'laviy va Navoiyning "Xusrav va Shirin" hamda "Farhodu Shirin" dostonlarini o'zaro tilolik jihatdan qiyoslash vositasida Navoiy asarlari fors tilidagi dostonning tarjimasini emas, balki original doston ekanligini isbotlab berdi. Bu doston Navoiydan keyingi davr turkiy va fors tilidagi adabiyotga jiddiy ta'sir ko'rsatganligini aniqladi. Fitrat bu asarlari bilan, birinchidan, milliy universitet navoiyshunosligini asosini yaratdi va ikkinchidan, turk dunyosining ulug' shoiri Navoiy ijodiga qanday yondoshish kerakligi to'g'risida ilmiy metodologiya yaratib berdi.

Prof. Abdurahmon Sa'diy O'zMU (1921-25, 1932-38, 1941-48) va SamDU (1930-32, 1939-41)da faoliyat ko'rsatish barobarida o'nlab maqolalar va "Alisher Navoiy ijodi o'zbek klassik adabiyotining yuqori bosqichi" mavzuida doktorlik dissertasiyasini yoqlagan. Mazkur tadqiqotda o'zbek klassik adabiyoti Navoiy siyosida jahon adabiyotiga ko'tarilganini, uning ijodi Dante, Shekspir, Gyote kabi daho ijodkorlar bilan bellasha olishini isbotladi.

Ilk marta "O'rta Osiyo tarixi" (1936) nomli fundamental tadqiqot yaratgan Bo'lot Solievning Temuriylar davri adabiyotiga doir qarashlari, Yahyo G'ulomovning arxeologiyaga doir kashfiyotlari universitet navoiyshunosligi o'z tarkibiga tarixchi va sharqshunos olimlarni ham jalb etganligiga guvohlik beradi. B.Solievning tarixiy asari rus tarixchilarining asarlari, xususan, V.Bartol'd tadqiqotlaridan Markaziy Osiyoda yaratilgan asosiy tarixiy manbalarni chuqur bilishligi, ularni yerli xalqlar nuqtai nazaridan o'rganilganligi bilan farq qiladi. Bu asardan keyin Markaziy Osiyo tarixi universitet olimlari tomonidan jiddiy o'rganila borganini, Yakubovskiy va Yag'yo G'ulomov kabi arxeologlarning turli qazishma ishlarini olib borishi uchun ilmiy asos bo'lib xizmat qildi. Rus olimi prof.A.A.Semyonov 1926-37-yillarda O'zMU

da ishlash davomida Milliy universitet kutubxonasidagi mavjud barcha besh mingdan ortiq qo'lyozmalar va toshbosma (litografiya) asarlarini o'rganib chiqib, ularning ilmiy tavsifi (katalog)ini yaratdi. A.A.Semyonov tomonidan "Sharq qo'lyozmalari katalogi tasnifi" (1936)da Alisher Navoiy qalambiqa mansub ellikdan ortiq qo'lyozma va bosma nashrlar ro'yxatga olingan.

Ma'lumki, Ikkinchi jahon urushi yillari ko'plab olimlar Rossiyaning markaziy shaharlaridan Toshkentga evakuasiya qilindi. V.Jimmunskiy (1942-1948), A.K.Arends (1939-43), Ye.E.Bertel's (1943-46) Milliy universitetda ishlash barobarida o'zbek navoiyshunosligiga salmoqli hissa qo'shdilar. Ye.E.Bertel's ilmiy faoliyatida Toshkent davri alohida o'rin tutadi. "Navoi. Opit tvorcheskoy biografii" asari bevosita universitetda ishlayotgandagi davrining mahsulidir. "Ulug' o'zbek shoiri" ("Rodonachal'nik uzbekskoy literaturi") to'plamidan o'rin olgan A.Yakubovskiyning Navoiy davriga oid maqolasi, I.P.Petrushevskiyning qator ishlari Alisher Navoiy ijodi tarixchi olimlar uchun ham tadqiqot ob'ekti bo'lganligini ko'rsatadi.

Falsafa va iqtisod fakul'tetlari ham Navoiy merosidan bahramand bo'lganini Oybek, M.Shayxzoda, V.Zohidov kabi ustoz adiblar faoliyati ham tasdiqlaydi. Akademik Muso Toshmuhammad o'g'li Oybek "Navoiy" (1942) romanini yozishdan avval ushbu mavzuda bir necha ilmiy maqolalar va "Alisherning bolaligi" qissasini e'lon qildi. Bu davrda Oybek O'zMUning Iqtisod fakul'teti aspiranti sifatida faoliyat ko'rsatayotgan edi. Shuningdek, O'zMUda qozoq romanchilik maktabining asoschisi Muxtor Avezov ta'lim olish bilan birga Oybek va boshqa o'zbek olimlarining Navoiy ijodiga oid tadqiqotlari ta'sirida qozoq tarixiy romani shakllanishiga asos solgan, birinchi qozoq epopeyasini "Abay yo'li" asarini e'lon qildi. Navoiy va Abay haqidagi romanlar dunyo tillariga tarjima qilinib, jahon adabiyotining durдона asarlari qatoriga qo'shildi. Shuningdek, qirg'iz shoiri Aali To'qomboev, turkman adibi Xidir Deryaev milliy universitetning talabasi sifatida universitetda ta'lim olganlaridan so'ng qirg'iz va turkman aadbiyotlarining yetakchi adiblari qatoridan joy oldilar.

A.To'qomboevning she'riyatiga Navoiy ijodi, X.Deryaev tarixiy romanlariga Oybek, M.Avezovning Navoiy va Abay mavzusidagi romanlari o'z ta'sirini ko'rsatdi.

Fitrat asos solgan mumtoz adabiyotni tadqiq va nashr etish ilmiy maktabining ulkan davomchisi, O'zbek adabiyoti kafedrasini uzoq yillar boshqargan G'.Karimov «Layli va Majnun» dostonining kritik teksti» mavzuida (1941) Ye.E.Bertel's rahbarligida nomzodlik dissertasiyasini himoya qilgan va bu doston matnini (1945) nashr ettirgan. Prof. G'ulom Karimov 50-90-yillar davomida Fitrat, Abdurahmon Sa'diy boshlab bergan tadqiqot yo'lini davom ettirish bilan cheklanmay, atrofiga o'ndan ortiq iste'dodli olimlarni birlashtira oldi va o'zbek mumtoz adabiyotini maxsus tadqiq etuvchi ilmiy maktab faoliyatini kengaytirdi. Avval 1942-yilda "O'zbek adabiyoti tarixi" kafedrasini ta'sis etildi va bu kafedra respublikada o'zbek adabiyotini o'rganuvchi, tashviq va targ'ib qiluvchi markazga aylandi va bu maktab hozirgi kunga qadar faol harakatdadir [4]. S.Dolimovning Navoiy ijodini o'rta maktablarda o'rganishga doir metodik ishlari universitet navoiyshunosligining yangi bir jabhasidan darak beradi. Umumta'lim maktablari uchun darslik va qo'llanmalar yaratgan A.Zunnunov, B.Qosimov, O.Madaev va Q.Yo'ldoshev kabi olimlar G'ulom Karimov asos solgan ilmiy maktabning davomchilaridir. Keyinroq G'ulom Karimov tomonidan asos solingan o'zbek mumtoz adabiyoti tarixini tadqiq etish ilmiy maktabi xorijiy mamlakatlarda, jumladan, Rossiya, AQSh, Turkiya, Yaponiya olimlari tomonidan ham tan olingan, ayrimlari bu maktab a'zolari bilan bevosita aloqa bog'laganlar. Shu jihatdan AKSh olimi E.Olvort va Temur Ko'ja o'g'li, yapon olimlari Enji Mono va Xisao Ko'matsu, Turkiya olimlari Kamol Eraslon, Usmon Sartqoya kabililar



sharq mumtoz adabiyotini tadqiq etishda ushbu maktab vakillari bilan muhim aloqa o'rnatganlar.

O'zbekiston sharqshunoslari maktabi dastlab universitetda shakllanganini, bu maktabdan Vohid Zohidov, Aziz Qayumov, Alibek Rustamov kabi akademiklar, Sodiq Mirzaev, Solih Mutallibov, To'xtasin Jalolov, Shoislom Shomuhamedov, Abduqodir Hayitmetov, Suyima G'anieva, Saidbek Hasanov ustoz navoiyshunoslar yetishib chiqqani universitet navoiyshunosligining alohida bir sahifasini tashkil qiladi [8]. Akad. V.Zohidov "Ulug' shoir ijodining qalbi" monografiyasida Navoiy va tasavvuf falsafasi mavzusini izchil o'rgandi, sho'ro tazyiqiga qaramasdan Navoiy ijodida tasavvuyi mazmun, taqin va obrazlar yetakchilik qilishini o'z tadqiqoti orqali ko'rsatib berdi. A.Qayumov Alisher Navoiyning deyarli barcha asarlarini tahdil va tadqiq etish natijasida o'n jildidan iboran "Asarlar" to'plamining 5 kitobini Navoiy ijodini o'rganish sirlariga bag'ishlagan.

Demak, XX- asrning birinchi yarmidayoq universitetdagi navoiyshunoslik ilmiy maktabi adabiyot tarixi, matnshunoslik, til tarixi, adabiyot o'qitish metodikasi, sharqshunoslik, tarix, falsafa kabi sohalarni o'zida birlashtirgan edi.

XX-asrning 70-80-yillarida S.Narzullaeva, B.Akramov kabi olimlarning doktorlik dissertatsiyalari milliy universitetda tayorlandi va Boku hamda Toshkent shaharlarida muvaffaqiyatli himoya qilindi. Universitetda tayorlangan doktorlik dissertatsiyalaridan Navoiy ijodi salmoqli o'rin olganligi, prof. M.Muhiddinovning bevosita Milliy universitet aspiranturasidagi tahsili keyingi yirik ilmiy ishlariga asos bo'lganligini alohida eslash joiz. G'aybulla as-Salom, N.Komilov kabi olimlarning tarjimashunoslikka doir ishlari va ularning Navoiyga doir qismlari mana shu maktab faoliyatining davomidan darak beradi. Prof. G'.Salomov O'zbekistonda ilk bor tarjimashunoslik ilmiy maktabiga asos solgan ekan, bu maktab davomchilaridan biri prof. N.Komilov tadqiqotlari Navoiy va islom tasavvufi masalalariga

bag'ishlandi. Ulug' shoir ijodini tasavvuf falsafasi va adabiyotidan ajratib o'rganib bo'lmashligini asoslab bergan olim, Navoiyning naqshbandiyya tariqatiga munosabati o'nlab monografiyalari orqali yoritdi.

A.Erkinov "Xamsa" matnshunosligi yuzasidan doktorlik dissertatsiyasi tayyorladi. Navoiyning Oqqo'yinlilar davrida ko'chirilyagan yangi qo'lyozma nusxasini xorij kutubxonalaridan topib, ilmiy muomalaga kiritdi. Tadqiqotchilar M.Akbarovanning «Alisher Navoiy g'azallarida qofiya», D.Yusupovanning «Alisher Navoiy «Xamsa»sida ritm va mazmunning badiiy uyg'unligi», Z.Mamadaliyevning "Lison ut-tayr"da ramziy timsollar" mavzularida nomzodlik dissertatsiyalari XXI asrda ham Navoiy poetikasi jiddiy o'rganishda davom etilayotganligini anglatadi.

**Xulosa va takliflar.** Alisher Navoiy ijodini o'rganish borasida universitetda mavjud ilmiy maktablar doirasida tadqiqotlar olib borilmoqda. Alisher Navoiy nafaqat ulug' adib, balki mutafakkir olim hamdir. Uning filologik merosi universitet olimlari tomonidan o'rganilgan, tadqiqot markaziga qo'yilgan. Agar XX-asrning 80-yillarida Navoiyning "Muhokamatu-l-lug'atayn" ("Ikki til muhokamasi") asari tilshunos olim M.Qodirovning tadqiqoti markaziga qo'yilgan bo'lsa, hozirgi kunda Navoiyning mumtoz poetikaga oid ishlari va tasavvufiy qarashlari universitetdagi mavjud "Mumtoz poetika" ilmiy maktabi tomonidan jiddiy o'rgnimoqda [10]. Bu borada "Sharq mumtoz poetikasi" (2006), "Islom tasavvufi manbalari" (H.Boltaboev, 2004) kitoblar muhim manba bo'la oladi. Navoiyning "Mezonu-l-avzon" asarining temuriylar davri poetikasidagi o'rni (D.Yusupova), Navoiyning mumtoz qofiya borasidagi qarashlari (O.Hamraeva) yuzasidan doktorlik dissertatsiyalari yoqlandi. Hozirgi kunda mumtoz adabiyotdagi murakkab strukturali janrlar va ular taraqqiyotida Navoiy asarlarining o'rni borasida doktorlik dissertatsiyasi (D.Qozoqboeva) tayyorlanmoqda.

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## ASSESSMENT OF RELIABILITY OF THE RESULTS OF SOCIO-ECONOMIC RESEARCH BY STATISTICAL METHODS

Annotation

The article explores the possibilities of modern software for building a model of the distribution of statistics suitable for a particular experiment. This program makes it possible to find approximate solutions with high accuracy in situations that cannot be implemented by analytical methods, using computational methods and statistical modeling, to draw not only asymptotic conclusions based on modeling, but also to observe the change in the law as the sample size increases.

**Key words:** Statistical distribution, model, numerical methods, software.

**Introduction.** Methods of statistical analysis of data, methods of applied mathematical statistics are widely used in the analysis of the results of stochastic experiments, mainly, in natural sciences, engineering, biology, medicine, economics, insurance, demography and social fields. The statistical systems used are not considered as tools for investigating the validity of the study. Therefore, in cases where it is not possible to determine research regularity using analytical methods, better results can be achieved using numerical methods.

But, almost all software systems do not include research validation through these quantitative methods. Professionals, who are in this field, face problems in their work in analyzing statistical data or choosing a distribution law model that adequately describes the distribution of observations. In addition, it is a problem for the representatives of the social sphere, which statistical criteria should be used in order to minimize the error in the statistical analysis of the results of the experiment.

In recent years, so many statistical methods and criteria have been proposed that even a specialist in mathematical statistics come across some difficulties to choose the right direction. There are several criteria for testing exactly one hypothesis. Naturally, several questions appear automatically: which criterion is the best? Which criterion guarantees that type 2 error is minimal for a fixed type 1 error?

Can be distinguished competing hypotheses within a given set of observations? Is it possible to use the asymptotic results of the given criterion in the size of the given observations? These questions can be answered by conducting research using computer technologies. Only when computer simulations are used, the shortcomings of statistical criteria become apparent, as they are limited in their precise field of application.

**Literature review.** Within the scope of the topic, in recent years, Professor B.Y. Lemeshko and his students [1] carried out scientific research in this field and formed a scientific school on statistical analysis of data, modeling and research of probabilistic. The main research of this scientific school consists in applying the fundamental results of mathematical statistics to various issues of practice. There are many studies by professor A.I Orlov, in the field of applied statistics, specific aspects of methods, factors to be considered in their application, and correct statistical inferences.

Among them [2] literature plays main role. Special attention is paid to the tasks of choosing the most optimal statistical criterion, which is different from the proposed technologies, ensuring the minimization of type 1 and 2 errors when using this statistical criterion, drawing not only asymptotic conclusions based on simulation, but also observing changes in the regularity with the increase of the sample size. In addition, the regularities of the results of the stochastic experiment conducted in our republic are determined, that is, they differ from the regularities of the data of other countries.

**Research methods.** The main goal is to study the laws of mathematical statistics using calculation methods and statistical modeling, considering computer technology as an instrument. Technologies under development significantly complement analytical methods, help to find approximate solutions in cases that cannot be implemented by analytical methods. On the basis of simulation, it is possible not only to draw asymptotic conclusions, but also to observe changes in the law as the sample size increases, to build and model the distribution model of arbitrary statistics studied in a given situation. For this, the following tasks were performed:

1. To observe software for computer data analysis, statistical analysis of observations of one-dimensional and multi-dimensional continuous random variables, developing of methods, algorithms and softwares;
2. To Apply methods of computer analysis of statistical regularities arising in mathematical and applied statistics issues;
3. To evaluate of distribution parameters of grouped, partially grouped (both censored and ungrouped) and interval observations and testing of statistical (simple and complex) hypotheses;
4. To Improve of methods and approaches for drawing correct conclusions based on deep study of advanced international experience and extensive use of modern mathematical and software-technical equipment in macroeconomic calculations.
5. Wide application of modern information and communication technologies of statistical data collection, processing, transfer and distribution, deepening the level of automation of the processes of working with statistical data, forming a statistical data bank;
6. To ensure minimum type 1 and 2 errors;
7. To construct of a distribution model of statistics suitable for a specific experiment.

The main goal of creating a set of practical programs is the statistical analysis of the results of stochastic experiments, in particular, multidimensional numerical data obtained from experiments in natural sciences, engineering, biology, medicine, economics, insurance, demography and social fields, and the effective application of mathematical statistics methods to them. It is known that there are statistical analysis programs created by various developed countries such as STATISTICA, SPSS, STATA, and they have their advantages and disadvantages. The advantage of the developed software is that the interface of this program is convenient for socio-economic researchers and it is available in Uzbek, Russian and English languages, and it is designed to select the best one from several statistical criteria. This provides certain convenience to the user. In addition, the set of proposed programs provides for the verification of hypotheses about the statistical validity and statistical reliability of the performed analysis, which is not available in the above-mentioned set of statistical programs, as well as providing appropriate conclusions. The main goal of analyzing the results of experimental observation is to determine the distribution law that best describes the distribution of the observed random variable. How well the observed pattern corresponds to the theoretical law is checked using various criteria. The purpose of testing the hypothesis about the correspondence of the empirical (experimental) distribution to the theoretical distribution is to make sure that this model of the theoretical law does not contradict the observations, and its use does not lead to serious errors. Improper use of statistical criteria leads to incorrect decision-making or unjustified rejection of the tested hypothesis. The lack of local practical software products for statistical analysis and data analysis in the market of scientific and technical products causes many problems in the analysis of the results of experiments in the socio-economic spheres. Firstly, using almost all of the available application software requires sufficient knowledge of mathematics and mathematical statistics. Secondly, these software products do not have the ability to make the necessary changes and edits for the researcher, and it is not possible to use the full capabilities of these programs. Currently, there are a number of statistical analysis programs used in world practice. Some of these programs are comprehensive, mainly, intended for a wide spectrum of statistical analysis, while some are intended to solve only certain issues. These systems provide a tool for solving various problems of statistical analysis. But the correct use of these systems depends on the skill of the user. The best used systems include arsenal classical methods of mathematical statistics. But the exact field of application of this arsenal differs in different applications. But the exact field of application of this arsenal differs in different applications. The conditions for applying statistical methods to problems that arise in practice are not fulfilled in many cases. For

example, non-fulfillment of the assumption that the measurement error obeys the normal law; the fact that the number of observations is limited limits the possibility of applying asymptotic results; the form of observations (grouped, censored, interval) does not allow the use of classical statistical evaluation and hypothesis testing methods; inability to propose criteria for testing complex hypotheses using analytical methods of mathematics, etc. Overall, in practice, many problems that cannot be solved by the mathematic mechanics of applied statistics.

Numerical methods and statistical modeling techniques promote the development of mathematical statistics as a "statistical software package - a tool of the researcher". But the statistical systems used are not considered tools for researching the validity of research. Therefore, in cases where it is not possible to determine research regularity using analytical methods, better results can be achieved using numerical methods. However, almost all software systems do not include research validation through these quantitative methods. It also requires sufficient training in mathematics and mathematical statistics to use most software systems. Therefore, it is important to create a system that is convenient for researchers conducting scientific research in socio-economic fields, that creates an opportunity to choose the most optimal of several statistical methods, and offers a high-accuracy approximate solution in cases where there is no exact solution. R, which is considered the most powerful statistical programming tool today, is widely used in software development. The existing library of R is edited and extended within the framework of the above tasks. The greatest strength of R is that it can be extended as desired using various packages. That is, iterative methods can be easily included in it.

**Conclusion and Recommendations.** Choosing the most correct and optimal statistical criterion based on the proposed technology and modeling, ensuring the minimum of type 1 and 2 errors when using this statistical criterion, distinguishing between competing hypotheses by statistical criteria, using calculation methods and statistical modeling, looking at computer technology as an instrument, studying the laws of mathematical statistics the tasks of clarifying the conditions for applying the exact theoretical results of mathematical statistics to the study, drawing not only asymptotic conclusions based on simulation, but also observing the changes in the regularity with the increase of the sample size are solved. As a result, correct conclusions are reached based on the results of research in socio-economic fields. It should be emphasized that obtaining statistical information quickly, collecting, recording, storing, and processing in a convenient form is a very time-consuming task, and high technologies are necessary here.

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## WRITING AS AN ASSET IN HUMAN DEVELOPMENT

Annotation

Writing as a skill to learn has always been one of the most challenging journeys. Yet, its significance has always appealed learners to pursue it throughout the world. Through the article we sought to explore the impact of social environment on learners' writing skills and the effect writing skills development on human cognition. In particular, we conducted 10 interviews with high-qualified, well-educated representatives of 10 different professions to study more about their writing skills, causes of writing skills development and advantages writing brings to their lives. Also, we tried to pursue if regular practice of writing as an activity can bring any changes into the society where people belong to. After thorough analysis, it was clear that writing is underrated as a medium to learn as only one fifth of the participants implement writing to be irreplaceable tool in the learning process. In addition, the results indicated that for developing writing skills social environment, including parents, teachers at schools, friends play an important role along with the occupation which requires regular writing practice. According to the majority in the experiment, writing activity contributes to the enhancement of social skills, attentiveness, and most importantly critical thinking. Eventually, the experiment demonstrated that regular writing practice influences positively within a social community, engaging the members in constructive reasoning, as well as preventing them from bad habits in their lives.

**Key words:** Writing, social environment, discourse community, genre, zone of proximal development theory, human cognition.

**Introduction.** In the century of modern technologies, writing skills play a huge role in people's communication. Given that, merely significant part of our interactions with individuals around us are the result of written activity. We write to socialize, to submit our academic assignments, to privately share our thoughts in a diary, write letters and emails for the job and so forth. As writing is helping us to express ourselves to the full, stand out in an academic community, serving as a plan for action, the demand for learning to write is colossal in the modern age [1].

However, mastering this skill requires long-term practice and well-delivered instructions. When the one has mastered writing skills skillfully, so many doors will open to his bright future, since writing is one of the major skills for excelling at any walk of life.

**Literature Review. Writing and social environment.** According to some scientists, social surroundings play a huge role in developing writing skills through communicating within the society. Andrew Kemp, for instance, in his scientific work cites Stone and Bell's view of writing as a means of communication. The researchers are sure that a competent writer is the one who will always take into account the surrounding environment and the context whereby the written language is being used. Otherwise, in the case of neglecting the surrounding background, the writer is bound to be misunderstood as if he/she is communicating in another language [2].

For a writer, being explicit is of paramount importance, since all the energy and other resources that he invests into his job is all aimed at being read, comprehended and accepted. Thus, for succeeding in the craft of writing, regardless of its styles, one has to keep in mind the circumstances, or the settings the written language is being produced in.

According to Chandrasegaran, writing is entirely a social activity as it is tightly bound to the society and the culture that surrounds this society. Thus, writing would not

exist without the life happening at a time, as written by Sami A. Al-asadi [3].

Indeed, writing is a product of our social interacting within a certain societal group with common beliefs, values and interests, where the writer, as a member of that group gains new source of ideas, language development specific to the group, and cultural aspects which are regarded specially there, such as traditions and customs particular to a certain ethnic group. Obviously, this is the stepping stone where one can be fully shaped as an individual, as a writer.

Kostouli, who claims that writing has, thereby, become an activity for social interactions deeply-rooted in us for many centuries so far, strongly believes that this is the reason why writing cannot be separated or evaluated in an isolate way from a discourse community and its genres, supported by Johns, who highlights the fact that changes in discourse and genre depend on community, as given credits in the work by Sami A. Al-asadi [3].

If we imagine the society where we live to be a playground, in it we learn what games exist, how to play them, what are the instructions or exceptions. Alike that playground where we choose what game to play and what toys we use for it, in the social environment which is divided into many discourse communities, it is us, human beings, who have a preference to a certain genre taking into account the interests of the community we live in. Hence, when analyzing a writer's work, it is crucial to learn what social backgrounds the writer has been surrounded by when growing up, as it must have had a huge impact on what he has written.

Anne Beaufort in her book implies that if people are willing to succeed in writing and thriving on the job, they should learn to socialize actively in the discourse community, ask questions, learn from more experienced ones, expose themselves to people, their explanations, discussions [4].

Steve Graham, in his article brings about "Writers-within-community" model based upon the belief that writing is the product of social interaction within a particular social community. The author agrees that writing is an act of

socialization which engages numerous people such as writers, their reading audience, associates or people working jointly on the writing project, mentors and teaching instructors, as he cites Hull and Schultz [5].

In the creation of a writing piece, multiple people make their contribution: one by being a source of inspiration; the other is by being a source of insights, ideas; the third one is by pointing at imperfections to be worked at. The writer in this situation is the observer and the depicter of what he sees and learns with the help of words.

What is practically a writing community? According to S. Graham it can be various as long as there is an educator of a specific writing task and learners. A school writing art club where school children learn the basics of writing, a writing club in the virtual world where young writers share their pieces of creation and exchange feedback, an establishment where a manager gives instructions to the trainees to how to shape a certain report, or a mother guiding her son to think up stories for entertainment purposes in a family settings [5].

This makes the whole writing activity a significant medium to share knowledge of any kind and with any purpose provided with interest learners have to learn it.

In the model of Writing-within-community put forward by S. Graham, the community ought to comprise at minimum one writer and one reader, to plan to reach a certain aim, whereby the piece of writing will serve as a medium of communication between the writer and the reader [5].

For instance, some members of the neighborhood may gather to practice some writing in order to write to the headmaster of a school asking for extra curriculum activities such as computing clubs or robotics club to operate at school for better children development.

In any case, regardless of how many people will read the writing piece: one or more, or none but the writer himself/herself, writing is a medium of communication and the writer plays a part of a reader of his/her own creation, as stated by S. Graham [5].

When people keep diaries, we communicate our thoughts and feelings to ourselves, as if listening and supporting ourselves as if a psychologist or a psychoanalyst is having a therapeutic session with us and guiding us through life problems. Intention to write in a diary is caused by the urge to express inner experience. Once a person has done some writing in the diary, he/she feels immediate relief, emotional stability.

The researcher, also, adds that an individual can be a member of more than one community where writing is practised regularly. Although there are different writing communities, they all have certain aspects in common. Sociocultural incentives as a stepping stone for a writing community, social settings, tools, actions, written products, purpose to write, members are among the peculiarities that are shared by all existing writing communities [5].

When people can belong to different writing communities, they have access to endless source of insights from like-minded individuals, enabling regular circulation and spreading of information among all members of communities. It is a good trend since it gives by far better prospects for the members to develop their writing skills and make the global community a better place to be.

In the scientific article by Nurfaidah S. Vygotsky's contribution to the world of education, to be more specific, developing writing in learners through Vygotsky's theory of Zone of Proximal development along with scaffolding in writing are discussed elaborately. Also, the author agrees with Lantolf and Storch about human cognition and that its development is guaranteed only when a person is socially active in the society where he/she is aided by the more knowledgeable person such as a teacher or a parent [6].

Like the author aforementioned, I cannot highlight more the influence parents and teachers have on young children at the very early stage of their lives. That is to say, in the first quarter of our lives, we, human beings should actively learn, since the rest of the life will very much depend on the quality of "treasure" we have accumulated: knowledge that we have gained, skills that we have mastered. In this long-term process, parents and educators, the more knowledgeable ones, are in charge of leading children through the way implementing all the wisdom they have managed to gain so far.

**Writing and human cognition.** As cited by Nurfaidah S., Vygotsky claims that what we think and what we speak is the most important result of awareness that we have as a human being, and subsequently, what we speak when think and see in our conscious mind to ourselves is writing as an end product. Hence, according to the writer, when we write, we learn our thoughts, evaluate them and refine them, that is to say, writing improves our language, us all in all through evaluation of writing activity at various times [6].

We can look at the act of writing in two ways: linguistically and globally. In the first case, a person who writes a lot, takes notes a lot, is prone to gain more information because human memory gets activated to analyze bigger chunks of knowledge, since the read and written information is the more repeated information. Subsequently, this can be a good way to learn languages as it requires constant repetition and active memory to master a language. According to Ronald T. Kellogg, well-trained writers who produce texts at advanced level, can use and manipulate their memory at a high level [7].

If we look at the writing process globally, we can observe not less compelling phenomenon. Writing, with the help of our thoughts, sets the stage for learning ourselves chronologically and enables us to trace our mental progress. We reach mental accuracy when we are less spontaneous which is attained via the process of writing. Organized thoughts are likely to lead to a more organized life on the whole. For example, writing can serve as a constant reminder for action for people who are dependent on inner drive or discipline to be more productive.

Fulwiler assumes it is through writing that human thoughts are visible and well-shaped, flexible, sophisticated and challenged, as cited by Akkaya A. and Aydin G. Also, the two researchers believe that academic writing serves as the most significant skill to solidify reasoning as well as it helps to depict the entire academic process lived through by researchers, from state of their mind or attitude towards the scientific problem, their experience, stage of learning through observation, the stage of applying new knowledge into practice or testing it, up to the finding a solution to the dilemma on scientific grounds [8].

When a person is involved in writing, he/she is more likely to read other people's works, to compare, to learn more. The more he/she reads, the more prominent writer he/she becomes. For example, when people do research, they read a lot of scientific publications, written by other researchers, where the readers learn the whole process of how the scientific work was been done in details and learn how to write scientific works themselves. This way researchers contribute the development of science by helping each other while writing enables the greatest exchange of information and knowledge among people.

Sami A. Al-asadi strongly advocates that instead of making the education process abstract and formal by just copying an authentic material, more attention ought to be drawn to make the classroom a place of collaboration where students are able to learn through inquiry-based method. He believes in such settings learners are likely to actively learn

how to reflect what they are going through successfully or having a barrier and finally build up their teamwork skills practising negotiation a lot. The author states these all eventually contribute to the development of reasoning skills, hence, critical thinking competence, as he joins Al-Hazmi’s view that in our modern age, learners are in need of learning how to shape a well-structured, evidence-based argumentation in their writing assignments [3].

In the modern academic life, as for doing well in the educational establishment, students are required to be able to write well-developed, thoroughly-supported compositions, I do agree with the researchers’ views above, about the teachers’ role. Teachers ought to organize student-centered environment in writing classes in the classroom where every single student should have their unique voice. When students are appreciated for their originality and not judged for not being able to fit the rules, they are more bound to sincerity about their thoughts, comprehension and progress. On top of that, unlike old times, it is appropriate for students to talk actively, communicate, learn from each other in the classroom. Because if they do not learn how to operate in a team, they are likely to have big trouble operating in by far bigger team in the future called society. They need to grow into smart critical thinkers who will bring prosperous meaning in the society they will live in.

Sami A. Al-asadi thinks cognition is activated while writing as it involves reasoning, mental activity to solve problems in the process such as generating ideas, organizing thoughts in a coherent and cohesive way in a fashion that it reaches the initial aim and communicates the thoughts to the reader explicitly by far earlier than shaping that all down in a written form. He also stresses the fact that the more an individual is engaged in writing actively, the smarter he/she gets in the disciplines he/she majors, as the writing activity enhances how to learn and how to question what they learn [3].

Apparently, human beings select a particular piece of information in mind, analyze it, shape it into the form of a sentence, before writing it down in the copybook. Hence, the whole process stimulates the cognition to operate actively and sharpen with regular writing practice, as the mental activity

becomes automatic. In the end, habitual writing act does contribute to the person’s cognitive development.

L.Mondada and K.Svinhuvud in their work imply on the interrelation of text production and problem-solving skills. That is to say, the more complex is the text one is capable of producing, the more skillful and creative he/she is at solving problems [9].

As writing is a mental process demanding creativity and contemplation, it is logical to assume that composing every sentence, paragraph or article is already a task that needs its solution or execution. Through regular writing there is a likelihood of developing high-level inventiveness and imagination.

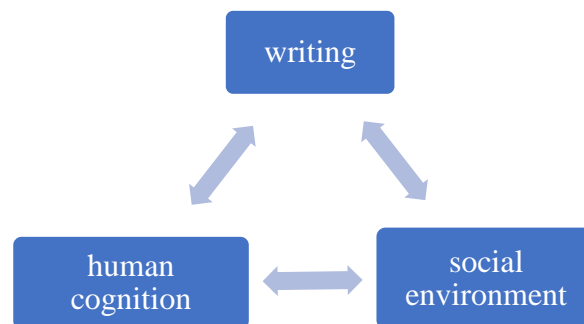
Members of the Cognitive Studies center L. Flower and J. Hayes have developed a model of the cognitive process of writing processes, whereby the researchers divided the whole writing creation process into three main stages: with the knowledge and long-term memory that the writer has, the writing generation, namely planning and setting goals in the first stage; translating in the second stage, reviewing, assessing and revising the ready written work is the final stage, as cited in the scientific work by Martin Nystrand. Here the author implies that writing is a long-term mental practice that demands active memory, complex mental production of thoughts, thoroughly planned into logical units [10].

The more one has writing practices the sharper his/her mental ability gets.

Also, researchers Schunk and Zimmerman claim that regular practice of writing enhances self-regulated learning in individuals which is based on social-cognitive theory and socio-cultural theory and is undergone through observation of social environment and human interactions, as cited by Ch. M. Stapleton et al [11].

Through writing people are likely to activate cognitive energy to develop discipline, ability to adhere to the plan and self-monitoring their actions in the task accomplishment. Self-regulated learning requires by far more mental output when dealing with an assignment.

**Methods.** A qualitative approach was implemented in the given scientific investigation. This method enables the researcher to gain information about the interrelationship of social environment-writing-human cognition.



There were 3 main questions we were intending to find answers to:

- 1.How does social environment influence a person’s writing skills?
- 2.How does writing practice stimulate human cognition?
- 3.Does regular writing practice influence on the social environment? If, yes, in what ways?

**Experiment.**

The experiment was carried out in the form of short interviews with 10 well-educated people from different walks of life who practice writing on a regular basis. Before the experiment a questionnaire was designed with 10 questions to ask from the participants.

The questions	1.What is writing to you? What do you usually write?
	2.What factors played a great role in your writing development?
	3.Did school impact anyhow on your early writing development?
	4.Have your parents or friends ever given inspiration to write?
	5.Have you taken workshops and training courses to develop your writing skills?
	6.Has writing ever contributed in your learning ability? In what ways?

7. How did writing change your life? (academic and professional)
8. Would you encourage younger generation to practice more writing? Why?
9. Do you think regular writing activity can change the social environment we are surrounded by? How?
10. Do your family members, friends and colleagues practice regular writing too? If yes, why?

**Data collection.** The interviews were held at the same location, the campus of National University. Although the participants were representatives of different fields, they all had one thing in common: they were all employed by the university. They were all involved in teaching and scientific research. Among them there were a philologist, a book writer, a translator, a historian, a biologist, a chemist, a physicist, a mathematician, an economist and a journalist-reporter.

As we planned, we interviewed 10 people within 3 weeks. All the interviews were recorded for further elaborate investigation. Further, it took us 3 weeks to analyze the data collected during the interviews.

**Result and Discussion.** According to the findings from the first five questions which were asked to learn whether social environment impacts on writing skills of an individual, the participants responds were different. To the first question all participants answered that writing is the ability to express their thoughts and ideas. According to the

journalist who participated in the experiment, practicing writing is similar to doing a mathematical equation. When she composes a writing piece with the right language pieces, accurately delivering the thought or idea, she felt a sense of accomplishment. Also, for the book writer and the philologist, writing means keeping a diary, or a bullet-proof journal to write important thoughts, plans and highlights. To the follow-up question of what they usually write: everyone included scientific articles, since they are all pursuing a university career, along with distinguishing writing activities practiced by the participants such as emails, diaries, economic reports and magazine articles. Among the researcher participants, the translator, the economist, the mathematician and the journalist were fully satisfied with their scholarly writing skills.

Since the aim of the questions 2, 3, 4 and 5 was to find out the exact source of social environment that contributed to writing development of the participants, we decided to illustrate the collected data in the form of a table below:

How the representatives of different spheres developed their writing skills in the social environment					
Participants	The impact of parents	Friends' role	The role of school	workshops, clubs and training courses	Workplace (professional requirements)
A philologist	+	+	-	+	+
A book writer, a poetess	+	-	-	+	+
A physicist	-	-	+	-	+
A translator	-	-	-	+	+
An economist	+	-	-	-	+
A chemist	-	-	-	-	+
A journalist-reporter	-	+	+	-	+
A historian	+	-	+	-	+
A biologist	+	+	+	+	+
A mathematician	-	-	+	-	+

As can be noted from the chart, only the biologist acknowledged all the sources that paved a road for her writing development, while the least satisfied with social condition that they had for successful writing development were the chemist and the mathematician. They both stated that schools were not as engaging as they wished and that writing classes were not conducted at a high level. In the interview with the journalist, we learned that she played games with her friends at school, that involved writing, and that school was a great motivation for her writing practice. Reading books, fiction and non-fiction, was the greatest impact in developing writing skills, as mentioned by the book writer, the journalist, the economist and the mathematician. According to the 50% of participants school does not give sufficient attention to develop writing skills of children and they wished more insights, assignments and guidance from the school teachers for children's writing development. 40% of the participants admitted workshops they attended which helped them to enhance their writing skills, where they learned how to write academic essays, reports, formal letters and scientific articles. The historian and the economist believed internet would suffice as a great source to gain knowledge in their sphere. In the journalist's case, she was inspired to become a more active writer because of a writing club she has never been a member of. She knew what sort of a writing club it was as she had to prepare a report once and observed one class; ever since she thought writing to be an exciting activity. The book writer

claimed she had attended an online course where she was lectured about academic writing.

To the questions "Has writing ever contributed in your learning ability? In what ways?" only 20% of the participants responded positively. Among them there was the book writer who believed firmly that it is only through note taking that she learns everything, that she has to pass through the information through her pen and copybook to remember it in mind for a long time. Another candidate who considered writing to contribute her general learning skills was the journalist who asserted that for her sophisticated spoken language she owes a lot to writing practice for stand-up reports that she has been involved for more than a decade. The others firmly uttered that they sharpened their learning skills with input skills, especially through reading a lot. It is obvious that writing is not given much attention as a means of learning.

The next question, "How did writing change your life?" was answered highly ambitiously by the book writer. Indeed, for her writing skills, for her poems that she has composed and for her active social performance at university she was awarded the most prominent award for writers of Uzbekistan - "Zulfiya", as she states. The journalist also added that writing a lot made her become more of an observant, more attentive before she writes, she looks at details before she describes. The others' responses were more or less the same: they were all of the opinion that writing helped them to access to the literature of various kind, create their own

writing compositions for various purposes, such as scientific articles, reviews and other academic assignments.

Subsequently, the participants were asked if they would encourage younger generation to practice more writing? All 100% answered positively, giving reasons such as writing is useful for self-discipline; through writing children can become interested in more reading; writing practice can improve creative thinking and others. Though the journalist clarified one thing about writing: she said “writing is good when it is precise, not long and wordy, as wordiness causes irritation in readers, especially in social networks.” In addition, the philologist along with the historian asserted that the more people write the better social skills they have.

To the following questions “Do you think regular writing activity can change the social environment we are surrounded by? How?” The philologist and the biologist among all the other participants were the most positive about the change in the society. Namely, the more people write, the better, more well-read community is shaped around, they believe. For example, they state, society who write and read will rarely be involved in bad habits and crime; they will be busy with constructive ideas. The book writer, the chemist, the translator also added the role of an early educator, be it parents or kindergarten teachers should arouse interest in children

towards early writing practice. “The earlier, the better effect”- added the chemist.

To the final questions: “Do your family members, friends and colleagues practice regular writing too? If yes, why?” all the participants responded affirmatively. Their spouses and children are involved in education all the time, according to them. The former ones are engaged in scientific research, whereas the latter ones are school children or students at university and submit academic assignments.

**Conclusion.** On the whole, we found out answers to the 3 questions we initially put forward before the experiment. Firstly, social media plays a great role in the enhancement of human writing skills, especially, occupation which requires writing practice can encourage increase in interest towards writing or learning to write. On top of that, parents’ and school’s contribution at the young age of learners is colossal. Thus, more attention ought to be given by them to the writing skills development of young generation. Secondly, through regular writing practice, people better off creative thinking, develop better learning skills, foster analytical skills through observations and finally they become better communicators. Thirdly, through writing more and in a better way, namely when busy with constructive mind, people can improve the society, who will have creative, talented people with no harm and only good intentions to others surrounding them.

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## ОБ АКТУАЛЬНЫХ НАПРАВЛЕНИЯХ И ПЕРСПЕКТИВАХ СОТРУДНИЧЕСТВА ИСТОРИЧЕСКОГО ФАКУЛЬТЕТА НУУЗ ИМЕНИ МИРЗО УЛУГБЕКА С НГУ И ТГУ

Аннотация

В статье анализируется межвузовское сотрудничество исторического факультета НУУз имени Мирзо Улугбека с ведущими ВУЗами Сибири (Российская Федерация): входящим в Топ-500, согласно Центру рейтингов университетов мира (CWUR) Новосибирским Государственным Университетом и входящим в Топ-1000 Томским Государственным Университетом.

**Ключевые слова:** Межвузовские связи, инновации, публикации, консорциум, образовательные проекты, российско-узбекское сотрудничество, академическая мобильность, перспективные планы

**Введение.** Узбекистан с 2017 г. ставит перед собой цели повышения охвата молодежи высшим образованием и улучшения его качества, что прописано в таких документах, как постановлении Кабинета Министров Республики Узбекистан «О мерах по созданию эффективных механизмов внедрения научно-инновационных разработок и технологий в производство», «Стратегии действий Республики Узбекистан 2017–2021 гг.», «Стратегии развития Нового Узбекистана на 2022–2026 годы», а также в «Концепции развития науки до 2030 г.», «Концепции развития системы высшего образования Республики Узбекистан до 2030 г.», которые являются методологическими и целеустановочными.

В соответствии с заявленными в его стратегических документах целями, Узбекистан включился в процесс интернационализации высшего образования. Последняя предполагает внедрение международной практики в учебную и внеучебную жизнь вузов, включая развитие академической мобильности и внедрение в учебные планы дисциплин, развивающих навыки межкультурного общения и прививающих понимание глобальности современного мира [1]. Интернационализация, как предполагается, поможет Узбекистану модернизировать свою систему высшего образования в соответствии с запросами современного мира. Поскольку в такой трансформации важен опыт других стран и регионов, одним из способов интернационализации высшего образования Узбекистана стало развитие научно-образовательных связей с университетами России. Это сотрудничество сегодня происходит путём учреждения филиалов, совместных факультетов и образовательных программ, а также развития академической мобильности.

В последние семь лет растёт количество узбекских студентов в российских вузах: с 21 тыс. (2016 г.) до 57 тыс. (2022 г.) [2]. Увеличивается и число филиалов российских вузов в Узбекистане: на начало 2023 года их 14 и ещё 7 планируется открыть [3]. Вдобавок, более 4,5 тыс. мест доступны студентам из Узбекистана на совместных образовательных программах с российскими вузами. Эти обстоятельства создают основу для дальнейшего научно-образовательного взаимодействия между странами.

**Методология исследования.** На основе анализа информации из открытых источников – официальных

сайтов [4, 5], официальных страниц в социальных сетях и мессенджерах (VK, Telegram, Facebook), принадлежащих НУУз имени Мирзо Улугбека, Новосибирскому государственному университету и Томскому государственному университету, – был составлен перечень научно-образовательных мероприятий, в которых указанные вузы выступали со-организаторами или участниками. Затем были оценены результаты каждого отобранного мероприятия с точки зрения развития российско-узбекского сотрудничества и на их основе даны рекомендации по развитию взаимодействия.

**Анализ и результаты.** Последовательно и динамично развиваются связи Исторического факультета Национального университета имени Мирзо Улугбека и Гуманитарного института Новосибирского Государственного Университета в рамках реализации Меморандума о взаимопонимании от 18.08.2018 г.

1 ноября 2018 г. в Новосибирском государственном университете прошла VIII Международная научно-практическая конференция «Коммуникативная культура: история и современность. Сессия: Культурно-историческое наследие в социальных коммуникациях», в работе которой активное участие приняли преподаватели НУУз имени Мирзо Улугбека. Результатом работы конференции стало подписание Соглашения о сотрудничестве с Историческим факультетом НУУз № 16 от от 28.03.2019 г. в рамках работы Консорциума исследователей истории стран Северной и Центральной Азии [6].

Гуманитарный институт НГУ провел 1 ноября 2019 г. IX Международную научно-практическую конференцию «Коммуникативная культура: история и современность. Трансмедийные компетенции в гуманитарных средах». Конференция проводилась в рамках Международного научного форума «Наследие, при участии коллег из НУУз имени Мирзо Улугбека [7].

В 2020 году увидела свет первая коллективная монография представителей двух ВУЗов «Очерки по истории государственности: политика, экономика, культура». Монография является результатом совместной работы узбекистанских и российских историков, археологов, культурологов, востоковедов в рамках деятельности Консорциума исследователей стран Северной и Центральной Азии [8].

В течение 2021/2022 учебного года на регулярной основе профессорско-преподавательский состав исторического факультета НУУз имени Мирзо Улугбека читал лекции и проводил мастер-классы для студентов Гуманитарного института НГУ. В частности, лекции прочитали академик А.С. Сагдуллаев, профессор О.П. , доцент А.Б. Халикулов, к.и.н. И. Шакиров.

18 октября 2022 года на Историческом факультете был проведен Международный научно-практический круглый стол «Актуальные направления межвузовского сотрудничества в гуманитарном направлении». Докладчики: проф. А.С. Зуев, академик А.С. Сагдуллаев, доценты Белица Т.И. и Халикулов А.Б. охарактеризовали итоги и перспективы международного сотрудничества; рассмотрели вопросы, связанные с практической реализацией академического обмена студентами, разработкой совместных спецкурсов и цифровизацией системы гуманитарного образования.

В состав редакционной коллегии журнала «Вестник НГУ. Серия: История. Филология», выпуск «Востоковедение» с 2022 года введена профессор исторического факультета НУУз имени Мирзо Улугбека О.П. Кобзева. Журнал индексируется в библиографической и реферативной базе Scopus и имеет квартиль 1[9].

Директор Гуманитарного института НГУ профессор А.С. Зуев с 2023 года является членом редколлегии узбекистанского научного журнала «Актуальные исследования»[10].

В 2023 году историками НУУз имени Мирзо Улугбека совместно с новосибирскими учеными к печати подготовлена вторая коллективная монография «Историко-культурные процессы в Сибири и Центральной Азии в древности и Средневековье». Ее авторами стали не только профессора Гуманитарного института НГУ, но и их коллеги из Сибирского Отделения РАН России и НИУ Высшая школа экономики в Санкт-Петербурге и т.д.[11].

18 сентября – 17 ноября 2023 г. Гуманитарный институт Новосибирского государственного университета проводит IV Международный научный форум «Наследие». Одной из целей форума является актуализация историко-культурного наследия и популяризация достижений исторической науки.

В 2023 г. форум будет посвящен нескольким памятным датам и знаковым явлениям: 150-летию со дня рождения М. М. Пришвина, 150-летию со дня рождения С. В. Рахманинова, 300-летию Петербургского договора с Персией, объявлению 2023-го года Годом педагога и наставника. Последнее особо актуально и для Узбекистана, так как 2023 год провозглашен в республике «Годом заботы о человеке и качественного образования». Профессора и преподаватели исторического факультета НУУз имени Мирзо Улугбека собираются принять активное участие в научно-практических конференциях «Актуальные вопросы изучения истории, международных отношений и культур стран Востока» (6–7 октября) и «Преподавание социогуманитарных дисциплин в высшей школе» (27 октября).

Соорганизатором форума выступает Консорциум исследователей истории Северной и Центральной Азии. В программный комитет форума вошли преподаватели исторического факультета НУУз имени Мирзо Улугбека: академик А.С. Сагдуллаев, профессора А. Г. Муминов и О.П. Кобзева[12].

В рамках общей тенденции развития образовательного сотрудничества между Узбекистаном и Россией развивается и взаимодействие Национального университета Узбекистана имени Мирзо Улугбека с Национальным исследовательским Томским государственным университетом (ТГУ). Национальный

университет Узбекистана стал участником Университетского консорциума исследователей больших данных, работа которого координируется Томским государственным университетом[13]. Действует совместная бакалаврская программа по Информационной безопасности, реализуемая Институтом прикладной математики и компьютерных наук ТГУ и Факультетом прикладной математики и интеллектуальных технологий НУУз.

Становятся регулярными совместные мероприятия. Например, Факультет исторических и политических наук ТГУ совместно с Историческим факультетом Национального университета Узбекистана имени Мирзо Улугбека 10 июля 2020 г. участвовали в организации Международного круглого стола «Совместные образовательные проекты в контексте российско-узбекского сотрудничества» в онлайн формате.

ТГУ, НУУз и СамГУ были организаторами международного круглого стола «Историческая память о Великой Отечественной войне в российско-узбекском общественном диалоге», который прошёл в онлайн-формате 26 мая 2021 г. 29 ноября 2021 г. эксперты обоих вузов выступили на совместном Международном круглом столе «Русский язык как фактор развития российско-узбекского диалога».

24 октября 2022 г. в рамках визита делегации ТГУ в Национальный университет Узбекистана прошёл совместный Международный круглый стол «Взаимоотношения Республики Узбекистан и Российской Федерации в культурно-гуманитарной сфере на современном этапе». В ходе мероприятия была достигнута договоренность о проведении совместных исследований об особенностях научно-образовательного сотрудничества Узбекистана и России. В результате реализации проекта планируется публикация трёх совместных статей в журнале Вестник ТГУ. История, а также электронных аналитических докладов на сайте Центра евразийских исследований ТГУ. Декан исторического факультета НУУз профессор А. Г. Муминов вошёл в редакцию этого журнала, который индексируется в Web of Science[14].

В апреле 2023 года представителями ТГУ и НУУз имени Мирзо Улугбека был опубликован первый совместный аналитический доклад на сайте Центра евразийских исследований ТГУ[15].

В 2022 году была опубликована монография «Из истории изучения Туркестанского края российскими востоковедами второй половины XIX – начала XX века». Ответственным редактором монографии, изданной по итогам научно-практической конференции, приуроченной к памятной дате выдающегося востоковеда А.Э. Шмидта (1871–1939 гг.) стал Юн С.М. – к.и.н., доц., заведующий кафедрой «Мировой политики» Факультета исторических и политических наук, руководитель Центра евразийских исследований Томского государственного университета. В монографии на основе изучения уникальных источников и ранее не опубликованных архивных материалов, наряду с актуальными вопросами истории и культуры Туркестанского края, изучается жизнь и деятельность выдающихся востоковедов второй половины XIX–начала XX вв., а также их вклад в сохранение исторического наследия [16].

**Заключение и рекомендации.** Говоря о планах сотрудничества Исторического факультета НУУз имени Мирзо Улугбека с НГУ и ТГУ необходимо обозначить следующие перспективные направления взаимодействия:

1. Продолжение давших положительный научно-образовательный эффект чтения лекций и проведения мастер-классов онлайн и оффлайн;

2. Академические обмены (преподавателями, студентами). Подготовка и проведение Летних школ и ознакомительных практик для студентов гуманитарных направлений НГУ и ТГУ;

3. Обмен научной и учебной литературой, в том числе, путем размещения ее в свободном доступе на образовательных онлайн платформах ВУЗов. Подготовка коллективных учебников и учебных пособий;

4. Продолжение совместных научных публикаций с НГУ и запуск Серии научно-исследовательских публикаций по истории высшего образования с ТГУ; Совместные публикации в журналах, индексируемых в Scopus и Web of Science.

5. Разработка и реализация совместного гранта по актуальной тематике, например, цифровизации в учебном процессе ВУЗов.

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### LINGUA-COACHING AS A NEW APPROACH TO TEACHING ESP

Annotation

This article is about the implementation of lingua-coaching as a new approach to language learning, specifically in ESP classes. The experimentation of different methods was conducted to analyze and evaluate the effectiveness of lingua-coaching. Additionally, the article provides a theoretical explanation of the coaching concept.

**Key words:** Lingua-coaching approach, lingua-coach, mentoring.

**Introduction.** Lingua-coaching is a modern approach in foreign language education that is becoming increasingly popular in the 21st century. It aids ESP students in achieving specific objectives and improving their professional outcomes by utilizing their inner potential, implementing advanced strategies to achieve desired outcomes, and developing the necessary abilities and skills.

The concept of lingua-coaching as a unique style of learning interaction did not emerge abruptly in English-speaking countries. It evolved from the integration of innovative concepts from mentoring, business advising, psychological counseling, and even psychotherapy [1].

To be a lingua-coach involves establishing a simple and supportive relationship with someone, which helps them achieve success in both their personal and professional life. This relationship empowers the individual to actively listen and understand others, and develop empathy towards them.

**Literature Review.** According to Warren G. Bennis, a leading expert on leadership, a lingua-coach should be an observant and attentive individual [2]. As a leader, a lingua-coach should be aware of the learner's context and help them see their journey in a new light. Even if the coach is not an expert in the learner's field, they rarely provide advice, but instead ask appropriate questions to help the learner find solutions to difficult problems. It's important not to confuse the role of a manager with that of a lingua-coach. A manager gives directives to promote the organization's interests, while a lingua-coach directs the individual's interests by maintaining insight to help them grow. In short, the role of a lingua-coach is to reflect reality and clearly understand how they are influencing others[3].

The use of technology has been and continues to be a valuable tool for personal and professional development, allowing people to learn new skills and achieve great success

in their lives. By using this technology, personal and corporate goals have become more focused and consistent [4]. Although it may be costly, it is believed to be an effective way of achieving concrete results and gaining recognition in Uzbekistan.

**Research Methodology.** A pedagogical experimental research was conducted involving a total of 20 ESP (English for Specific Purposes) instructors from universities including National University of Uzbekistan and Kimyo International University of Tashkent. The research concludes that the concept of "method" is multidimensional, and therefore, each teaching method should be designed by the teacher based on their individual circumstances.

Various methods are often combined and interact with each other, characterizing the relationships between teachers and students from different perspectives [5]. During the realization of implementing lingua-coaching approach there were applied several research methods, such as experimental, case study, introspection, observation and survey on the base of teaching methods including the method of specific situations, the method of emotional stimulation of learning, the method of creating a situation of cognitive dispute, 'mosaic' and the method of projects.

**Analysis and Results.** Students were selected from two universities, which included three faculties - history, mathematics, and biology from the National University of Uzbekistan, and Kimyo International University of Tashkent. The knowledge of students were assessed through oral, written, and practical tasks in the experimental and control groups

To determine the level of English of the ESP students, we conducted a placement test using integrated skills, as well as grammar and vocabulary. This helped us determine if their level of English was A1, A2, or B1.

**Table 1**  
The overall results of the experimental and control groups at the initial stage (National University of Uzbekistan and Kimyo International University of Tashkent)

№	Experimental group				Control group			
	Total number of students	A1	A2	B1	Total number of students	A1	A2	B1
History								
1	44	15	20	9	46	18	18	9
Mathematics								
2	43	18	20	5	42	16	23	3
Biology								
3	41	25	14	2	43	23	17	3
Total	128	58	54	16	131	57	58	15

**Table 2**  
The overall results of the experimental and control groups at the final stage (National University of Uzbekistan and Kimyo International University of Tashkent)

№	Experimental group				Control group			
	Total number of students	A1	A2	B1	Total number of students	A1	A2	B1
History								
1	44	7	24	13	46	15	24	7
Mathematics								
2	43	8	24	11	42	14	26	2
Biology								
3	41	10	23	8	43	21	15	7
Total	128	25	71	32	131	50	65	16

**Table 3**  
Results of an experimental and control groups of National University of Uzbekistan and Kimyo International University of Tashkent

Results of an experimental group	$X_i$	B1	A2	A1	Total number of students
		$n_i$	32	71	25
Results of a control group	$Y_j$	B1	A2	A1	Total number of students
	$m_j$	16	65	50	$m=131$

Based on the provided choices, we create a record of how the students progress over time.

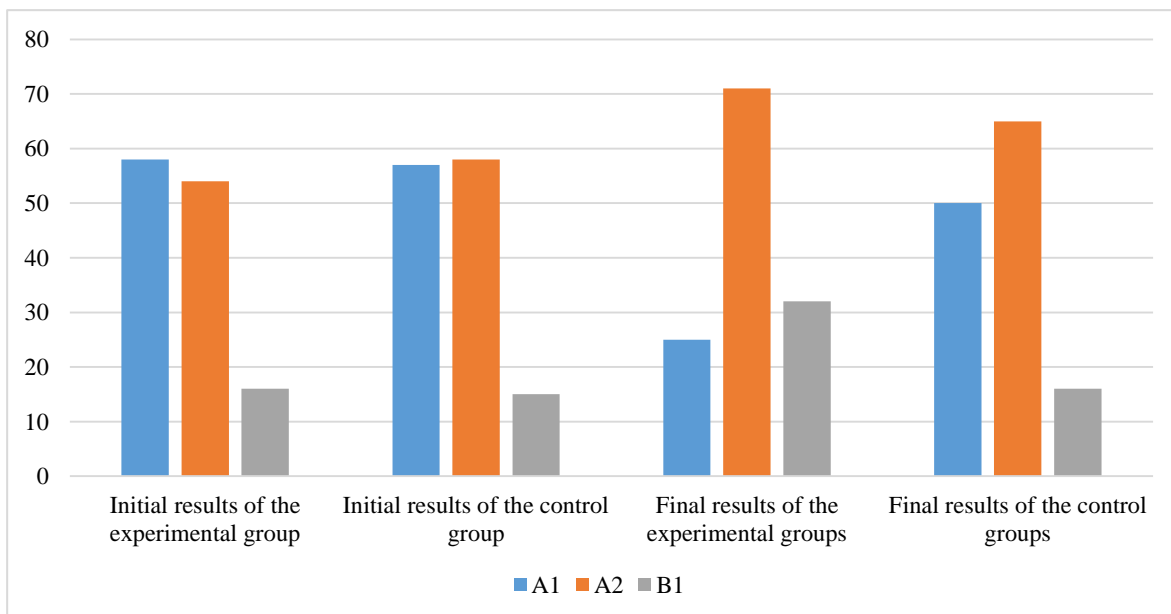


Fig. 1 Dynamics of students development in National University of Uzbekistan and Kimyo International University of Tashkent

According to the results of Table 2 we can conclude that the average value for the options  $X > Y$  satisfied the conditions. In order to find the average value, we applied the following formula

$$X = \frac{1}{n} \sum_{i=1}^3 niXi = \frac{1}{128} (32 \cdot 5 + 71 \cdot 4 + 25 \cdot 3) = \frac{1}{128} (160 + 284 + 75) = \frac{519}{128} = 4.0546875 \approx 4.1$$

$$Y = \frac{1}{m} \sum_{j=1}^3 miYj = \frac{1}{131} (16 \cdot 5 + 65 \cdot 4 + 50 \cdot 3) = \frac{1}{131} (80 + 260 + 150) = \frac{490}{131} = 3.74045802 \approx 3.7$$

From these calculations, it is apparent that the learning rate of learning of the experimental group is higher than the control group.

Variation coefficients are calculated for both experimental and control groups. For this, sample variance is required

$$D_n = \sum_{i=1}^3 \frac{n_i(x_i - X)^2}{n-1} = \frac{160(5-4.1)^2 + 284(4-4.1)^2 + 75(3-4.1)^2}{128} = \frac{160 \cdot 0.81 + 284 \cdot 0.01 + 75 \cdot 1.21}{128}$$

$$\frac{129.6+2.84+90.75}{128} = \frac{22.319}{128} = 1.7436 \approx 1.7$$

$$D_m = \frac{\sum_{j=1}^3 \frac{m_i(y_i - \bar{Y})^2}{n-1}}{\frac{27.04+5.85+24.5}{131}} = \frac{\frac{16(5-3.7)^2 + 65(4-3.7)^2 + 50(3-3.7)^2}{131}}{\frac{16 \cdot 1.69 + 65 \cdot 0.09 + 50 \cdot 0.49}{131}} \approx 0.4$$

From these results, we find standard deviation

$$\tau_n = \sqrt{D_n} = \sqrt{1.7} \approx 1.3; \quad \tau_m = \sqrt{D_m} = \sqrt{0.4} \approx 0.6$$

On the basis of these results, the index variation is calculated for experimental and control groups

$$\delta_n = \frac{\tau_n}{X} = \frac{1.3}{4.1} \approx 0.3; \quad \delta_m = \frac{\tau_m}{Y} = \frac{0.6}{3.7} \approx 0.2$$

From these calculations we find the level of statistical significance

$$\alpha = \delta_m - \delta_n = 0.2 - 0.3 = 0.1$$

Statistics from the Laplace function table for  $\alpha=0.1$ , critical point  $t_{kn}$  from the equality we determine

$$F(t_{kn}) = \frac{1-2\alpha}{2} = \frac{1-2 \cdot 0.1}{2} = \frac{0.8}{2} = 0.4$$

$$t_{kn} = 1.29$$

Reliable deviations of the assessment in the experimental group are equal to,

$$\Delta_n = t_{kn} \cdot \frac{D_n}{\sqrt{n}} = 1.29 \cdot \frac{1.7}{\sqrt{128}} = 1.29 \cdot \frac{1.7}{11.3} = \frac{2.193}{11.3} \approx 0.2$$

While the control group's

$$\Delta_m = t_{kn} \cdot \frac{D_m}{\sqrt{m}} = 1.29 \cdot \frac{0.6}{\sqrt{131}} = 1.29 \cdot \frac{0.6}{11.4} = \frac{0.774}{11.4} = 0.06$$

From the results, the reliable interval for the experimental group is

$$X - t_{kn} \cdot \frac{D_n}{\sqrt{n}} \leq \alpha_x \leq X + t_{kn} \cdot \frac{D_n}{\sqrt{n}}$$

$$4.1 - 0.2 \leq \alpha_x \leq 4.1 + 0.2$$

$$3.9 \leq \alpha_x \leq 4.3$$

For the control group is

$$Y - t_{kn} \cdot \frac{D_m}{\sqrt{m}} \leq \alpha_y \leq Y + t_{kn} \cdot \frac{D_m}{\sqrt{m}}$$

$$3.7 - 0.06 \leq \alpha_y \leq 3.7 + 0.06$$

$$3.69 \leq \alpha_y \leq 3.76$$

The degree of value of the statistical sign, that is  $\alpha=0.1$ , it can be said that the performance of the experimental group is higher than the control group.

On the basis of the results of the calculations, we calculate the effective indicator. According to the calculations  $X=4.2$ ;  $Y=3.7$ ;  $\delta_n=0.3$ ;  $\delta_m=0.2$ . From these, the indicator of effective training is

$$K = \frac{(X - \delta_n)}{(Y + \delta_m)} = \frac{4.1 - 0.3}{3.7 + 0.2} = \frac{3.8}{3.9} \approx 1 > 0$$

And we calculate the degree of cognition by the following formula

$$K = (X - \delta_n) - (Y - \delta_m) = (4.1 - 0.3) - (3.7 - 0.2) = 3.8 - 3.5 = 0.3 > 0$$

According to the results of the calculation, the assessment criterion of effective training and the degree of cognition is higher than zero. From this, it can be said, the indicators of the experimental group is higher than the control group.

Based on the formula of the average value, we calculate the results in the percentages

$$P = \frac{X}{3} \cdot 100\% - \frac{Y}{3} \cdot 100\% = \frac{4.0546875}{3} \cdot 100\% - \frac{3.74045802}{3} \cdot 100\% = 135.15625 - 124.6819 = 10.5\%$$

From this calculation, it became clear that the results of the experimental group increased by 10.5% compared to the control group.

**Conclusion/Recommendations.** The hypothesis presented was found to be effective based on the results of calculations from the four universities. It is recommended to use a lingua-coaching approach to teach ESP. During the experiment, various coaching tools were employed, providing students with opportunities to discover their potential and inner resources while staying motivated. The tasks given to the students not only increased their self-confidence but also stimulated them to work independently. Therefore, integrating coaching tools in a lingua-coaching approach has numerous benefits, including eliminating monotony in the teaching process and making lessons more engaging.

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## XIX-XX ASRLARDA O'ZBEKISTON MAHALLALARINING RIVOJLANISH TARIXI

АННОТАЦИЯ

Ushbu maqolada, muallif XIX-XX asrlarda O'zbekiston mahallalarining rivojlanish tarixi yoritilgan bo'lib, mahalla institutining jamiyat xayotida tutgan o'rnini va ahamiyatiga e'tibor qaratilgan. O'zbek xonliklari, Rossiya imperiyasi, Sobiq Ittifoq hamda mustaqillik davrida mahallalarning shakllanish va rivojlanishi ilmiy jihatdan tushuntirib berishga xarakter qilingan. Bundan tashqari mahallalarning shakllanishida shaharlar va qishloqlarning va dahalarining ta'siriga ham ahamiyat berilgan. Mustaqillik yillarida mahalla o'zining azaliy nufuzi va obro'siga ega bo'lganligi izohlangan. O'zbekiston milliy mustakilligining qo'lga kiritilishi natijasida, mahalladek an'anaviy tuzilmaning vakolat doiralari yana qayta tiklanishiga imkon yaratilganligi ta'kidlab o'tilgan.

**Kalit so'zlar:** mahalla, fuqarolar, tarix, jamoa, oqsoqollar, arxeologik, umumxalq, oliy ta'lim, ma'naviyat, qo'ni-qo'shni, qon-qarindoshlik, shahar, aholi, evolyusiya, sotsiologiya.

**Kirish.** Zamonaviy taraqqiyot davrida aholini boshqarish va uning ijtimoiy-iqtisodiy muammolarga ko'maklashuvchi mahalla institutining ahamiyati beqiyosdir. Shu o'rinda ushbu mavzuni o'rganishda sotsiologik tahlil qilish usullari bilan yoritib berish ishning amaliy jihatlarini oshiradi. O'tmishda mahallalardagi aholi soni va xonadonlar xususidagi ma'lumotlar ham yanada e'tiborlidir.

So'nggi o'rta asrlar, xususan, XIX asr oxiri XX asr boshlarida O'rta Osiyo shaharlaridagi har bir mahallada 50-150 tagacha 13, ba'zan 200-250 [1] tagacha xonadon bo'lgan va ular anchagina tig'iz joylashgan.

- **Mavzuga oid adabiyotlarning tahlili (Literature review).** Shahar markaziga yaqin mahallalarda aholi uning atroflaridagi mahallalarga qaraganda nisbatan tig'iz joylashganligi tadqiqotchi X.Bo'riyeva tomonidan ham qayd qilinadi. [2] XIX asr oxiri - XX asr boshlariga oid N.A. Mayevning "Азиатский Ташкент" maqolasida Toshkentning Eski shahar qismida o'sha davrga taalluqli mavjud mahallalar haqida ma'lumotlar uchraydi. Mazkur asarning 1-, 5-, 4-boblarida Eski shahardagi dahalar haqida ma'lumotlar keltirilgan. Ayrımlari haqida tafsilotlar ham yozilgan. Jumladan, bular Shayxontoxur, Sebzor, Ko'kcha, Beshyog'och dahalaridir. [3]

Odatda, dahalar mahallalarga bo'linib, u yerda masjidlar, madrasa va maktablar ham bo'lgan. Jumladan, XIX asrning so'nggi choragida Toshkent shahrining Shayxontohur dahasida 60 ta masjid, 10 ta maktab, 5 ta madrasa; Sebzorda 10 ta masjid, 3 ta madrasa; Ko'kchada 51 ta masjid, 34 ta maktab, 2 ta madrasa; Beshyog'ochda 68 ta masjid, 16 ta maktab, 3 ta madrasa bo'lgan. [4]

Shaharlarda qishloqlardan farqli ravishda mahallalar bir necha qismlarga yoki ko'chalarga, katta ko'chalar esa nisbatan kichikroq ko'chalar va tor ko'chalarga bo'lingan. Ko'chalarga odatda, ularning katta-kichikligiga qarab (Katta ko'cha), mahalla nomi bilan (Qoratosh ko'cha, O'qchi ko'cha), shu ko'chada yashagan biror taniqli shaxs nomi bilan (Murod ko'chasi, Hazrati Imom ko'chasi), shahardan qaysi tomonga qarab chiqilishiga ko'ra (Parkent yo'li, Qo'qon yo'li, Zangiota yo'li, Chimkent yo'li), joy relesining tuzilishiga qarab (Pastko'cha, Balandko'cha, Jarko'cha), shu ko'chadagi biror mashhur joy nomi bilan bog'liq (Eski Namozgoh ko'chasi) yoki kasb-hunar bilan bog'liq (Parchabo Degrezlik,

Etikdo'zlik) kabilar tarzida berilgan. 1927 yilda Toshkentning Eski shahar hududida katta-kichik ko'chalarning soni taxminan 300 ga yaqin, kichik va tor ko'chalar ulardan 2-3 baravar ko'p bo'lgan. [5]

Shuni alohida qayd etish joizki, yirik shaharlardagi ko'chalarga nom berish Rossiya imperiyasi Turkistonni bosib olgandan so'ng boshlangan. Eski shahar hududidagi ayrim katta ko'chalarga nom berish 1893 yili 13 mayda Toshkent shahar Dumasiniig 14-majlisida tasdiqlangan. Mazkur дума majlisi bayonida "Xalq orasida tarkalgan ko'cha nomlarini yozma ravishda qonunlashtirish lozim", - deb yozilgan edi. [6]

Toshkent shahar Mahkamasining Dumada bergan hisobotiga ko'ra, mazkur taklif Turkiston general-gubernatori tomonidan tavsiya qilingan. Dumaning mazkur qarorida ko'chalarning tasdiqlangan nomlari uzunligi 16 vershok, kengligi 4 vershok o'lchamli, moviy rangga bo'yalgan tunukachalarga rus va "sart" tillarida yozilib, ko'chalarga ilib qo'yilishi shart bo'lgan. [7]

O'tmishda mahallada bozorlarning ham o'ziga xos o'rnini bo'lgan. So'nggi o'rta asrlar shahar bozorlarining topografik jihatdan joylashish tartibi ham diqqatga sazovor. Odatda shaharlarning markaziy qismidagi mahallalarda zargarlar, sarroflar, temirchilar, turli kiyim-boshlar bilan savdo qiluvchi ko'pgina bozorlar joylashgan. Qishloq xo'jaligi va chorvachilik mahsulotlarining ayrim turlari bilan savdo qilishga ixtisoslashgan ba'zi bozorlar ko'p hollarda shahar chetlari va uning tashqarisida joylashgan.

- **Tadqiqot metodologiyasi (Research Methodology).** Jumladan, "Туркестанский сборник"da chop etgan maqolada, 1812 yili O'rta Osiyo xonliklariga safar qilgan hindistonlik Mir Izzatilla Buxorodagi "ot bozori" Bahovuddin Nakshbandiy mozoriga yaqin yerda joylashganligini va har chorshanba kuni qizg'in savdolar bo'lganligini yozib qoldirgan. Unda yozilishicha, shaharning yana bir ot bozori shahar tashqarisiga - "Samarqand darvozasidan 1,5 chaqirim narida", boshqa yeri esa Imom darvozasidan tashqarida, "sigir, ko'y va tuya bozori" esa Namozgoh darvozasidan tashqarida joylashgan. [8] XIX asr oxiri - XX asr boshlarida Turkistonda Rossiya imperiyasi hukmronligi davriga kelib mintaqada mahalliy boshqaruv tizimida an'anaviy tizim o'z kuchini yo'qota boshlagan. Bu, ayniqsa, dahalar tarkibiga kirgan

volost boshqaruvchilari va oqsoqolliklari ish faoliyatida ko'ringan.

Mahallalar 1917 yilda o'lkada sovet hokimiyati o'rnatilgunga qadar keng ish olib borib, mahalliy aholini birlashtiruvchi, uyushtiruvchi tashkiliy tuzilma bo'lib kelgan. U o'zbek xalqining kundalik ijtimoiy hayotini va turmushini tashkil qilishda asosiy bo'g'in sifatida hamda asrlar davomida takomillashtirilgan an'analarni ajdodlardan avlodlarga yetkazgan. Ammo shunga qaramasdan, sovet davrida hukmron tuzum mahallani rasman tan olmadi. Biroq aholining chuqur noroziligiga sabab bo'lmaslik uchun mahallalarni taqiqlab ham qo'ya olmadi, uni jamiyatni boshqarish tizimiga kiritmadi, ammo keyinchalik boshqaruvda an'anaviy mezonlarga tayanish zarurligini anglab yetdi.

Shu boisdan 1932 yil 17 aprelda O'zbekistonda mahallalar faoliyati "Shaharlardagi mahalla qo'mitalari to'g'risida"gi Nizom asosida rasmiylashtiriladi. XX asrning 20-30 yillarida mahalla faollari savodsizlikni tugatish, xalqni ma'rifatli qilish, joylarni obodonlashtirishda faol ishtirok etadi. Sovet davrida har qancha tazyiq va mahallalar faoliyatini tugatishga qaratilgan harakatlar o'z samarasini bermagan. Natijada Sovet hokimiyati bunday uyushma bilan hisoblashishga va murosaga borishga majbur bo'ladi. [9]

1935-1936 yillarda dastlab shaharlarda mahalla qo'mitalari tashkil etila boshlangan. Ya'ni, mahallalarda rais boshchiligidagi mahalla komitetlari tashkil etilib, aholi o'rtasida olib boriladigan barcha ishlarni rais boshqargan. Rasmiy doiralar mahalla idoralarga aholini hisobga olish va ma'lumotnomalar berish hamda yuqori tashkilotlarga hisobot taqdim etish vakolatlarini yuklagan. [10] Ular shahar sovetiga buysungan, ammo, ularga yuridik shaxs maqomi berilmagan. Shu bois hukumat o'zini o'zi boshqarish tuzilmasining faoliyatini tubdan o'zgartirishga majbur bo'ladi.

1937-1938 yillarda sovet hukumatining olib borgan deportatsiya siyosati natijasida o'zbek mahallalariga ko'plab o'zga millat vakillari ko'chirib keltirilib, joylashtirilganligi tarixdan ayon. Xususan, Ukrainadan nemislar, polyaklar, Uzoq Sharq o'lkasidan koreyslarning majburan ko'chirilishi oqibatida O'zbekistonga birgina 1937 yilning oktyabr va noyabr oylarida 74500 koreyslar olib kelinadi, 34 ming qrim-tatar oilalari, jami 151 529 nafar ko'chirib keltirilgan. [11]

Binobarin, O'zbekiston azaldan bag'rikeng diyor bo'lib kelgan. XX asr birinchi yarmi tarixidan ayon bo'ladiki, xalqimiz boshidan kechirgan og'ir qatag'on yillari va ikkinchi jahon urushi yillari ko'p sitamlarga yuzma-yuz bo'lgan koreyslar, nemislar, turklar, polyaklar, greklar, qrim-tatar va boshqa millat vakillari O'zbekistonni Vatandardilar. Ularning xozirgi avlodlari uchun esa O'zbekiston Ona Vatanga aylandi.

1938 yil 15 sentabrda O'zbekiston SSR Oliy Kengashi Prezidiumi Qarori bilan qabul qilingan "O'zbekiston SSR shaharlaridagi mahalla (kvartal) qo'mitalari to'g'risida"gi Nizomda mahalla qo'mitalari bekor qilingan hamda ularning funksiyalari rayon va shahar kengashlari tomonidan bajarilishi ko'zda tutilgan. Biroq, xalq turmush tarzini majburlab o'zgartirish hamisha salbiy oqibatlarga sabab bo'lishi anglab yetganlari bois, aynan ushbu kamchiliklarni 1940 yilda tuzatish va boshqaruv tizimida mahalla qo'mitalarini qayta tiklash to'g'risidagi masalaga qaytish uchun asos bo'ladi. Demak, mahalliy kengashlarning ijtimoiy salohiyatini chuqur anglagan holda, sovet hokimiyati mahallani yuridik qonuniylashtirishga majbur bo'lgan. [12]

**- Tahlil va natijalar (Analysis and results).** 1940 yil 10 iyuldagi O'zbekiston SSR Xalq Komissarlari soveti qarorida O'zSSR shaharlarida mahalla (kvartal) qo'mitalarini tashkil etish zarur, deb hisoblanishi hamda "O'zbekiston SSR shaharlaridagi mahalla (kvartal) qo'mitalari to'g'risida"gi Nizom tasdiqlanishi belgilangan. Ya'ni, boshqaruv tizimida mahalla qo'mitalarini tiklash borasida O'zbekiston SSR Sovnarkomi quyidagicha qaror qabul qiladi:

1) O'zbekiston SSR Sovnarkomining tegishli ko'rsatmasi asosida O'z SSR shaharlarida mahalla qo'mitalarini tashkil qilish zarur, deb hisoblansin;

2) O'zbekiston SSR Sovnarkomi qaroriga asosan "O'z SSR shaharlari mahalla qo'mitalari to'g'risida"gi Nizom tasdiqlansin. [13]

Shu asosda 1941 yilda O'zbekiston SSR Xalq komissarlari soveti "O'zbekiston SSR shaharlaridagi mahalla (kvartal) qo'mitalari to'g'risida"gi Nizomning yangi tahririni qabul qildi. Unga binoan, mahalla komitetlari a'zolari mehnatlari evaziga haq olmaganlar. Mahalla komitetlari moliyaviy-xo'jalik ishlari (oshxonalar, qizil choxonalar, sartaroshxonalar ochish va ularni ishlatish) bilan shug'ullanishi mumkin emas edi. Ularning asosiy vakolatlari mahalla hududidagi sovet, partiya va jamoat tashkilotlariga madaniy ishlarda yordam berish, ko'chalar, maydonlar, hovlilarni obodonlashtirish hamda ularni keng miqyosda nazorat qilishdan iborat bo'lgan. [14]

Ikkinchi jahon urushi yillarida va undan so'ng mahalla o'zining baynalminallik xarakterini namoyon etdi. U aholini ommaviy safarbarlikka jalb etish, urushga chaqiruvni tashkil etish, front uchun oziq-ovqat, kiyim-kechak, o'q-dori jo'natish, ko'chirib keltirilganlarni joylashtirish ishlarida faol ishtirok etgan. Ayniqsa, o'zbek mahallalari front hududlaridan O'zbekistonga ko'chirib keltirilgan aholiga haqiqiy insonparvarlik, bag'rikenglikni namoyish etdi. Urushning dastlabki kunlarida O'zbekistonga 1 mln.dan ortiq kishi ko'chirib keltirilgan bo'lsa, shulardan 240 000 dan ko'prog'i bolalar edi. [15]

Ma'lumotlarga ko'ra, birgina 1941 yil dekabr qadar O'zbekistondagi mahallalarga 525 ming nafar aholi keltirilishi va joylashtirilishi rejalashtirilgan. Amalda ularning soni 665, 419 nafarni tashkil etgan. 1942 yil yanvar oyining o'rtalarida Toshkent tumani mahallalariga 2712 kishi evakuatsiya qilingan. Ularning 1252 nafarini erkaklar, 1460 nafarini ayollar tashkil etgan. Ulardan ruslar - 1913, ukrainlar - 126, beloruslar - 33, yaxudiyalar - 569, armanlar - 9, tatarlar - 13, polyaklar 6, nemislar 3, greklar - 2, latishlar - 7, moldovanlar - 8, shvedlar 1 chuvashlar 6, estonlar - 5, boshqa millat vakillari 8 nafarni tashkil etgan. Jami Toshkent viloyati mahallalariga 1942 yil yanvar oyining o'rtalarigacha kelganlarning soni 5414 kishini tashkil etgan. Ulardan 2341 nafari erkaklar, 3073 nafari ayollar bo'lgan. [16]

1941 yilning noyabr oyi davomida Ukrainadan O'zbekiston mahallalariga 54029 nafar kishi (jumladan, Odessa oblastidan - 9508, Kiyevdan - 7528, Dnepropetrovskdan - 4238, Xarkovdan - 3490, Vinniskdan 2810, Jitomirdan - 2082) evakuatsiya qilingan edi. [17] Urush yillarida birgina Surxondaryo viloyatidagi mahallalarga 20 mingdan ortiq aholi keltirilib joylashtirilgan bo'lsa, ularning 3,5 mingtasi yosh bolalar edi. Evakuatsiya qilingan aholi uchun Samarqand viloyatining Bulung'ur, Jomboy, Narpay, Pastdarg'om va boshqa tumanlaridagi mahallalarda ham bolalar uylari tashkil etiladi. Ularda 4270 nafardan ortiq bola tarbiyalangan, Buxoro viloyatidagi mahallalarga esa 150 mingdan ortiq evakuatsiya qilingan aholi joylashtirilgan. [18]

1941 yilda Namangan viloyati mahallalariga Ukraina, Belorusiya, Boltiqbo'yi respublikalaridan 19 ming kishi evakuatsiya qilingan. Ularning 1674 nafari ish bilan ta'minlangan. To'raqo'rg'on, Yangiqo'rg'on va Pop tumanlaridagi mahallalarda maxsus bolalar uylari tashkil qilinadi. Qoraqalpog'istonga esa 3891 nafar kishi ko'chirib keltirilgan. O'z xoxishi bilan 900 ga yaqin oila ota-onasidan ajralgan yetim bolalarni o'z tarbiyasiga oladilar. Shuningdek, xarbiy xizmatchilarning va ko'chirib kelinganlarning 20,3 ming nafar farzandlari bolalar bog'chasiga va bolalar uylariga joylashtirilganligi ma'lum. [19]

Bunday bag'rikenglikka xos fazilat tom ma'noda Respublika polietnik xususiyatining o'ziga xosligidan dalolatdir. Urush yillarida va undan so'ng bu yerda yana qator



millat vakillari tatar, boshqird, udmurt, qorachoy, cherkas, slavyan xalqlaridan rus, ukrain, belorus, polyak, latish, umuman, yana ko'plab xalqlar mahallalarga joylashtirilib, o'zbek xalqi ularga yuksak milliy mentalitet va bag'rikenglikning timsoli sifatida mehmondo'stlik, beg'arazlik ko'rsatgan edi.

Urushdan so'ng, ya'ni 1950 yil 2 oktabrda O'zbekiston SSR Oliy Soveti Prezidiumi tomonidan tasdiqlanib, 1955 yil 17 iyunda va 1959 yil 23 aprelda tegishli qo'shimcha va o'zgartirishlar kiritilgan "Xalq deputatlari shahar, posyolka va qishloq sovetlari doimiy komissiyalari faoliyati to'g'risidagi qoida" qabul qilindi. Mazkur qoidada xalq deputatlari shahar, posyolka va qishloq sovetlari doimiy komissiyalari a'zolarining huquq hamda vakolatlari, majburiyatlari umumiy tamoyillar asosida tasdiqlandi. Shu yo'sinda asosiy e'tibor o'sha davr g'oyaviy tashviqot hamda targ'ibot ishlariga qaratildi. [20]

Ammo 1961 yil 30 avgustda O'zbekiston SSR Markaziy Ijroiya Komiteti tomonidan barcha joylarda, ya'ni shahar, qishloq, posyolka va ovullarda mahalla komitetlari to'g'risida maxsus Nizom qabul qilinadi. [21] Mazkur Nizom asosida markazlashgan mahalliy sovetlar o'zini o'zi boshqarish organlari sovet davrida kommunistik mafkura asosida ish olib bordi. Aslida turli jamoat komissiyalarining, qishloq va posyolka soveti faoliyatining mavjud shakllari oldindan rejalashtirilgan mazmunga ega bo'lgan. Yuqori tashkilotlar va davlat tuzilmalari nazorati o'zini o'zi boshqarish tuzilmasining rivojlanishiga imkon bermas edi.

1968 yilda O'zbekiston SSR Oliy Sovetining "O'zbekiston SSR Xalq deputatlari qishloq va posyolka sovetlari faoliyatini yo'lga qo'yish tartibi to'g'risida"gi qonuni qabul qilinadi. [22] Kommunistik tartib-qoidalar hamda chora-tadbirlarning mahalliy kengashlar zimmasiga yuklanishi 1972 yilda qabul qilingan "O'zbekiston SSRning Qonunlar to'plami"da mustahkamlandi. Unda belgilanishicha, mahallalarga mustaqil birlashma sifatida emas, balki sovet organlari, tashkilotlari qarorlarining targ'ibotchilari va

yordamchilari sifatida qaraldi. Mahalliy sovetlarning faoliyati qishloq soveti (кишлачный совет) Posyolka soveti (посёлковый совет) va Shahar soveti (городской совет) larga bo'ysunuvchi mahalliy tashkilotga aylantirildi hamda sotsialistik shiorlarni targ'ib qiluvchi mexanizmga aylantirilib, maxsus qonun va qoidalar bilan tasdiqlandi.

Mazkur qonun-qoidalarga muvofiq, Xalq deputatlari Qishloq va Posyolka soveti Kengashi a'zolarining vakolatlari, vazifalari, huquq va majburiyatlari qonunda belgilangan tamoyillar asosida maxsus moddalarda aks etdi. [23]

- **Xulosa va takliflar (Conclusion/Recommendations).** Faqatgina mustaqillik yillarida mahalla o'zining azaliy nufuzi va obro'siga ega bo'ldi. Ya'ni, O'zbekiston milliy mustakilligining qo'lga kiritilishi natijasida, mahalladek an'anaviy tuzilmaning vakolat doiralari yana qayta tiklanishiga imkon yaratildi. Shu boisdan, hozirgi demokratlashirish va fukarolik jamiyati qurish sharoitida xalqning o'zini o'zi boshqarish hamda jamiyatni ijtimoiy tashkil etishning tarixiy tajribalarini tadqiq etish va umumlashtirish muhim ahamiyatga ega bo'lib borayotganligini inobatga olib, o'zbek xalqining an'anaviy jamoaviy hayot tarzi asoslarini va uning namoyon bo'lishidagi o'ziga xosliklarni tadqiq etish yanada dolzarb ahamiyat kasb etdi.

Mahalla institutining ahamiyati yangi O'zbekistonda yanada oshdi. Mahallar raislari saylov yo'li bilan saylanishi yo'lga qo'yildi. Mahallaning o'zini o'zi boshqarish organi sifatidagi ahamiyati oshib o'zining tegishli hududida ijtimoiy-iqtisodiy muammolarni mustaqil hal qilish imkoniyati yaratilib aholi orasida mahalla raisi va uning xodimlarning roli yaxshilandi va aholining mahallaga nisbatan ishonchi oshdi. Oliy ma'lumotli bo'lmagan mahalla raislari va xodimlarining oliy ma'lumotga ega bo'lishlari uchun alohida kvotalar ajratilib, mahalla institutida band bo'lgan hodimlari orasida oliy ma'lumotlilar ulushi sezilarli oshishiga guvoh bo'lish mumkin. Mahalla instituti sohasidagi islohatlar inson qadriini yuksaltirishga va ularga munosib turmush sharoitlarni yaxshilashga hissa qo'shmoqda.

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## ДИНАМИКА КАЧЕСТВА ЖИЗНИ ДЕТЕЙ, БОЛЬНЫХ ХРОНИЧЕСКИМИ СОМАТИЧЕСКИМИ ЗАБОЛЕВАНИЯМИ

Аннотация

В статье приводятся результаты оценки качества жизни детей, больных хроническими соматическими заболеваниями до и после проведения коррекционной работы. Выявлены особенности физического, эмоционального, социального и ролевого функционирования до и после проведения психокоррекционных мероприятий. Отмечается, что у детей, участвовавших в психокоррекционных группах особенно заметные изменения налюдались по эмоциональному, социальному и ролевому компонентам качества жизни, что свидетельствует об успешной адаптации к условиям болезни детей.

Ключевые слова: дети, болезнь, психология, хронические соматические заболевания, качество жизни, компоненты качества жизни, факторы, коррекция, адаптация, реабилитация.

**Введение.** В мире обеспечение здоровья населения является не только социальной, но и важной экономической проблемой в условиях экономического роста. В этой сфере уделяется особое внимание на сохранение физического, психологического и социально-духовного здоровья с детства. В 2013 году на 66-сессии Организации Объединенных наций утвержден план комплексных действий, в основе которого заложен принцип «без психического здоровья нет здоровья вообще». Недостаточное решение проблем организации оказания комплексной психологической помощи и реабилитационных мероприятий остаются одной из актуальных задач практической медицины и психологической службы.

В мире исходя из того, что хронические соматические заболевания занимают второе место после болезней центральной нервной системы как фактор задержки психического и социального развития, уделяется особое внимание научным исследованиям по психосоциальным детерминантам реабилитации детей с данными заболеваниями. В составе осуществляемых научных поисков приоритетное место занимают научные исследователи по таким направлениям, как выявление роли психологических и социально-психологических факторов в возникновении, течении и лечении хронических соматических заболеваний, изменения индивидуаль-психологических особенностей больных детей под воздействием болезни, влияние хронических болезней на формирование различных психологических расстройств у детей, организация психологической помощи в зависимости от характера болезни, осуществление психодиагностических и психокоррекционных мероприятий в детской клинической психологии, профилактика задержки психического развития и социально-психологической дезадаптации у детей вследствие хронических заболеваний.

### Анализ литературы по теме (Literature review).

По изучаемой теме исследования проводились преимущественно представителями педиатрической науки Ф.И.Иноятовой[4], Д.Н.Исаевым[5,6], Ю.Куртановой[8] в которых изучались роль психологических факторов в развитии различных соматических заболеваний у детей, особенности психологического статуса детей, больных с соматическими заболеваниями, пути коррекции

психологик расстройств фармакологическими средствами. В данных исследованиях раскрыты нарушения в интеллектуальной, психоэмоциональной, поведенческой сферах детей, больных хроническим вирусным гепатитом (Ф.И.Иноятова и соавторы), взаимосвязь *Helicobacter pylori* и психосоматических расстройств, как опорных факторов, поддерживающих патологические процессы в слизистой оболочке желудка и 12-перстной кишки. В исследованиях Д.П.Хакимова и соавторов показано важное место психосоматических факторов в возникновении ряда заболеваний у новорожденных, а также на последующих этапах развития.

### Методология исследования (Research Methodology).

В литературе подчеркивается, что современная медицина характеризуется внедрением идей и методов медицинской психологии в клинику соматических заболеваний. Этот процесс во многом обусловлен развитием реабилитационного направления, одним из самых важных принципов которого является личностный подход [7,9]. Обзор методологических подходов к изучению психосоциальных детерминантов реабилитации детей с хроническими соматическими заболеваниями показывает, что существуют несколько позиций и направлений реабилитации, в которых особое место отводится к психологическим и социально-психологическим компонентам реабилитации. Методологически данное исследование основывается именно на концепции реабилитации, данная концепция состоит из государственных, социально-экономических, медицинских, психолого-педагогических, профессиональных и других систем мероприятий. Опорные направления реабилитации состоят в следующем: ресоциализация, оказание психологической помощи детям и их родителям с учетом таких факторов, как особенности отношения к болезни ребенка, характер и длительность болезни, взаимоотношения между родителями и детьми.

Вместе с тем, хотелось бы отметить, что несмотря на большой диапазон исследований по изучаемой проблеме, до сих пор нет комплексных клиничко-психологических исследований, направленных на изучение психосоциальных детерминант реабилитации детей, больных хроническими соматическими заболеваниями. Существующие исследования ограничены клинически выявленными психологическими симпто-

мами, в некоторых работах медицинской науки осуществлена попытка медикаментозного подхода к коррекции психологических расстройств у детей под влиянием соматической болезни.

**Анализ и результаты (Analysis and results).** В нашем исследовании участвовали всего 248 детей дошкольного и младшего школьного возраста, среди них 60 детей с хронической гастродуоденальной патологией (хронический гастродуоденит, язва желудка и 12-перстной кишки), дети с хроническим вирусным гепатитом «В» составили группу из 80 больных, дети с заболеваниями сердечно-сосудистой системы (врожденный порок сердца, недостаточность митрального клапана, недостаточность аортального клапана) – 33 больных. Для проведения эмпирических исследований по изучаемой проблеме были подобраны отличающиеся достоверностью и валидностью психодиагностические методики. При выборе методик обращали внимание на возраст ребенка,

психокоррекционные методики подбирались с учетом характера заболевания и состояния ребенка с обязательным учетом рекомендаций и мнения лечащего врача.

В ходе исследования мы провели сравнительное изучение качества жизни детей, получивших только лекарственную терапию и детей, наряду с лекарственными средствами участвовавших дополнительно в психокоррекционных группах и получили следующие результаты (таблицы 1-2): Для выявления эффективности психокоррекционных мероприятий до и после коррекционной программы проводили оценку качества жизни детей с помощью методики PedsQL-4.0. Методика включала в себя компоненты, оценивающие уровень физического, эмоционального, социального и ролевого функционирования детей.

Таблица 1

Сравнительный анализ показателей качества жизни детей, получивших медикаментозное лечение, N=30

Показатели	Результаты первичной психодиагностики N=30		Результаты психодиагностики через 2 месяца N=30		Результаты психодиагностики через 6 месяцев		t-критерий p	t-критерий p
	M	Σ	M	Σ	M	σ		
Физический компонент	47,3	11,9	55,5	10,9	55,2	10,4	-8,624 p=0,000*	-6,359 p=0,000*
Эмоциональный компонент	34,6	9,2	39,7	9,5	39,3	10,2	-7,544 p=0,000*	-3,879 p=0,001*
Социальный компонент	29,5	7,6	33,3	8,2	34,2	8,9	-6,349 p=0,000*	-4,37 p=0,000*
Ролевой компонент	28,9	7,0	36,8	8,9	38,3	8,92	-8,388 p=0,000*	-8,257 p=0,000*

Примечание: \* отмечены статистически значимые различия

Как видим из таблицы 1 в группе детей, в которой наряду с медикаментозной терапией применялись психокоррекционные методы, исследования проведенные через 2 и 6 месяцев после стационарного лечения

показали положительные сдвиги показателей качества жизни на достоверном уровне по сравнению с группой детей, получивших только медикаментозное лечение.

Таблица 2

Сравнение показателей в группе детей, получивших медикаментозное лечение и психологическую коррекцию, N=30

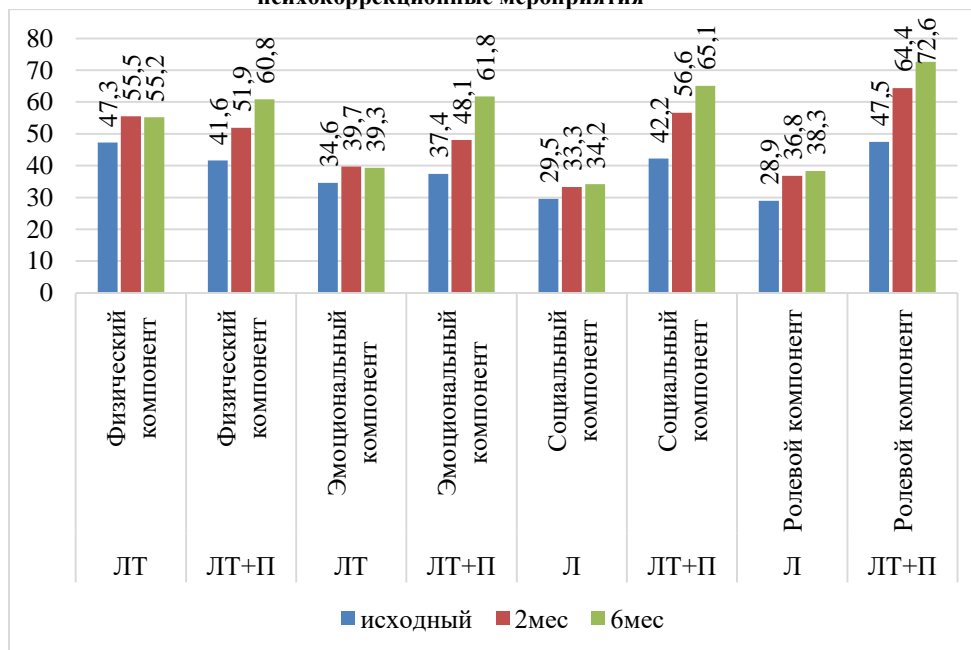
Показатели	Первичная психодиагностика N=30		Психодиагностика после 2 месяцев N=30		Психодиагностика после 6 месяцев		t-критерий p	t-критерий p
	M	σ	M	σ	M	σ		
Физическое функционирование	41,6	8,2	51,9	7,7	60,8	8,3	-7,706 p=0,000*	-11,525 p=0,000*
Эмоциональное функционирование	37,4	10,7	48,1	10,4	61,8	11,7	-13,699 p=0,000*	-16,073 p=0,000*
Социальное функционирование	42,7	9,8	56,6	9,7	65,1	8,3	-17,142 p=0,000*	-17,963 p=0,000*
Ролевое функционирование	47,5	10,7	64,4	10,1	72,6	8,9	-15,942 p=0,000*	-16,853 p=0,000*

Примечание: \* отмечены статистически значимые различия

Как видно из таблицы 2 и рисунка 1, сравнение результатов методики оценки качества жизни детей через 6 месяцев после стационарного этапа лечения, получивших только медикаментозное лечение и детей, получивших медикаментозное лечение+психокоррекцию показывает постепенное стабильное состояние физического, психоэмоционального и ролевого компонентов качества жизни. То есть не ущемляя ценность медикаментозной терапии, можем сказать, что

подкрепление медикаментозной терапии психокоррекционными мероприятиями способствует более стабильному сохранению физического, психологического и социального статуса больных детей, профилактике частых рецидивов и осложнений заболевания, тем самым оказывает существенное влияние на социальную адаптацию детей с хроническими соматическими заболеваниями в условиях болезни.

Рис.1 Динамика показателей качества жизни у детей, проходивших медикаментозное лечение и психокоррекционные мероприятия



**Заключения и предложения (Conclusion/Recommendations).** Как после двух месяцев у детей, участвовавших в группе психокоррекционных мероприятий отмечаются статистически достоверные изменения психоэмоционального ( $t=-3,273$ ,  $p<0,05$ ) и социально-ролевого статуса ( $t=-10,039$ ,  $p<0,001$  и  $-11,146$ ,  $p<0,001$  соответственно), хотя в контрольной группе показатели физического статуса находятся почти на одинаковом уровне с физическим состоянием основной группы.

Результаты изучения качества жизни детей, больных хроническими соматическими заболеваниями после 6 месяцев показали, что имеются статистически достоверные различия у детей основной группы по сравнению с детьми контрольной группы по всем компонентам качества жизни. Если на предыдущих месяцах после лечения физическое состояние детей, участвовавших в психокоррекционных мероприятиях не показывало достоверно значимых изменений, уже на шестом месяце после лечения показатели физического функционирования детей основной группы имели достоверно значимые различия по сравнению с детьми, получавшими только медикаментозное лечение. Такие результаты указывают на то, что применение психокоррекционных методов способствуют дальнейшему и долговременному сохранению физического, психоэмоционального и социального состояния детей, больных хроническими соматическими заболеваниями. Если обратить внимание на показатели детей, получивших медикаментозное лечение, то можно обнаружить, что и при лечении только медикаментозными средствами наблюдаются улучшения не только общего самочувствия, физического получивших только состояния больных, но и показателей эмоционального, социального и ролевого функционирования, причем на статистически достоверном уровне. Но если обратить внимание на показатели детей, получивших медикаментозную терапию и дополнительно ещё помощь, то уже на 6 месяце мы

видим заметные улучшения всех компонентов качества жизни, тогда как в группе детей, получивших только медикаментозную терапию как видим из таблиц и рисунков, к 6-му месяцу средние значения всех компонентов качества жизни детей остаются на уровне показателей после 2 месяцев. Особенно если обратить внимание на показатели физического функционирования, то если сразу после стационарного лечения среднее значение физического функционирования составило 47,3 баллов, то ко второму месяцу после лечения этот показатель составил 55,5 баллов, а к шестому месяцу 55,2 баллов. А между показателями эмоционального, социального и ролевого функционирования сразу после лечения, двух месяцев и 6 месяцев сохраняется статистически достоверные различия. Несомненно здесь отмечается усилия врачей и эффективность современной медикаментозной терапии. результаты, полученные в ходе проведенного нами исследования, могут быть применены при проведении комплексных реабилитационных работ с детьми с хроническими соматическими заболеваниями, а также при их социальной адаптации. Считаем, что коррекционные методы работы в клинических условиях будет иметь более выраженный терапевтический эффект в случае индивидуальной продолжительной работы, направленной на гармонизацию эмоциональной сферы, связанной с глубинными переживаниями и потребностями ребенка.

Таким образом, основываясь на результаты проведенных психокоррекционных мероприятий можно утвердить, что применение адекватных методов в психокоррекционных мероприятиях по реабилитации больных детей, рациональное использование арттерапии, танцевально-двигательной терапии, игротерапии, сказкотерапии, психогимнастики открывает новые возможности для полноценной коррекции психологических нарушений и повышения качества жизни детей.

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## CRITICAL APPROACHES TO THE STUDY OF THE IMAGE OF WOMEN IN ENGLISH LITERATURE

### Annotation

English literature is rich in the writers who used women image in essential works. By using this they also tried to analyze the periods and the role of women in society. In the novels by Jane Austen, Charlotte Bronte and modern English novelist Kazuo Ishiguro female image was shown evidently.

**Key words:** Literature, female image, novel, writer, analyze, society, period.

**Introduction.** The reflection of a woman's image in world literature, her social position in society is directly related to the historical period in which she lived. While romantic images of women were created in the prose of the 18th century, images of women fighting for their interests slowly began to appear. If we look at world literature, Elizabeth in English literature, Princess Otkuba in Japanese literature, Tatiana Larina and Natasha Rostova in Russian literature, Scarlett Ohara in American literature, and Madame Bovary in French literature have become the symbols of women of these nations today. Such images can be found in Russian classical literature of the 19th century. In the history of the 17th century English, the position of women was inferior to men for a long time. Lord Chester-field once said: "It is Women who should be spoken of as inferior to men and superior to children." Women did not have the right to vote. In history, only men and their interests were taken into account. Thus, in this century, women continued to be inferior. Therefore, Virginia Woolf described this period as "the history of England is not the history of women, but of men" [1]. These words are true. If we want to know the history of our grandfathers and great-grandfathers, many materials about fathers are kept as a reference. They can be officials, merchants or writers. There is always glory in their history. However, if we want to know about the life of our grandmother or great-grandmothers, there is little explanation left for them. Sources had things about them that were pretty, good at cooking, or something like that. Everything is nothing but such a tradition.

Many people accuse women of being stupid or uneducated in conversation, but these qualities are not innate, they are born out of the influence of the environment. Mary Ostell (2002) points out that people always ignore the inner world of women and that women are capable of the best, what they lack is education. With the development of Enlightenment period, women began to enter literature and learn to read and write. They mostly wrote fiction because fiction is the easiest thing for women (Wolf, 1966). Female writers reflected their life experiences, experiences, and deep concerns in their fictional and fantastic works. But at the very beginning, from the point of view of men, women's thoughts and views were evaluated as insignificant, meaningless and sentimental. This is not surprising, because all the rules of writing literature were learned by men. They could not get used to women's writing style.

**Literature review.** In Europe, it can be seen that the analysis of the experiences of a woman's soul has become stronger when observing the works created in the spirit of various currents such as classicism, enlightenment,

romanticism and realism. The most important aspect of the era of realism is that it reveals that the main cause of all good and bad traits in human character is the existing conditions. Revealing the image of a woman in the works of Charles Dickens (Charles Dickens 1812-1870), analyzing her typologically, includes theoretical, historical-literary processes. In Charles Dickens's prose, the traditions of the Victorian era play an important role in the development of female characters [2]. In modern literary studies, the system of characters in the works of Charles Dickens reflects the creation of typology as a result of the identification of its signs and the comprehensive study of women's characters when dividing characters into types. The study and analysis of female characters in the writer's work, in turn, embodies the history of England and the views of English Dickens scholars.

When describing a female character in the prose of Charles Dickens, first of all, in the periodic stages of the creation of image dynamics noticeable. It belongs to the female character of the writer Western literary scholar Michael Slater "Victorian beliefs, especially in relation to women was characteristic and typical" [3] [180; -570 r]. Governesses, home teachers, that is, educated girls. This type of character is manifested in various ways in the works of Charles Dickens will be They are composed of representatives of the middle class, its main task is to teach.

**Research Methodology.** In English literature of the 19th century, we can find bright images of the image of a woman in "Jane Eyre" by the English writer Charlotte Bronte. Charlotte Bronte is an English writer and poet, the eldest of three sisters who became writers. He was born in 1816 in Thornton, Yorkshire. Charlotte's father was an Irish English priest. After Charlotte's mother died of cancer in 1821, her father was unable to devote time to raising the children, and in August 1824 he sent Charlotte and her two sisters to the Clergy Daughters religious school in the village of Cowan Bridge. This place became the prototype of Lowood School in the novel "Jane Eyre". Could you please explain to me what the inscription 'Lowood House of Mercy' above the entrance means? - This is your school. - Why is it called "house of mercy"? Is it different from other schools? This place is like an orphanage: you and I, all the other girls, live here because of the mercy shown to us [4]. This work vividly reflects the life of the Victorian society in the form of the tragedy of the life of the main character Jane Eyre. The realities of his life cover almost all aspects and characteristics of the morality of that time, including the position of women in society. The relationship between men and women in the Victorian era played a major role in the writing of the novel, and the role of women is clearly indicated in the work. The Victorian era is

the period in which Queen Victoria ruled Britain from 1837 to 1901. At that time, the country gradually lost its leadership in world industrial production. However, Britain retained its position as the world's colonial empire. The Victorian era was known for its high standards and the need to conform and be correct according to the criteria of this society. Jane Eyre did not live up to these standards. He did not agree to follow the path predetermined by the people around him. Bronte had a very negative attitude to the standards of that time, and this is clearly reflected in the quotes of the hero of her novel. Calmness is characteristic of women, but women have the same qualities as men; they have the same need as men to demonstrate their abilities and find their own field of activity; forced to live in an inert environment under the strict pressure of custom, they suffer as men suffer. And if the stronger sex claims that women's work is only to bake puddings and knit stockings and play the piano and sew handbags, this is very narrow thinking.

Female writers were called feminists since they intended to establish the moral equality between men and women (Kirkham, 1997). Mary Austell published her famous work *A Serious Proposal to the Ladies for the Advancement of the their True and Greater Interest* in 1694, in which she exposed people at that time only paid attention to women's appearance while ignored their soul. In fact, women are capable of the best things instead of those trivial things like needling or washing. However, they were occupied with domestic trivia and invisible of their own worth. Austell (2002) also exposed the rooted reason for women's ignorance was lack of education. Women wanted to learn and acquire knowledge. They just did not have that opportunity. So men had no right to laugh at or even blame women's ignorance because it was men who shut women out of education. With the ongoing of Enlightenment, women got more access to literature and education. Austell (2002) proposed to build up a particular college for women where they can receive serious education and enjoy pure friendship and peaceful life. In addition, she also suggested women have religious belief and devote to charity. Of course, on the way of fighting for women's interests, Austell was not alone. Other feminists like Catherine Cockburn, Lady Mary Chudleigh and Mary Wollstonecraft also made their contributions. For example, Wollstonecraft also made claim that women should not be confined to domestic work and they deserve better education. In *A Vindication of the Rights of Women*, Wollstonecraft (1792) almost summed up all the points of feminism including women's education, marriage and moral values, etc. Especially, she emphasize that reason and principle could guide us to good consult. At the same time, *Vindication* mainly concerned with the middle class women because they were the most potential ones who could probably recognize themselves and fight for their own interests though some encouragement. The upper class women were indulged in their corrupted lifestyle and had no desire to change it while lower class women were lack of education and not enlightened enough to unite themselves for fighting. Jane Austen happened to be middle class woman who pioneered the way to the women's liberation. Austen's stand is quite similar with Wollstonecraft in women acquiring knowledge from recognition through experience. This feminism point can be found in many of Austen's works. For example, in *Pride and Prejudice*, our heroine Elizabeth Bennet is misled by first impression. However, she finally finds out the truth by reconsidering what had happened. Austen created this female figures in order to prove that women are also endowed with wisdom and they are capable of being reasonable and rational [5].

**Analysis and results.** One of the most famous English writer Charlotte Bronte uses different characters in her works and gives them qualities such as intelligence and passion, thus

creating conflict between them. It is important to look at the images of the main characters to see how the author uses them to reflect the problem being studied. So, in the work, the image of a woman is taken as the main character. Jane Eyre is the main character of the novel. Outwardly plain and unassuming Jane distinguished from the women of that time by her intelligence and her desire to be independent. She is an honest young girl who has to face the oppression, inequality and hardships of life against women. Throughout the novel, despite the fact that she constantly encounters people who want to change her position in life, Jane always adheres to her strong beliefs and principles of equality, human dignity and justice. With her strong faith and belief in gender and social equality, she challenges the prejudice against women of the Victorian era. In the next female character, Mrs. Reed is Jane Eyre's aunt, the widow of Jane's uncle, Mr. Reed. Mr. Reid was Jane's mother's brother and died nine years before the events of the play begin. Mrs. Reed constantly humiliates and punishes Jane, who in her opinion is rebellious, while ignoring the shortcomings of her own children. He sends Jane to boarding school.

Jane Eyre can be seen as an expression of Charlotte Bronte's character. Throughout the play, the conflict between the forces of reason, supported by St. John Rivers, and the forces of passion, led by Bertha, increases. This tension gets to Jane and perhaps Charlotte's heart. It can be assumed that Bronte uses the novel to create this conflict between all her characters and convey it to her readers. Bertha and Saint John symbolize the different dangers lurking in Jane's different paths of life. Charlotte tries to convey to the reader that the main thing in life is balance. In 19th century England, gender had a strong influence on one's behavior and identity, and women had to endure 'derogatory' views about their social status, intellectual abilities and right to choose. Jane is fighting an uphill battle to be independent and recognized as an individual. He encounters many men who do not respect women and do not consider them equal. Mr. Rochester and St. John try to control the women. Bronte uses marriage in the novel to describe a power struggle between a man and a woman. Despite her madness, Bertha Mason is a provocative symbol of how married women can be suppressed. Jane rejects various marriage proposals that she considers to be an end to her personal expression, she strives for equality in relationships. At the time, Jane Eyre was considered a provocative book because of its portrayal of the struggle for gender equality. When *Jane Eyre* (1847) was published by Charlotte Bronte under the male pseudonym Carrer Bell, it was met with praise on the one hand and severe criticism on the other. Conservative Lady Eastlake said that if the book had been written by a woman, "she would have already lost her gendered society" [6]. In addition to this lack of feminism, he saw a reflection of the Chartist working-class uprising and the political revolutions sweeping Europe at the time. In Lady Eastlake's eyes, Jane Eyre's unorthodox views of how women should behave meant subverting the social order.

There are also some studies which particularly aim at female characters' portrayal in the novel. For example, Tanner thinks Austen gave immense charm to Elizabeth Bennet and this heroine was too perfect. Because Elizabeth not only gets pretty appearance and an lively spirit, but she also does rational reflections. Thus, she could never be silly girl like other sisters and 11 meet the expectation of moral standard, being rational. However, Waldron does not agree and argued that Elizabeth was not totally portrayed as the perfect woman. Elizabeth is not the saint and her personality weakness exposed sometimes. For example, when she realized becoming the mistress of Pemberley meant something and it was good both for her and her family. That is to say she did care about money like others did and she was also superficial to some extent. In addition, Arnold think Jane Austen did not portray



female characters in positive ways and all of women in the novel displayed their silliness to certain extent. Though Austen did give some quickness and wit to our heroine Elizabeth Bennet, she also couldn't escape from such silliness which all other women share. Thus, Arnold asserts that Jane Austen herself was influenced by stereotyped views of women though she wanted to establish a brand new female image for readers. Besides Elizabeth, some works also talked about other main female characters in the novel such as Mrs Bennet and Charlotte Lucas. Most of comments on Mrs Bennet is negative. Arnold asserts that Mrs Bennet is portrayed as a nagging, narrow-minded woman who always complains about trifles and her life career is to get her daughters well married. Tanner believes that Mrs Bennet's mental space is limited and incapable of reflection. That is to say, there is "very few other thoughts in her head" [7]. And she makes statements without thinking about others' feelings. Concerning Charlotte, there are different voices from critics. Weinsheimer criticises Charlotte's of her vanity because she cared more about the establishment than the real felicity in marriage and also of her self-deception as she tried to ignore the defects of Mr Collins and derived satisfaction from housing. However, Newton argues that Charlotte was also the victim of social and economic force of that time and if we see Charlotte with irony, we should also see Elizabeth with irony too. Because though Elizabeth blamed Charlotte's materialism, she worried whether she would make the same choice finally as a single woman of a small property. Tanner (1986) also agrees that we should sympathize Charlotte instead of blaming her. It is the economic reality that forces her to make that choice and it is just a way of surviving.

If we talk about postmodernism, surely Kazuo Ishiguro's works are the best choice for analysis. He has won a number of prizes and awards, including the Booker Prize in 1985. The female characters in Ishiguro's novels display very complex behaviors. Some characters stand strong despite severe oppression, while others lose their minds. Therefore, these characters could only be properly understood if studied under feminism. The ideology of equal status of women in social, political and economic spheres is broadly called

feminism. Theories about problems faced by women due to gender bias in the fields of politics and sociology are classified under feminism. In addition, all actions and struggles aimed at improving women's lives were carried out under the umbrella of feminism. It can be divided into three periods. The first feminist wave occurred in the nineteenth and early twentieth centuries, the second in the 1960s and 1970s, and the third from the 1990s to the present. It is interesting to note that many female characters in Ishiguro's novels resemble the stereotype of "Japanese women". To begin with, in the novel *Pale View of the Hills*, the main characters Etsuko, Keiko and Sachiko, and minor characters such as Hanada's wife are very dependent on others. These women are true warriors in their lives, but they cannot escape all fate. Some female characters in Ishiguro's novels face domestic and social oppression. An example of this is Christopher Banks' mother in *When We Were Orphans*.

**Conclusion.** In the Victorian era, men and women organized their relationships based on the requirements and laws of society at that time. The "undesirable" qualities of a person are ignored and rejected as "unsuitable". Behavior during this period was very strictly regulated by gender stereotypes. The main purpose of women was to marry and accompany their husbands with care and obedience, as well as to act in their interests. But they lived a false life and only followed the beliefs of others that satisfied the demands of Victorian society. The ideal woman is the personification of an innocent and pure angel. Women were expected to maintain this angelic appearance and lead an elegant life, regardless of their desires. The image of the Victorian woman is often compared in literature to the "domestic angel". Charlotte Bronte shows Jane as the complete opposite of this image. A girl with a unique character is looking for her own way in life, she fights with her life despite the pressure of society, she follows her heart and soul and tries her best to overcome the rules and requirements of the environment that influences her. All these themes were important to the patriarchal society of 19th century Victorian England. It was created under the influence of K. Petmore's poem "Angel of the House".

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*Based on the Tashkent University of Information Technologies professor S. Beknazarova's review*

## DIGITAL TECHNOLOGIES AND ARTIFICIAL INTELLIGENS IN HISTORY EDUCATION: EXPERIENS AND PERSPECTIVES

### Annotation

In an article about the application of digital technologies in certain disciplines and fields of science. Issues related to research and information technology and the creation on this basis of fundamentally new integrated technologies based, in particular, Internet technologies, digital technologies and artificial intelligence are being studied. The risks of using artificial intelligence in education are also analyzed.

**Key words:** History, education, digital technologies, education, artificial intelligence, applications, programs, sources, civilization, reconstruction.

**Introduction.** Education as one of the most important social institutions is also subject to constant development by society's changing goals and needs, with the development and implementation of high technologies in the educational and research processes.

Obviously, the tasks set for the Higher School of training are highly qualified, competitive, meeting modern requirements, and personnel - specialists of the 21st century-require immediate implementation. In this regard, I would like to consider the issue of training personnel using modern technologies.

The rapid development of information technology, in addition to a noticeable reduction in temporal and spatial barriers to the dissemination of information, has opened up new perspectives in the field of education. Today we can observe with confidence how in the modern world there is an active merging of educational and information technologies and the formation on this basis of fundamentally new integrated learning technologies based, in particular, on Internet technologies, digital technologies and artificial intelligence.

Information technologies are used in all spheres of human activity, spread through information flows in society, and form a global information space. Today in the world they are becoming more widespread because society needs updating information. Almost all spheres of society use information technology. The central part of this process is the computerization of education, including higher education [1].

**Literature review.** A certain layer of literature has been written on the topic of the use of digital technologies and artificial intelligence in history. These include the works of L.I. Borodkin: A new stage in the digital transformation of historical research: the possibilities of big data technologies and artificial intelligence, as well as a number of other articles by this author. Also, on this topic, articles by Krasovskaya L.V., Isabekova T.I. The use of information technologies in education, Korotaeva E. V., Andryunina A. S. Interactive learning: aspects of theory, methodology, practice, Chistyakova F. The pros and cons of using AI in education are named, Medvedeva Yu. Why is artificial intelligence dangerous for humanity, Gambiaeva Yu. N., Glotova A. V. Artificial intelligence as part of the concept of modern education: challenges and prospects. It should also be noted the works of the authors Gambiaev Y. N., Glotov A. V. Artificial intelligence as part of the concept of modern education: challenges and prospects.

Also, of particular interest in writing the article were the following works of foreign specialists, such as Nayak, P.,

Vaheed, S., Gupta, S. et al. Predicting students' academic performance by mining the educational data through machine learning-based classification model, Bobi, C. B., & Ahiavi, M. A. (2023). Using Differentiated Instruction to Promote Creativity, Critical Thinking and Learning: Perspective of Teachers, Rockwell Anyoha. The History of Artificial Intelligence Special Edition on Artificial Intelligence. This article is part of a Special Edition on Artificial Intelligence.

**Research methodology.** Digital technologies and artificial intelligence are becoming an integral part of our daily lives. However, their application is not limited to the sphere of entertainment, communications or business; they have great potential in education as well. At the moment, we can see an increase in the number of applications and programs that have been created to complement traditional methods of education, including history education. A well-known scientist in the field of the application of digital technologies in historical education, Corresponding Member of the Russian Academy of Sciences L.I. Borodkin believes that the process of digital transformation of historical research and education has acquired new features in recent years. While the tradition of using statistical methods and computer technologies by historians dates back six decades, with the beginning of the 21st century, the time has come for a noticeable update of the tools suitable for processing and analyzing data from historical sources. We are talking about the rapid development of data science, the emergence of new "intelligent" methods and technologies for working with data (when the data became "big") [2].

A key factor in the success of digital technologies in education is the ability to use them to gain a deeper and more understandable understanding of the material, as well as to develop critical thinking.

In the context of history education, digital technologies and artificial intelligence can be used to create interactive lessons and teaching aids that can help teachers and students better understand the past, its contemporary meaning and its connection to the present. The dynamic and rapid development of the era of digitalization has saturated this environment with numerous gadgets, which has expanded the very concept of "interactive learning". To date, both approaches to learning, forms of learning, learning technology, teaching methods, and teaching aids are called interactive[3].

One of the most striking examples of the use of digital technologies and artificial intelligence in history education is the creation of 3D models of historical places and events. Such models can recreate architecture, life, and everyday aspects of

time, giving students the opportunity to "jump back in time and space" and gain a deeper understanding of what happened in a particular historical period. Today we have 3D reconstructions of many archaeological sites. For example, the Baburnama chatbot can not only reproduce the terrain described in the book version of the work of Zahiriddin Muhammad Babur "Baburnama", but also visualize some of the historical events described in this source, such as the Battle of Ankara in 1402, etc.. In addition, digital technologies and artificial intelligence can be used to create educational games that can increase students' interest in history and develop their ability to switch between the detailed and comprehensive study of the material. For example, with the help of online games, students can go through various stages of the development of civilizations, learn to solve complex historical problems and draw conclusions based on their knowledge.

The IT sphere and mathematical approaches continue to develop, and new approaches appear, but the main difference between modern science and everything that has been done before, even in the field of artificial intelligence, is that historical knowledge itself has changed. Digital literacy has become the norm for the entire academic community, and the archival and museum industries have changed. Early local initiatives and experiments are more about interesting approaches, rather than the possibility of important changes. Now, every step creates the conditions for big changes, says Roman Borisovich Konchakov, head of the Department of Social and Economic History of Russia, ION RANEPА [4].

**Analysis and results.** The digitalization of history is one of the priority areas in the development of historical education in Uzbekistan. In recent years, significant steps have been taken in the country in this direction, and national projects for the digitalization of various types of content have been launched with the participation of government agencies, educational institutions and private companies. Among them is the electronic platform <https://raqamlitarix.uz/>, prepared in 2022 at the Faculty of History of the National University of Uzbekistan. The platform contains documents, video, audio and photo materials on the history of the repressive policy of the Soviet government in 1925-1950s in Uzbekistan. Another such project is the "Virtual Museum of Tashkent", which was launched in 2018. It contains more than 2.5 thousand exhibits, recreates historical buildings, and also offers virtual tours of different districts of Tashkent, allowing you to see the city from different points of view. In addition, online collections of national museums have become available for viewing to a wide audience.[5] Also noteworthy is the work of T. Nurulin - 3D reconstruction of ancient architectural monuments of ancient Tashkent, posted on the site [civiltashkent.blogspot.com/?m](http://civiltashkent.blogspot.com/?m).

It is also worth noting the importance of interactive teaching aids for digital history education. An electronic encyclopedia of the country's history was created in Uzbekistan, which includes more than 60,000 pages and more than 100,000 images. This has helped make history classes more interesting and understandable for students and promotes a useful and accessible education. In addition, universities and scientific organizations in Uzbekistan are actively introducing new technologies in historical research and education, allowing students and researchers to access a large amount of data and archives that were previously inaccessible to non-specialists.

In general, the digitalization of historical education is an important tool for improving the educational environment and improving the quality of education in Uzbekistan. Thanks to new technologies and various projects, a wide range of people can access the history of their country and better understand its meaning and connection with modernity.

Artificial Intelligence (AI), it can be used in history education to improve the quality of teaching and learning.

Let's take a look at some of the ways in which AI can be used in history education, which include:

- Creating dialogue systems: AI can be used to create dialogue systems that can ask questions to students and help them understand the material better. Such systems can use neural networks and natural language processing algorithms to process student responses and offer additional information for an in-depth study of the historical period.

- Text recognition and information processing: AI can be used to classify historical documents and texts and process and analyze them. Such processing can help teachers collect, store and manage large amounts of historical data.

- Creation of history teaching materials: AI can be used to create teaching materials in various formats, including interactive lectures and workshops, video tutorials, online games, etc. With the help of machine learning algorithms and neural networks, the generated content can be customized to the unique needs of each student.

- Image Recognition: Using AI to recognize images such as historical photographs and illustrations can greatly facilitate the learning process and make it more interesting and engaging for students.

- Creation of virtual museums: AI can be used to create virtual museums, allowing students to explore historical objects and exhibits from different parts of the world that were previously inaccessible.

- Big data analysis: AI can facilitate big data analysis, including bringing historical documents into a readable format and using machine learning algorithms to classify information.

- Interactivity: The use of AI can help create interactive micro-scenarios within the study of history, allowing students to interactively interact with historical events and personalities, realizing their meanings and details.

The use of AI in history education can greatly improve the learning process and provide a better understanding of historical facts, events and characters.

Therefore: the use of artificial intelligence (AI) in historical education has great prospects. Here are some of them:

- Improving the quality of education: AI can help improve the quality of education by providing teachers and students with interactive lectures, tours and games, which can make the learning process more interesting and accessible to everyone.

- Attracting new generations: AI can help attract a new generation of students to study history. Interactive lessons, online games and other forms of content can make history learning more fun and interesting for young people.

- Improved accessibility: AI can help students explore historical events and documents from anywhere in the world, allowing for greater accessibility to education and ensuring equal access for all populations to education for all.

- Personalized learning: The use of AI can help personalize learning for each student and learner, and customized learning materials can be offered according to the level of knowledge or different needs.

- More material: The use of AI allows you to collect and process large amounts of information, including historical data, which makes it possible to gain a more comprehensive understanding of a particular historical period.

- Expanding Research: AI can help search for new historical connections and trends, expanding our knowledge of history and helping to better understand the relationship of chronology - between different historical periods.

The use of AI in history education makes the learning process more accessible, interesting and effective for students. The potential of such learning experiences makes us think about a future where the use of AI will play a big role in the development of education around the world.

It should also be noted that Artificial Intelligence can bring many positive aspects to the education system - for example, ChatGPT will make learning personalized. But it will not do without minuses, Olga Neronova, LearnAI expert, noted in an interview with RIA FAN. Firstly, it (ChatGPT - author's note) will make learning personalized. Based on the analysis of student data, and ChatGPT is in this pro, he will be able to create individual learning plans, select the necessary information to fill gaps, and explain in an accessible way what is difficult to understand.

Also, AI will increase the productivity of teachers and teachers by reducing the time it takes to find and process the necessary information. Estimates will become more objective because such technologies will allow the creation of new algorithms for determining a score for work.

However, one of the risks may be bias or discrimination against AI, as well as mistakes made by it. Another disadvantage is that the number of jobs for teachers may be reduced because ChatGPT will take over some of their duties. For example, the ChatGPT chatbot is already helping students write their final theses[6].

However, despite all the positive aspects and prospects, the use of digital technologies and artificial intelligence in education should always be carried out with caution. The goal is to make AI that will work only for the benefit, and not to the detriment of a person [7].

Artificial intelligence can play a key role in the system of modern education (realization of the idea of personalized learning, increasing the efficiency of teachers, creating favourable conditions for learning and development of students, etc.).[8] And also in predicting academic performance.

Predicting student academic performance is one of the most important data mining (EDM) applications in education

that helps improve the quality of the learning process. Achieving student outcomes in Outcome-Based Education (OBE) adds invaluable rewards by facilitating corrective action in learning processes. In addition, the explosive growth of e-learning platforms generates a large amount of data that requires the extraction of useful information using modern methods [9].

The process of using AI in the educational process, the view and opinion of the teacher is also important. Examining the experience of teachers in this area, showing a positive effect that can affect the knowledge and skills of students, educators recognize the importance of learning styles, motivation and encouragement to improve learning outcomes[10]. Here it is appropriate to cite the opinion of scientists at Harvard University, who also discuss questions about the ability of machines to think, whether to follow it in pursuit, the path of success and failure, predictions of ubiquitous artificial intelligence[11].

**Conclusion/Recommendations.** However, it is important to consider that some areas of knowledge, such as history, require more time and intellectual effort to be mastered and understood. Therefore, before introducing digital technologies and artificial intelligence into history education, we need to conduct a serious discussion and analyze their impact on the quality of education. In conclusion, we can say, in our opinion, that digital technologies and artificial intelligence in historical education have great potential. Curricula and teaching materials developed using new technologies can help students gain a deeper and more comprehensive understanding of history and draw their attention to this important subject. But their application must be carried out taking into account all the risks and benefits.

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## ИЗУЧЕНИЕ ОПТИМАЛЬНЫХ УСЛОВИЙ ВЫДЕЛЕНИЯ ФЛАВОНОИДОВ ИЗ РАСТЕНИЯ *PHYSALIS ALKEKENGII*

Аннотация

В данной статье изучены оптимальные условия экстракции биологически активных веществ, в частности суммы флавоноидов из лекарственного растения *Physalis alkekengi L.* При этом были изучены влияние некоторых факторов на выход флавоноидов, в частности, концентрация экстрагента, размер частиц сырья, влияние времени инкубации и соотношение сырья и экстрагента. Получен сухой экстракт тёмно-зелёного цвета с помощью этанола и проведен количественный и качественный анализ для определения суммы флавоноидов в листьях растения в пересчете на лютеолин.

**Ключевые слова:** Флавоноиды, лютеолин, физалис, биологически активные вещества, лекарственное растение, экстракция, экстрагент, этанол, сухой экстракт.

**Введение.** В последние годы большое внимание уделяется препаратам растительного происхождения, воздействующим на организм без негативных последствий. Использование различных растительных препаратов обусловлено, прежде всего, их высокой биологической активностью и меньшим вредным воздействием на живой организм, чем их химические аналоги. Это связано с тем, что биологически активные вещества растительного происхождения гораздо реже вызывают побочные реакции (аллергию, дисбактериоз, заболевания крови, язвенную болезнь желудка и кишечника и др.) и, как правило, не накапливаются в организме, тканей человека и животных [1].

Большинство лекарственных средств, применяемые в медицинской практике для лечения многих заболеваний имеют синтетическую природу и эти препараты в большинстве случаев, имеют побочные действия. В связи с этим особое внимание уделяется на лекарственные растения, которые в этом плане более перспективным являются флавоноидсодержащие растения, в частности их экстракты. К таким видам лекарственных растений относится *Physalis alkekengi L.* из семейства пасленовых [1].

Это растение широко распространено в Европе, Америке, Азии и обладает противовоспалительным, антисептическим, болеутоляющим, кровоостанавливающим, мочегонным, желчегонным действиями. Отвар или водный настой плодов принимают при мочекаменной болезни, цистите, гепатите, бронхите, перемежающейся лихорадке, отеках, асците, ревматизме, подагре, ушибах. Свежие плоды и сок растения применяют при дерматозах, заболеваниях органов дыхания, гонорее, дизентерии, гипертонии [3].

Учитывая медико-биологическую значимость данного класса соединений, в настоящее время проводятся научные исследования с целью идентификации видов флавоноидсодержащих растений [2]. Исходя из активности, доступности и практической значимости *Physalis alkekengi L.* является важнейшим представителем флавоноидсодержащих растений.

По литературным данным известно, что в плодах содержатся углеводы и родственные соединения: сахара (28,38%), пектин (3,8%); органические кислоты (5,1%), а в семенах - жирное масло (14,86%), аскорбиновая кислота, дубильные вещества, макро- и микроэлементы. Листья

содержат каротиноиды: альфа-каротин, физоксантин, лютеин, бета-каротин, и флавоноиды, в том числе, лютеолин, 7-β-глюкозидлютеолина [3].

Исходя из вышеизложенного, целью исследования являлась разработка оптимальных условий получения экстрактивных веществ лекарственного растения *Physalis alkekengi*, обладающей наиболее высокой биологической активностью.

**Анализ литературы по теме.** Особенность этого растения - богатый состав биологически активных веществ (БАВ), то есть химические вещества, обладающие при небольших концентрациях высокой физиологической активностью по отношению живому организму. Среди БАВ, которые синтезируются и накапливаются растением, относятся алкалоиды, стероиды, флавоноиды (фенольные соединения и их гликозиды), каротиноиды, полисахариды, лектины, пектины, витамины, жирные масла, дубильные вещества (танины) и др [4].

По литературным данным известно, что в плодах растения содержатся углеводы и родственные соединения: сахара (28,38%), пектин (3,8%); органические кислоты (5,1%), а в семенах - жирное масло (14,86%), витамины, дубильные вещества, макро- и микроэлементы. Листья содержат каротиноиды: альфа-каротин, физоксантин, лютеин, бета-каротин, криптоксантин, зеаксантин, эфир зеаксантина; стероиды: ситостерин, кампестерин, стигмастерин, холестерин, изофукостерин; фенолкарбоновые кислоты и их производные: хлорогеновая; флавоноиды; лютеолин, 7-β-глюкозид лютеолина [5].

*Physalis alkekengi L.* использовался в качестве противомикробного растения в иранской народной медицине. Изучены антибактериальные свойства и противогрибковые активности водно-спиртового экстракта растения. Также учеными установлены, что водно-спиртовой экстракт растения уменьшает имплантацию и вызывает антиплодотворение у крыс. Установлены воздействия фруктового водно-спиртового экстракта *Physalis alkekengi* на сократительную способность матки и его возможности. Поэтому в иранской народной медицине считается, что это растение обладает abortивными и противобесплодными действиями [5].

*Physalis alkekengi* широко распространено по всему Китаю. Все части растения (плоды, чашечки, корни, листья и стебли) издавна используются в традиционной китайской медицине для лечения болей в горло, кашель, экзема, гепатит, проблемы с мочеиспусканием, и опухоли [8]. Также рядом японскими и китайскими исследователями установлено эффективное лечение экстракта *Ph. alkekengi* фарингита, так как, основные компоненты экстрактов физалины и флавоны предьявляли антибактериальные свойства и противовоспалительную активность [10].

Работы по физалисам интенсивно проводились в Англии, Франции и США учеными Keith Basey, Brian A. McGaw and Jack G. Woolley 1973г. Из следующих видов физалиса *P. angulata*, *P. philadelphica*, *P. ixocarpa*, *P. edulis*, *P. peruviana*, *P. minima*, *P. pubescens*, *P. viscosa* и *P. Pruinosa* выделены и изучены алкалоиды 1-метилпирролидин-2, 3-метил-2- оксипирролидин и установлены их антибактериальные свойства. Некоторые важные алкалоидные соединения, как, физалин и пиридоксин выделены и изучены также Иранскими учеными из растения *Physalis alkekengi* и *P. angulata* [11].

Японскими учеными выделены и охарактеризованы около 124 биологически активных компонентов из разных частей *Physalis alkekengi*, как стероиды (особенно физалины А, В, D, F, L), флавоноиды (лютеолин О-β-D-глюкопиранозид), калистегин В1, В2, хлорогеновая кислота, феруловая кислота и др. Также, показаны фармакологические функции выделенных соединений *in vitro* и *in vivo*. Экстракты растения проявляли различные действия, такие как противовоспалительные действия, ингибирование пролиферации опухолевых клеток, антимикробная активность, диуретический эффект, антидиабет, антиастма, иммуномодуляция и антиокислительное действие [12].

Применение *P. alkekengi L.* для предотвращения возрастного ухудшения зрения (Дейнека В.И., Сорокопудов В.Н., 2008), каротиноиды (Гостицев И.А., 2018), биохимический состав физалиса (Гумеров Т.Ю. и др., 2017) изучены российскими учеными [14]. Также ведутся химические работы по изучению растения *P. alkekengi L.* в Институте химии растительных веществ в Таджикистане (И.Дж. Кароматов, З.Р. Гоипова, 2017).

**Методы исследования.** Для проведения исследований были использованы зеленые листья и цветки лекарственного растения *Physalis alkekengi*. В работе для определения содержания флавоноидов взяли 30 г листья растения, измельченной до размеров частиц 0,5 мм, поместили в колбу емкостью 1,0 л колбу и заливали экстрагент. Затем инкубировали при комнатной температуре в течение 6-8 часов. После инкубации смесь экстрагировали последовательно этанолом (40-90%). Для полного извлечения флавоноидов из растения экстракт нагревали при температуре 80-90°C и этанольный экстракт порциями упаривали на роторном испарителе «Rotavapor R-210» при t 50-60°C до консистенции густой массы. Затем проводили лиофильную сушку для получения сухого экстракта растения. В полученных сухих экстрактах

определяли содержание флавоноидов в пересчете на лютеолин [12]. Сухой экстракт представлял собой негигроскопичный порошок темно-зеленого цвета со специфическим запахом.

Около 1,0 г (точная навеска) сырья *Physalis alkekengi*, измельченного и просеянного через сито с диаметром отверстий 2,0 мм, помещали в колбу вместимостью 250 мл, добавляли 80%- этиловый спирт в количестве 100 мл и взвешивали. Колбу нагревали на кипящей водяной бане в течение 1 часа, периодически встряхивали. Колбу с содержимым охлаждали, взвешивали и при необходимости доводили объем содержимого до метки 80% - этиловым спиртом. Извлечение фильтровали через бумажный фильтр, отбрасывали первые 10 мл фильтрата (*раствор А*). 3,0 мл фильтрата помещали в мерную колбу вместимостью 25 мл, прибавляли 5 мл 3% спиртовой раствор алюминия хлорида в 80 % - этиловом спирте. Затем инкубировали в течение 10 минут и добавляли разведенной уксусной кислоты (2 капли). Объем раствора доводили до метки 80% - этиловым спиртом и оставляли на 45 минут (*раствор Б*).

Оптическую плотность полученного раствора измеряли на спектрофотометре при длине волны 400 нм в кювете с толщиной слоя 10 мм. В качестве раствора контроля для сравнения использовали раствор, состоящий из 3,0 мл исходного извлечения, 2 капель разведенной уксусной кислоты и доведенный 80 % этиловым спиртом до метки в мерной колбе вместимостью 25 мл. Содержание суммы флавоноидов в процентах (X) в пересчете на лютеолин и абсолютно сухое сырье вычисляли по формуле:

$$X, \% = \frac{D \times x \times 100}{549,41 \times m \times 3 (100 - W)} \times 100;$$

D – оптическая плотность исследуемого раствора;  
549,41 – удельный показатель поглощения комплекса лютеолина с алюминия хлоридом при 400 нм;  
m – масса сырья в граммах;  
W – потеря в массе при высушивании сырья в процентах.

Правильность методики устанавливали определением количественного содержания суммы флавоноидов в пересчете на лютеолин в растворах, полученных с помощью добавления 0,25 мл, 0,50 мл, 0,75 мл стандартного раствора лютеолина к исследуемому раствору [14].

**Анализ результатов.** В работе для выбора оптимальных условий экстракции флавоноидов из растения *Physalis alkekengi* было проведено исследование по определению извлечения суммы флавоноидов. При этом были изучены влияние некоторых факторов на выход флавоноидов, в частности, концентрация экстрагента, размер частиц сырья, влияние времени инкубации и соотношение сырья и экстрагента.

Для установления полноты экстракции флавоноидов из растения *Physalis alkekengi* изучали влияние концентрации экстрагента. Полученные данные приведены на рис. 1.

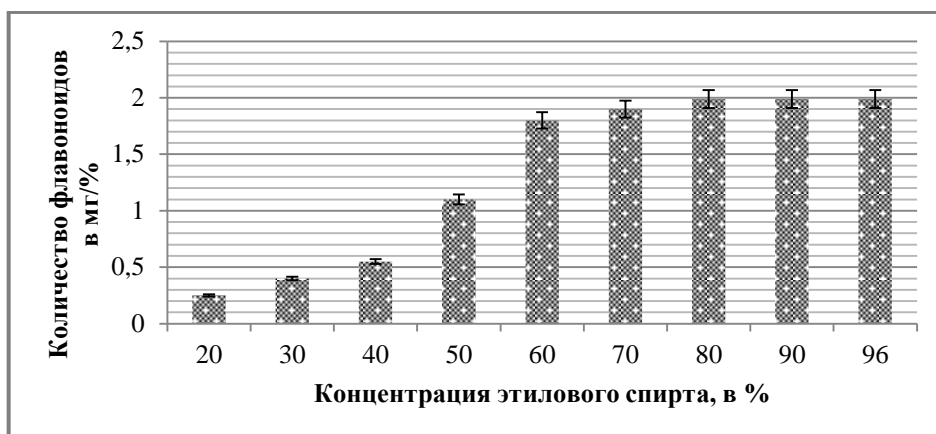


Рис. 1. Влияние концентрации этанола на эффективности экстракции флавоноидов

Из рис. 1 видно, что при низких концентрациях (20%, 30% и 40%) выход флавоноидов составлял от 0,25 до 0,55 мг. Флавоноиды наиболее полно извлекались этанолом при концентрации 80%. При этом концентрация флавоноида составлял 1,92 мг. Дальнейшее повышение концентрации экстрагента не приводило к увеличению эффективности экстракции флавоноидов.

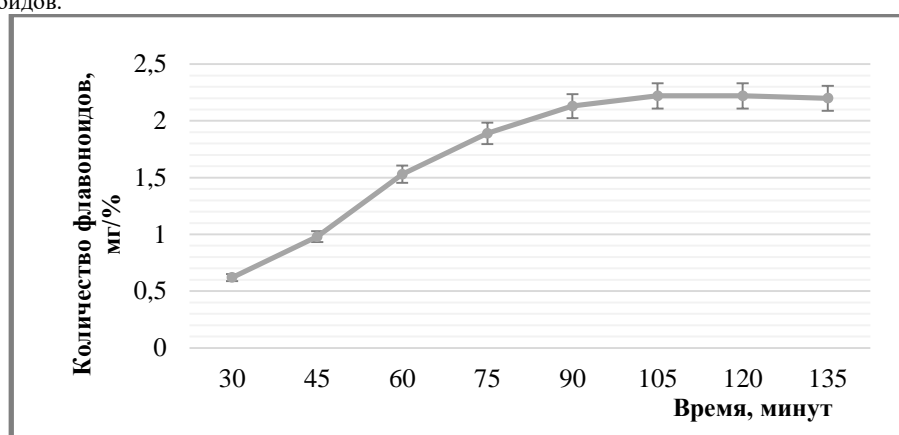


Рис.2. Влияние время инкубации на эффективности экстракции флавоноидов

Также в работе были изучены влияния времени инкубации на эффективности экстракции флавоноидов в течение от 30 до 135 минут (Рис. 2).

Как видно из рис. 2, что в течение 105 минут флавоноиды полностью извлекаются из растительного сырья. Дальнейшее увеличение времени инкубации не повышал выход флавоноидов.

На следующем этапе исследования нами были изучены влияния степени измельчения сырья, соотношение сырья и экстрагента для выхода флавоноидов. Полученные данные представлены в таблице 1. Из таблицы видно, что степень измельченности растения оказывает большое влияние на выхода активных веществ, в частности флавоноидов. При выборе степени измельченности растения использовали частицы сырья, проходящие через сито с диаметром отверстий 0,5; 1,0; 2,0; 3,0; 4,0 и 5,0 мм. Из полученных данных видно, что наиболее максимальное извлечение флавоноидов из *Physalis alkekengi* достигается при измельчении сырья до размера частиц 2,0 мм (количество флавоноидов составлял 1,93 мг) (Таблица №1).

Также были изучены соотношение сырья и экстрагента для выхода флавоноидов. Полученные данные приведены в таблице №1.

Таблица №1.

#### Влияние степени измельчения сырья, соотношение сырья и экстрагента для выхода флавоноидов

Соотношение сырьё : экстрагент, г/мл	Выход флавоноидов, мг%	Степень измельчения сырья, мм	Выход флавоноидов, мг%
1:30	1,51±0,87	0,5	1,79±0,91
1:50	1,62±1,03	1,0	1,81±1,12
1:60	1,79±1,12	<b>2,0</b>	<b>1,93±1,01</b>
1:80	1,91±0,92	3,0	1,90±1,71
<b>1:100</b>	<b>1,95±0,81</b>	4,0	1,65±0,98
1:150	1,95±0,99	5,0	1,48±0,91
1:200	1,94±1,12	6,0	1,48±0,91

Из таблицы №1 видно, что при соотношении сырьё и экстрагент (1:100) количество флавоноидов составлял 1,95 мг. Дальнейшее увеличение соотношение сырьё и экстрагента не повлиял на выход флавоноидов.

Далее, проведены исследования для количественного определения флавоноидов в сырье *Physalis alkekengi* и проведено исследование, основанная, на их способности образовывать окрашенный комплекс со спиртовым раствором алюминия хлорида [7]. Для расчета суммы флавоноидов в пересчете на лютеолин применяли метод УФ-спектрофотометрии. Измеряли оптическую плотность окрашенного комплекса, образующегося при

взаимодействии с 3 % спиртовым раствором алюминия хлорида, при длине волны 400 нм. Аналогичный максимум поглощения при длине волны 400 нм был отмечен для комплекса лютеолина со спиртовым раствором алюминия хлорида, использованного нами в методике в качестве стандартного образца (рис. 3). В качестве контроля использовали раствора без реактива.

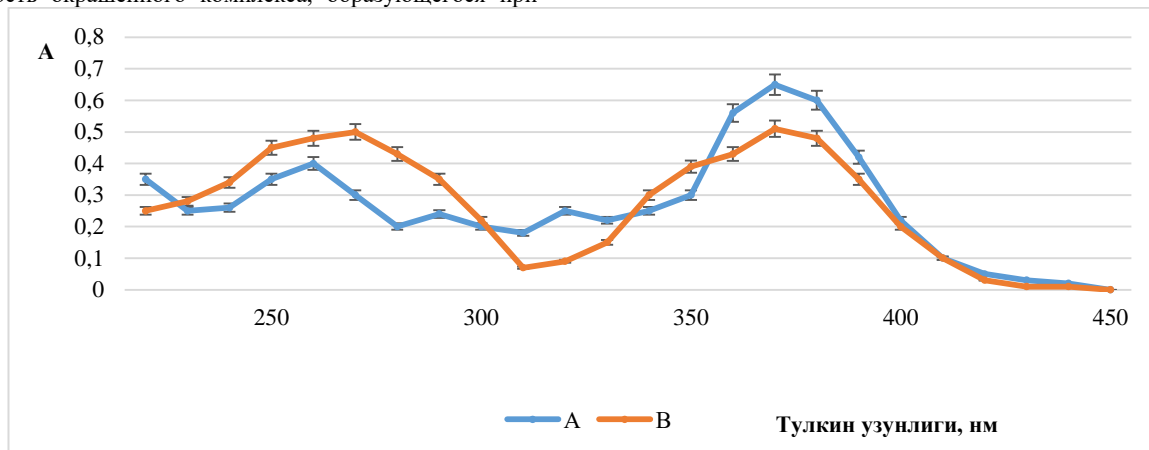


Рис. 3. УФ-спектры раствора стандартного образца лютеолина (А) и спиртового извлечения *Physalis alkekengi* (В)

Таким образом, был разработан метод получения сухого экстракта из растения *Physalis alkekengi*, и был проведен эксперимент на изучения количественного содержания флавоноидов.

**Выводы.** Таким образом, в данной статье подобраны оптимальные условия для экстракции биологически активных веществ, в частности суммы флавоноидов лекарственного растения *Physalis alkekengi*. При этом были изучены влияние некоторых факторов на выход флавоноидов, в частности, концентрация

экстрагента, размер частиц сырья, влияние времени инкубации и соотношение сырья и экстрагента. При этом 80% - этиловый спирт с частицами сырья размером 2,0 мм являлись оптимальными для выхода флавоноидов, а соотношение сырьё : экстрагент – составлял 1:100, а время экстракции составлял 105 минут. Также, в работе получен сухой экстракт тёмно-зелёного цвета с помощью этанола и проведен количественный и качественный анализ для определения суммы флавоноидов в листьях растения в пересчете на лютеолин.

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## MUMTOZ POETIK JANRLAR ABDURAUFI FITRAT TALQINIDA

Annotatsiya

Ushbu maqolada Jadid adabiyotining yirik vakili Abdurauf Fitratning adabiyotshunoslik faoliyati, xususan, mumtoz poetik janrlardan qasida, masnaviy va musammatlar haqidagi talqinlari ifoda etilgan va bugungi kundagi dolzarbligi va ahamiyati ochib berilgan.

**Kalit so'zlar:** Jadid adabiyotshunosligi, Abdurauf Fitrat, mumtoz poetik janrlar, qasida, masnaviy, musammatlar.

**Kirish.** Jadid adabiyoti namoyondalaridan nafaqat shoir, yozuvchilar va davlat va millat arboblari, balki, yirik adabiyotshunos-olimlar ham etishib chiqqan. Jadid adabiyotshunos-olimlaridan Abdurauf Fitrat, Vadud Mahmud, Abdurahmon Sa'diylarning adabiyotshunoslik borasidagi ilmiy izlanishlari mumtoz adabiyot va bugungi kun adabiyoti uchun yirik nazariy manba bo'lib xizmat qilib kelmoqda.

XX asr boshlarida Ovro'pa tipidagi adabiyot nazariyalarini shakllantirish borasida Sharq poetika maktabiga qayta-qayta murojaat qilib, undagi omil va jozib sifatlarini o'rgangan olim Fitratning she'riy janrlar sharhiga bag'ishlangan qarashlari muhim ahamiyatga ega. "Zero, "Adabiyot qoidalari" mumtoz poetika bilan zamonaviy adabiyot nazariyasini tutashiruvchi o'ziga xos ko'prik vazifasini o'tagan uchun ham bunday benazir vositaga tayangan holda o'tmish she'riyatiga nazar tashlash ham mumkin ekanini olimning nazariy qarashlarini asoslaydi" [1].

**Mavzuga oid adabiyotlar tahlili.** Abdurauf Fitrat "Adabiyot qoidalari" va "Fors shoiri Umar Xayyom" asarlarida mumtoz adabiyot janrlaridan g'azal, ruboiy, qasida, tarji'band, tarkibband, masnaviy, musammatlar haqida qimmatli ma'lumotlarni beradiki, biz ushbu maqolamizda murakkab strukturali janrlardan bo'lgan qasida, masnaviy, musammatlarga olim Abdurauf Fitratning qarashlarini asos qilib olamiz. Fitrat "Adabiyot qoidalari"da sochim va tizim haqida gapira turib, "o'zbeklarda-da tizim o'lchovi ikki turli bo'lib qoldi: birinchisi, o'zimizning milliy vaznimiz bo'lg'an barmoq vazni, ikkinchisi, arab-fors o'lchovi bo'lg'an aruz vazni. Bizda fors, arab aruzidagi tizimlarning shakllari tubandagichadir" deya, avvalo, g'azal haqida ma'lumot berib o'tadi. So'ngra *murakkab strukturali janrlardan* biri bo'lgan **qasida** to'g'risida to'xtaladi: "G'azal yo'sunida tuzulib, o'n iki baytdan ortuq bo'lg'an tizimlarga qasida deyiladi. Qasida g'azaldan kengrakdir. Maxtashlar, maxtanishlar, tabiat tasvirlari, axloqiy fikrlar qasida yo'sunli aytiladi" [2]. Fitrat qasidaga ta'rif berar ekan, bu janrda bizning o'zbek-chig'atoy adabiyotida qasida yo'li judayam kengaymagani, chiroylik o'rnaklari ozligini biroq tanqid qilib ketadi. "Fors shoiri Umar Xayyom"da esa qasidaga atroflicha, keng to'xtaladi: "Bir qofiya bilan aytilgan uzun manzumalardan iboratdir. Adabiyot qoidachilari uning 12-15 baytdan ortuq bo'lusini lozim ko'radilar. Qasidalar, umuman, shoirming sevganini maqtash, bahor, kuz, qish kabi fasllarni tasvir qilish, axloqiy va falsafiy dasturlar berish bilan boshlanib bir hukmdorning, bir vazimning yoxud qandaydir bir to'rani maqtash bilan tamomlangan.

**Tadqiqot metodologiyasi.** Qasida arab she'rining eski bir shaklidir. Arablarda qasidachilik islomdan burun bor edi. Forsiy shoirlar bu shaklni arablardan oldilar. Bu shaklning fors

adabiyotiga qachon kirgani haqida qat'iy bir narsa aytish qiyin. Biroq, ba'zi ma'xazlarning xabariga qarab, mas'alani o'zgina oydinlashtirish mumkin: 186 hijriy (808 milodiy)da mashhur abbosiy xalifalaridan Xorun ar-Rashid o'z o'lkasini o'g'ullariga taqsim qilib berganida Eron, Afg'oniston ham Movarounnahrni o'g'li Ma'mung'a berg'an va Ma'mun hukumati markazining Marvda bo'lishiga qaror qilgan edi. Mana shundan keyin Ma'mun Marvga kelganda Abul Abbos Marvaziy tomonidan unga forscha bir qasida taqdim qiling'an. Bu qasidaning bizgacha qolgan qismi uning ohangicha Ro'dakiy, Unsuriylarga ko'ra juda tubanligini ko'rsatadi. Abul Abbos Marvaziy bu qasidasida «undan burun forsiy tilda bunday bir she'r yozilmaganini, Ma'munning madh va sanosi bilan fors tilini ham buzatmak uchun bu qasidasini yozganini so'ylaydi. Yolg'uz shuning bilangina bu mas'ala haqida bir narsani uzul-kesil qilib aytish mumkin bo'lmasa ham boshqa qarinalarni munga qo'shganidan keyin qasidaning forsiy adabiyotiga har holda hijriy ikkinchi asrning oxirlarida kirganin qabul etish muvofiq bo'lib qoladi.

Eronda, Movarounnahrda arab xulofat markazidan ajralgan mustaqil hukumatlar (tohiriyalar, somoniyalar, g'aznaviyalar, saljuqiylar, xorazmshohiy-lar)ning saroylari fors adabiyotini, fors tilini himoya qilganida, ayniqsa, qasidachilikka katta ahamiyat berildi...

**Tahlil va natijalar.** Arablarda ham ko'brak madh va marsiya uchun ishlangan qasida shakli mazkur hukmdorlarning himoyalari soyasida judayam gullab ketdi. Somoniyalar, g'aznaviy (va) xorazmshohiy saroylarining qasidachi shoirlarini himoya qilishlari har kimga hayrat berarlik darajada buyuk edi. Shoirlarning og'izlarini injulardan to'ldirish, ularga obod qishloqlar, oltin kamar, qullar, bedov otlar bag'ishlamoq bu himoyaning kichkina namunalaridan sanaladi. Mahmud G'aznaviy o'zining saroy shoirlaridan «G'azoriy (Abu Yazid Muhammad G'azoriy-Roziy)g'a qadar in'om qilgan, oqcha bergan ediki, G'azoriy uni oqcha berishdan to'xtatmoq uchun yangi bir qasida bilan qichqirishga majbur bo'lg'an edi"[3]. Yuqorida Fitrat fikrlarini to'liq keltirishdan maqsad, birinchidan, qasidaning janr va mazmun jihatlari ko'rsatish, ikkinchidan, har bir qasidanavis ham podshohning in'omlarini, injularini olishga iddao qilmaganligidir.

"Adabiyot qoidalari"da qasidadan so'ng qit'aga va qit'adan keyin murakkab strukturali janrlardan bo'lgan **masnaviyga** ta'rif beriladi: "Har baytning iki misra'i o'ziga maxsus qofiyasi bo'lg'an tizimlarga masnaviy (ikilik) deyiladi. Dostonlar, maktublar (ko'brak sevgi maktublari) masnaviy yo'sunli yoziladi.

Misol:

Men qaribman meni xud netg'usidir,

Meni bu erda muqim etg'usidir...  
Na qo'lum bor, na oyog'im, na belim,  
Bu qadar evriladir so'zga tilim”.

“Fors shoiri Umar Xayyom”da Fitrat masnaviy haqida anchagina keng va atroflicha to'xtaladi: “Masnaviy so'zi(ning) bizchasi ikilikdir. Bu shakl nazmda har iki misra'ning maxsus mustaqil qofiyasi shart bo'lmoq bo'lub, masnaviy atalishi ham shuning uchundir. Masnaviy shaklida bir asar yozmoqchi bo'lg'an shoir qasida va g'azalida bo'lg'ani kabi o'z asarini ma'lum birgina qofiya bilan yozishg'a majbur bo'lmaydi. Shuning uchun nazmning bu shakli shoirg'a ozodlik beradi. Turli hikoyalar, dostonlar, va'z-nasihatlarga oid uzun asarlar yozish uchun nazmning masnaviy shakli boshqa shakllarga qarag'anda qulayroqdir. Bu shakl forsiylarning burung'i milliy nazm shakllaridanidir. Buning arab islomidan burung'i sostoniyalar sulolasi zamonida sulolasi borlig'i ma'lum”. Ko'rinadiki, Fitrat masnaviy haqida, batafsil ma'lumot berib o'tadi. Ayniqsa, Islom davridagi Eron shoirlardan eng eskilarining masnaviy shaklida dostonlar yozganlarini, Hijriy 4-asrda yashagan Bo'shago'r Abu Shakur Balxiy, Daqiqiy, Rudakiy va 5-asrda yashagan Asadiy va Firdavsiylar turli dostonlar yozganlarini, bu dostonlarning muhim qismi eroniyning milliy qahramonlik dostonlaridan iborat bo'lib, arab istilosidan qutulgan eronliklar orasida milliy his, milliy tuyg'ular qo'zg'alishiga xizmat qilgani uchun bunday dostonlar Eron milliy burjuaziyasi tomonidan himoyalanganligini aytib o'tadi. Fitrat qahramonlik dostonlari haqida gapira turib, bu borada Firdavsiychalik shuhrat topganlar kamligini eslatadi: “Qahramon(lik) dostonini eng yuqori darajaga chiqarg'an shoir mashhur Firdavsiy (hijriy 411). Firdavsiydan keyin bu yo'lda asar yozish davom qilg'an bo'lsa ham Firdavsiydan yuqoriroq yoxud unga baravar keladigan bir shoir undan keyin forsiy adabiyot dunyosida etishmagandir”. Bu zamonlarda qahramonlik dostonlari bilan birga ishqiy dostonlar ham yozila boshlangan edi. Uning ilk namunasi Daqiqiyning ishq ham urush dostoni bo'lg'an «Vomiqu Uzro»sini, «Lug'ati Hofizi Ubahiy»da mashhur Rudakiyga nisbat berilgan ba'zi baytlardan uning ham muta'qorib vazni birla «Yusuf, Zulayho» yozganini gumon qiladi. Firdavsiyning ham «Yusuf, Zulayho» o'tli ma'lum bir dostoni borligi, biroq u «Shohnoma»si darajasida yuksak bir asar emasligini, ishqiy dostonlar o'zining eng yuqori bosqichiga milodiy 12-asrda yashagan mashhur Nizomiy bilan chiqa olganligini, Nizomiy o'zining «Layli va Majnun», «Farhod va Shirin», «Haft paykar» kabi ishqiy dostonlari bilan bu yo'lda forsiy adabiyotiga abadiy esdaliklar bag'ishlay olganligini, Nizomiydan keyin bu

yo'lni undan ilgariroq olib borish hech bir forsiy shoirga nasib bo'lmaganligini aytib o'tadi.

“Adabiyot qoidalari”da Fitrat *tarji'band va tarkibband* haqida qisqacha ma'lumot berib o'tadi, biroq “Fors shoiri Umar Xayyom”da bu janrlar haqida ma'lumotlar uchramaydi. Tarji'band va tarkibband janrlari va ularning takomili haqida biz o'z tadqiqot ishlarimizda batafsil to'xtalganmiz [4].

Fitrat “Adabiyot qoidalari”da *musammatga* ham ta'rif beradi: “Uzun bir tizmani to'rtlik, beshlik, oltilik parchalariga ajratadilar. Birinchi parchasining hamma misra'lari qofiyadosh bo'ladi. Qolg'an parchalarining so'ng misra'lari ayri-ayri qofiyadosh bo'lub, so'ng misralar esa birinchi parchaning qofiyasig'a boylanadi. *Musammat* necha turlik bo'ladi: 1) to'rt misra'liq bo'lsa murabba' (to'rtlik); 2) besh misra'liq bo'lsa muxammas (beshlik); 3) olti misra'liq esa musaddas (oltilik) deyiladi...” – deya, Navoyi, Lutfiy, Husayniy, Komil, Rojiiy, Amiriy kabi ko'b chig'atoy o'zbek shoirlarining musammatlari (muxammas, musaddas, murabba'lari) borligini qayd etib o'tadi. Husayniyning Navoyi g'azaliga bog'lagan muxammasini misol tariqasida keltiradi.

“Fors shoiri Umar Xayyom”da Fitrat ayrim janrlarni keltirmaganligining sababini quyidagicha izohlaydi: “Biz fors she'rining shakl e'tibori bilan to'rt muhim qismg'a ayrilg'anin yozdik. Bu fors she'rining musammat, qit'a, mustazod kabi boshqa shakllarini eslamay qolg'animizdan emas, balki ularning ikkinchi darajada ahamiyatli hamda bizning mavzuimiz uchun judayam kerakli bo'lg'ani uchundir. Shuni ham aytib qo'yish kerakki, fors shoirlari bu shakllarning hammasi bilan ham mashg'ul bo'lganlar. Hammasida ham yozg'anlar, biroq ularning har shaklda yozg'anlari san'at nuqtai nazaridan bir darajada bo'lmag'an. Ba'zilari masnaviyda, ba'zilari qasidada, ba'zilari g'azalda, ba'zilari ruboyida ustunlik qilg'anlar”.

**Xulosa va takliflar.** Yuqoridagi fikrlar va faktlardan ma'lum bo'ladiki, adabiyotshunos-olim Abdurauf Fitrat Sharq mumtoz adabiyoti anrlariga va ularning takomiliga befarq bo'lmagan va har bir janr haqida ilmiy-nazariy fikrlarini misollar, iqtiboslar keltirish orqali asoslagan. Ushbu janrlarning o'zbek adabiyotidagi va fors adabiyotidagi namunalari, ularning o'xshash hamda farqli jihatlarning talqini, *murakkab strukturali janrlardan qasida, masnaviy, musammatlar* haqida bildirilgan fikrlari ayniqsa, bugungi kunda adabiyot nazariyasi, mumtoz adabiyotshunoslik, jaded adabiyotshunosligi va zamonaviy adabiyotshunoslik uchun katta ilmiy-nazariy noyob manba bo'lib hisoblanib kelinmoqda.

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## ВЗАИМОСВЯЗЬ САМОЭФФЕКТИВНОСТИ И ЦЕННОСТНОГО ОТНОШЕНИЯ ЛИЧНОСТИ К ЗДОРОВЬЮ

Аннотация

В статье анализируются результаты изучения взаимосвязи самоэффективности и ценностного отношения личности к здоровью как у здоровых людей, так и у людей в ситуации хронических заболеваний. Методологической основой анализа эмпирических данных выступили биопсихосоциальный подход к здоровью и болезни Дж.Энджела, теория отношений В.Н.Мясищева, социально-когнитивная теория А.Бандуры. В качестве показателей ценностного отношения к здоровью в статье рассматриваются степень выраженности здорового поведения и его компонентов, приверженность лечению, управление болью. Высокие показатели самоэффективности личности выявлены у участников исследования с высокими уровнями здорового поведения и приверженности лечению, конструктивными стратегиями управления болью.

**Ключевые слова:** самоэффективность, здоровье, ценностное отношение к здоровью, здоровое поведение, приверженность лечению, управление болью.

**Введение.** Научно-исследовательским и практическим фокусом социальной психологии здоровья является феномен ценностного отношения к здоровью. Именно фактор отношения человека к своему здоровью выступает в качестве основного среди факторов риска. Так, статистические данные показывают, что среди факторов риска факторы образа жизни занимают примерно 50-57% удельного веса всех факторов (генетические факторы, окружающая среда, качество и эффективность медицинского обслуживания), влияющих на здоровье людей [5].

Приоритетность изучения ценностного отношения личности к здоровью в психологических исследованиях обусловлена изменением образа жизни современного человека и высоким уровнем заболеваемости хроническими болезнями. Так, согласно данным Всемирной организации здравоохранения, основными проблемами здоровья подростков и молодежи во всем мире выступают травмализм, насилие, психическое здоровье, употребление алкоголя, наркотических средств и табака, ВИЧ/СПИД и другие инфекционные заболевания, преждевременная беременность и деторождение, недостаточное питание, ожирение, дефицит питательных микроэлементов, низкий уровень физической активности. К примеру, половина всех психических нарушений у взрослых проявляются до 14 лет, но они остаются невыявленными в детском возрасте и, соответственно, служат фактором снижения качества жизни [3]. Или, данные ВОЗ свидетельствуют, что отказ от употребления табака, конструктивное питание, регулярная физическая активность, поддержание здоровой массы тела могут предотвратить большинство сердечно-сосудистых заболеваний, диабет 2-ого типа [2].

Постановка проблемы психологического изучения ценностного отношения личности к здоровью с необходимостью поднимает вопрос о его факторах. К этим факторам относят социально-когнитивные, коммуникативные особенности личности, ее смысловые ориентации и психологическое благополучие, среди которых самоэффективность личности рассматривается как ключевой. В связи с этим

**целью** настоящей статьи выступает анализ взаимосвязи самоэффективности и ценностного отношения личности к здоровью как в ситуации здоровья, так и в ситуации хронических заболеваний. Реализация этой цели требует, *во-первых*, обсуждения понятия «самоэффективность личности», *во-вторых*, рассмотрения результатов изучения самоэффективности личности в ее взаимосвязи со здоровым поведением, приверженностью лечению, управлением болью.

**Литературный обзор.** Самоэффективность личности рассматривается в рамках социально-психологических моделей поведения, направленного на здоровье (*health related behaviour*), которые занимают особое место в социальной психологии здоровья. В моделях, разработанных с позиций англосаксонской традиции изучения проблем здоровья и болезни, подчеркивается значение когнитивных процессов как основных механизмов детерминации поведения человека [1]. К этим моделям можно отнести модель взглядов на здоровье (*The Health Belief Model*), теорию спланированного поведения (*Theory of Planned Behavior*), социальную когнитивную теорию (*Social Cognitive Theory*), трансформационную модель изменения здорового поведения (*The Trans-Theoretical Model of Health Behaviour Change*).

Социально-когнитивные модели, *во-первых*, подчеркивают роль убеждений как основных детерминант поведения человека, *во-вторых*, обращаются не только к познавательной потребности человека (т.е. передаче определенного количества знаний), но и к необходимости тренировки различных навыков, правильного поведения в жизненных ситуациях (например, провоцирующих курение, первое употребление алкоголя, наркотиков). В качестве ключевого социально-когнитивного конструкта, например, в теории социального научения Дж. Роттера выступает locus контроля, в социально-когнитивной теории А. Бандуры – самоэффективность, в теории запланированного поведения А. Айзена, М. Фишбайна – воспринимаемый поведенческий контроль [1, 4].

Социальная когнитивная теория (*Social Cognitive Theory*) А. Бандуры строится на предположении, что

поведение человека, влияние внешней среды, отношения и представления носят взаимозависимый характер. Основанием теории выступает разнофакторная причинная структура, в которой осознаваемые цели, ожидания результатов и внешние воспринимаемые препятствия совместно с самоэффективностью регулируют мотивацию, действия и благополучие человека [8, 9]. Самоэффективность определяется А. Bandura как убежденность человека организовать и реализовать свои действия для достижения своих целей [8, 9]. Другими словами, люди верят в свою способность справиться с обстоятельствами, в которых их здоровье подвергается высокому риску, и больше не возвращаются к вредному для здоровья или рискованному поведению. А. Бандура указывает, что «в социально-когнитивной теории, убеждение в эффективности действует как одна из многих детерминант, регулирующих мотивацию, эмоции и поведение» [8, с.628].

Многочисленные исследования направлены на поиск доказательств самоэффективности личности как фактора поведенческих изменений, здорового поведения и здорового стиля жизни, контроля хронических заболеваний [7, 10, 12-14]. В частности, исследования показывают, что самоэффективность играет большую роль в изменениях поведения [например, 10, 13]. Она служит ресурсом для выполнения как конкретных задач (например, использование тренажеров, приготовление овощей, бег трусцой), так и для саморегуляции (например, постановка целей, самомониторинг, решение проблем) [10]. Выраженность самоэффективности предсказывает контроль респондентами индекса массы тела [12].

Если рассматривать роль самоэффективности в ситуации хронических заболеваний, то литературный анализ показывает значительную связь между самоэффективностью и специфическими действиями по поддержке здоровья. Самоэффективность рассматривается как важный психосоциальный конструкт, который прямо или опосредованно влияет на действия по сохранению здоровья, который способствует эффективности образовательных вмешательств в ситуации заболевания [14].

Таким образом, представляет интерес изучение самоэффективности личности как фактора ценностного отношения к здоровью.

**Методология исследования.** В статье проведен анализ эмпирических данных, полученных в ряде исследований. Методологической основой анализа эмпирических данных выступили биопсихосоциальный подход к здоровью и болезни Дж.Энджела [11], теория отношений В.Н.Мясищева [6], социально-когнитивная теория А.Бандуры [8, 9].

В исследовании взаимосвязи самоэффективности личности и здорового поведения в зрелом возрасте приняли участие 407 человек, в подростковом и юношеском возрасте – 280 человек. В исследовании взаимосвязи самоэффективности личности и приверженности лечению приняли участие 40 мужчин с подтвержденным диагнозом «первичное бесплодие», 40 потребителей инъекционных наркотиков, живущих с ВИЧ. В исследовании взаимосвязи самоэффективности личности и стратегий управления болью участвовали 80 пациентов с подтвержденным диагнозом ревматоидного артрита.

В исследованиях применялись для изучения особенностей самоэффективности личности – шкала самоэффективности (R.Schwarzer, M.Jerusalem); здорового поведения – методика «Индекс отношения к здоровью» С.Д.Дерябо, В.А.Ясвина, авторский опросник здорового поведения в зрелом возрасте, опросник здорового поведения для подросткового и юношеского возраста

О.С.Макаровой, М.Х.Карамян; приверженности лечению – опросник диагностики приверженности лечению при бесплодии (Д.Н.Валиева, М.Х.Карамян), опросник диагностики приверженности антиретровирусной терапии (Н.Г.Харабара, М.Х.Карамян); управления болью – опросник болевых копинг-стратегий.

В качестве методов анализа были использованы статистические методы обработки данных (U-критерий Манна-Уитни и t-критерий Стьюдента для двух независимых выборок, корреляционный анализ с помощью коэффициента ранговой корреляции Спирмена). Статистическая обработка данных производилась с помощью программы SPSS 23.0.

**Анализ и результаты. Самоэффективность личности и здоровое поведение в зрелом возрасте.** Было показано, что участники исследования, которым характерна высокая самоэффективность, чаще совершают действия по сохранению своего здоровья ( $U=18094,0$ ,  $p\leq 0,05$ ), правильно питаются ( $U=17871,0$ ,  $p\leq 0,05$ ). Высокоэффективные участники исследования чаще, чем низкоэффективные участники исследования стараются жить в соответствии с общечеловеческими духовными ценностями, сохранять ровное оптимальное настроение ( $U=18228,0$ ,  $p\leq 0,05$ ). Им более свойственна маскулинность, т.е. вера в то, что человек должен быть физически сильным и контролировать свои эмоции ( $U=16857,0$ ,  $p\leq 0,05$ ). Это результат можно объяснить тем, что самоэффективность личности связана с верой в себя и свои действия.

Полученные данные подтверждаются результатами корреляционного анализа показателей здорового поведения и показателей самоэффективности и локуса контроля здоровья. Чем больше выражена у людей зрелого возраста самоэффективность, тем реже они курят, употребляют наркотические вещества ( $r_s=0,123$ ,  $p<0,05$ ), тем чаще они верят в необходимость контроля своих эмоций, поддерживают хорошее настроение ( $r_s=0,164$ ,  $p<0,01$ ), избегают рискованного поведения ( $r_s=0,203$ ,  $p<0,01$ ), получают положительные эмоции при общении с друзьями и родственниками ( $r_s=0,102$ ,  $p<0,05$ ).

**Самоэффективность личности и здоровое поведение в подростковом и юношеском возрасте.** Исследование показало, что самоэффективность более выражена у подростков с высоким уровнем интенсивности отношения к здоровью ( $U=3283,0$ ,  $p<0,05$ ) и с высокой выраженностью здорового поведения ( $U=3477,0$ ,  $p<0,05$ ). Другими словами, подростки и юноши с высоким уровнем интенсивности отношения к здоровью и большей выраженностью поведения, направленного на здоровье, черпают свои силы в вере в эффективность собственных действий, ожидании успеха от их реализации. Они характеризуются уверенностью в эффективности собственных действий в сложных жизненных ситуациях, чем подростки, у которых низкая выраженность здорового поведения.

Более высокие показатели правильного питания ( $U=3488,5$ ,  $p<0,05$ ), вовлечения в физическую активность и спорт ( $U=4135,5$ ,  $p<0,05$ ), маскулинности ( $U=4311,0$ ,  $p<0,05$ ), положительных эмоций ( $U=3327,5$ ,  $p<0,05$ ), соблюдения здоровых привычек ( $U=3980,0$ ,  $p<0,05$ ), безопасности и избегания риска ( $U=3793,5$ ,  $p<0,05$ ), прохождения профилактических процедур ( $U=4456,5$ ,  $p<0,05$ ) характерны для подростков с высоким уровнем самоэффективности. В целом у подростков с высоким уровнем самоэффективности более выражена общая поведенческая активность в отношении здоровья ( $U=3237,5$ ,  $p<0,05$ ).

**Самоэффективность личности и приверженность лечению.** В исследовании приверженности лечению пациентов с мужским

бесплодием было выявлено определенное влияние самоэффективности личности на степень приверженности (Д.Валиева, 2012). Участникам исследования с высоким уровнем самоэффективности более свойственна высокая приверженность лечению, чем участникам исследования с низким уровнем самоэффективности. Кроме этого, хотя в исследовании не было выявлено статистически достоверных различий между высокоэффективными и низкоэффективными испытуемыми в выраженности приверженности и ее когнитивном, эмоциональном и поведенческом компонентах, тем не менее, у участников исследования с высоким уровнем самоэффективности лучше выражен общий показатель приверженности лечению.

В исследовании приверженности антиретровирусной терапии у потребителей инъекционных наркотиков с ВИЧ-инфекцией (Н.Г.Харабара, 2008) выявлено, что участники исследования с высоким уровнем поведенческой приверженности оказываются более самоэффективными в решении различных проблемных ситуаций, легче добиваются своих целей и лучше владеют своими эмоциями в стрессовых ситуациях, чем участники с низким уровнем поведенческой приверженности ( $U=101,00$ ;  $p<0,05$ ).

Роль самоэффективности в поддержании высокого уровня поведенческой приверженности прослеживается и в том, что испытуемые с низким уровнем самоэффективности реже, чем испытуемые с высоким уровнем самоэффективности, соблюдают рекомендованную диету при антиретровирусной терапии ( $U=101,00$ ;  $p<0,05$ ), реже вовремя пополняют запасы лекарства ( $U=115,50$ ;  $p<0,05$ ). Испытуемые с низким уровнем самоэффективности также чаще, чем испытуемые с высоким уровнем самоэффективности, употребляют алкоголь ( $U=92,50$ ;  $p<0,05$ ). Возможно, потребители инъекционных наркотиков с низким уровнем самоэффективности чаще прибегают к употреблению алкоголя как способу ухода от реальных проблем.

**Самоэффективность личности и управление болью.** Изучение психосоциальных аспектов управления болью при ревматоидном артрите (К.К.Каримова, 2013) показало роль самоэффективности личности в выборе стратегий совладания с болью. Так, испытуемые с высоким уровнем самоэффективности чаще, чем испытуемые с низким уровнем самоэффективности используют такие копинг-стратегии как отвлечение ( $t=-3,09$ ,  $p<0,05$ ), интерпретацию ( $t=-2,95$ ,  $p<0,05$ ), надежду и мольбу ( $t=-2,15$ ,  $p<0,05$ ), игнорирование ощущений ( $t=-2,57$ ,  $p<0,05$ ) самостоятельность ( $t=-3,7$ ,  $p<0,05$ ) и увеличение поведенческой активности ( $t=-3,29$ ,  $p<0,05$ ). Самоэффективные пациенты активно используют все стратегии совладания с болью, кроме трагидизации.

**Выводы и рекомендации.** Подводя итоги, важно отметить, что исследовательские данные о взаимосвязи самоэффективности и ценностного отношения личности к здоровью являются надежными. Самоэффективность личности выступает в качестве ресурса здорового поведения и его компонентов, приверженности человека лечению, управления болью.

Из приведенных выше фактов можно заключить, что самоэффективность как социально-когнитивная характеристика личности способствует высокому уровню поведенческой активности, направленной на здоровье. В связи с этим программы по формированию здорового образа жизни должны фокусироваться на развитии у человека личной ответственности и веры за соблюдение действий, сохраняющих и укрепляющих его здоровье. Полученные данные свидетельствуют, что программы обучения здоровому образу жизни, формирования приверженности и навыков психологического управления болью должны включать не только информирование человека о действиях, способствующих сохранению здоровья, но и учитывать необходимость формирования у человека самоэффективности.

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## O'ZBEKISTON RESPUBLIKASINING FAXRIY UNVONLARI

Annotatsiya

Mazkur maqolada O'zbekiston Respublikasining davlat mukofotlaridan biri hisoblangan faxriy unvonlar haqida tahliliy ma'lumotlar bayon qilingan. Unda faxriy unvonlar yaratilishi, tavsifi taqdirlanganlar statistikasi hamda kimlarga qaysi xizmatlari uchun berilishi asosalangan.

**Kalit so'zlar:** Qonun, mukofot, faxriy unvon, belgi, ko'krak nishon, tavsif, taqdirlash, xalq, xizmat ko'rsatgan.

**Kirish.** Davlat mukofotlari ichida mamlakatimiz iqtisodiy, siyosiy, ijtimoiy, ma'naviy va madaniy sohalarini taraqqiy etishi va rivojlanishida o'z xissasini qo'shgan mamlakatimiz fuqarolarini taqdirlashda O'zbekiston Respublikasining faxriy unvonlari muhim ahamiyat kasb etadi. Faxriy unvonlar bilan taqdirlangan insonlarga belgilangan na'munadagi diplom va ko'krak nishoni topshiriladi. Shuningdek, ular qonunlar bilan belgilangan pul mukofotlari oladilar hamda imtiyozlardan foydalanadilar. Faxriy unvonlarning ko'krak nishonlari ham mustaqillik g'oyalari va milliy qadriyatlariga asoslangan holda yaratilgan. Ko'krak nishonlar umumiylikka ega bo'lib, tashqi ko'rinishi jihatdan o'xshash hisoblanadi. "O'zbekiston Respublikasi san'at arbobi", "O'zbekiston Respublikasi fan arbobi" va "Xalq" faxriy unvonlari ko'krak nishonlari 0.25 mikron qalinlikda tilla qoplangan 925 probali kumushdan tayyorlanib, diametri 34 millimetrligi doira shaklida bo'lib, nishonlarning qalinligi bir xil ya'ni 2.2 millimetrdan iborat. "O'zbekiston iftixori" ko'krak nishoni 1 mikron qalinlikda tilla qoplangan 925 probali kumushdan tayyorlanib, diametri 36 millimetrligi doira shaklida bo'ladi. "Xizmat ko'rsatgan" faxriy unvonlari ko'krak nishonlari diametri 30 millimetrligi doira shaklida bo'ladi va 925 probali kumushdan tayyorlanib, nishonlarning qalinligi bir xil ya'ni 2.2 millimetrdan iborat. Nishonlarning orqa tomonida O'zbekiston Respublikasining Davlat gerbi tasvirlangan [1].

**Mavzuga oid adabiyotlar tahlili.** O'rganilayotgan mavzu mustaqillik davriga oid bo'lganligi uchun asosan qonunlar, Oliy Majlis axborotnomalari va mustaqillik yillarida yozilgan adabiyotlardan foydalanildi. Fuqarolarni mehnatdagi xizmatlari, samarali davlat, ijtimoiy va ijodiy faoliyatlari uchun rag'batlantirish maqsadida O'zbekiston Respublikasining 1996-yil 26-aprelda 226-I sonli O'zbekiston Respublikasining Faxriy unvonlarini ta'sis etish to'g'risida qonun qabul qilinadi. Ushbu qonun bilan 30 nomdagi faxriy unvonlar ta'sis etiladi [9]. Keyinchalik 1996-yil 27-dekabrda "O'zbekiston Respublikasida xizmat ko'rsatgan fuqaro aviatsiyasi xodimi", 1998-yil 28-avgustda "O'zbekiston iftixori" 1998-yil 1-mayda "O'zbekiston Respublikasi xalq ustasi", 2000-yil 26-may "O'zbekiston Respublikasi xalq baxshisi", 2020-yil 30-noyabrda esa "O'zbekiston Respublikasida xizmat ko'rsatgan geolog" faxriy unvonlari ta'sis etiladi. Shu bilan faxriy unvonlar soni bugungi kunda 35 tani tashkil etmoqda. O'zbekiston Respublikasi Vazirlar Mahkamasining 1993-yil 7-iyundagi 274-son qarori bilan Faxriy unvonlarga ega bo'lgan kishilarning ish haqi va pensiyalariga har oyda beriladigan gonorollar hamda qo'shimcha haq miqdorlari belgilanadi.

**Tadqiqot metodologiyasi.** Mazkur maqolani tadqiq etishda bir qator tarix fani metodologiyalaridan foydalanilgan

bo'lib, mavzuga doir ma'lumotlar qiyosiy tahlil etilgan. Shuningdek, o'rganilayotgan muammo yuzasidan muammoviy va statistik tahlil usuli qo'llanilgan. Faxriy unvonlarni yaratilishi, ularning tavsifi, taqdirlanganlar statistikasi tizimlilik asosida tahlil etilgan. Shu bilan birga, xalq va xizmat ko'rsatgan faxriy unvonlarga oid ma'lumotlarni umumlash-tirish, xolislik tamoyili kabi ilmiy-tadqiqot metodlari asosida yoritilgan.

**Tahlil va natijalar.** O'zbekiston Respublikasi san'at arbobi faxriy unvoni yuksak badiiy asarlar yaratgan, respublikada adabiyot va san'atni rivojlantirishda, ijodiy kadrlarni tayyorlash va tarbiyalashda xizmat ko'rsatgan rejissyorlarga, bastakorlarga, dirijyorlarga, baletmeysterlarga, musiqi, xor, raqs va boshqa badiiy jamoalarning rahbarlariga, madaniyat va san'at o'quv yurtlarining muallimlariga, rang tasvir, naqqoshlik, o'ymakorlik, gilamdo'zlik va xalq ijodiyotining boshqa turlarida yuksak asarlar yaratgan xalq ustalariga beriladi. Nishonning ko'rinishi hoshiyalangan tekis yuz tomonida rangin taxta mo'yqalamlari bilan, skripka va ochiq kitob, pastki o'ng chekkasida dafna novdasi tasvirlangan. Nishonning chap qismidan SAN'AT ARBOBI degan yozuv gorizontol holatda joy olgan [1]. Mustaqillikka erishgandan so'ng ushbu mukofot bilan dastlab 3 nafar fuqarolar taqdirlanadi [4]. Umumiy hisobda 2021-yilga qadar 50 nafar shaxslar ushbu unvon bilan mukofotlangan. 2019-2021-yillarda taqdirlash amalga oshirilmagan.

**O'zbekiston Respublikasi fan arbobi** faxriy unvoni olimlarga fan va texnika sohasidagi g'oyat qimmatli asarlari, kashfiyot va ixtirolari uchun, fan va texnikani rivojlantirishdagi, uning yutuqlarini targ'ib va joriy etishdagi, respublika xalq xo'jaligi uchun ilmiy kadrlar va yuqori malakali mutaxassislar tayyorlashdagi xizmatlari uchun beriladi. Nishonning ko'rinishi hoshiyalangan tekis yuz tomonida yadro atrofidagi elektronlar traektoriyasi, pastki o'ng chekkasida dafna novda tasvirlangan. Nishonning chap qismidan FAN ARBOBI degan yozuv gorizontol holatda joy olgan [9]. Mustaqillik e'lon qilingandan so'ng dastlab T.Jo'rayev, J.Fayzullayev va T.Yo'ldoshboyevlar ushbu mukofotga sazovor bo'lgan [4]. 2021-yilga qadar 66 nafar shaxslar ushbu unvon bilan taqdirlangan.

**O'zbekiston iftixori** faxriy unvon bilan jahon chempionatlarida, Olimpiya o'yinlarida va shularga teng jahon sport anjumanlarida g'oliblik - chempionlik unvoniga erishgan hamda o'z yutuqlari bilan Vatan obro'sini, shoni va shuhratini ulug'lashga ko'maklashgan O'zbekiston Respublikasi fuqarolariga beriladi [1]. Nishonning tasviri hoshiyalangan tekis yuz tomonida kumushrang aylanma yugurish yo'lkalari bilan o'ralgan, yashil rangli emal qoplangan stadion maydoni tasvirlangan bo'lib, uning markazida olimpiya ramzi - ichki sathi ham kumushrang beshta o'zaro tutash halqalar

joylashgan. Stadion maydoni uzra O'zbekiston Respublikasi Davlat gerbini tutib turgan ikkita kumushrang qo'l tasvirlangan. Nishonning yuqori yarim aylanasida bo'ylab, gerb uzra O'ZBEKISTON IFTIXORI degan yozuv joylashgan. Nishonning pastki yarim aylanasida yashil shaffof emal qoplangan dafna novdasi joylashgan bo'lib, uning o'rtasidan O'zbekiston Respublikasining Davlat bayrog'i ranglaridagi lenta o'tgan. Ushbu unvon bilan 1998 yil ilk bor 8 nafar sportchilar mukofotlanadilar, ular orasida Mahammadqodir Abdullayev, Artur Grigoryan, Ruslan Chagayev, Lina Cheryazevalar bor edi [11]. 2021-yilgacha 52 nafar sport sohasi vakillari ushbu fahriy unvon bilan taqdirlangan.

**O'zbekiston Respublikasi xalq artisti** fahriy unvoni atoqli san'at arboblari teatr, musiqa, kino, estrada, sirk, televideniya va radio eshittirishni rivojlantirishdagi, respublikada ijodiy kadrlarni tayyorlash va tarbiyalashdagi alohida xizmatlari uchun beriladi. Nishonning tasviri hoshiyalangan tekis yuz tomonida pardasi ochilgan teatr sahnasiniig bir qismi, niqob, pastki o'ng chekkasida dafna novdasi tasvirlangan. Parda ostidagi tekis sathdan, nishon markazining chaprog'idan XALQ ARTISTI degan yozuv gorizontol holatda joy olgan [9]. Mukofot bilan Mahmud Nomozov, Murod Radjapov, Rajab Adashev, Ozodbek Nazarbekov, Abdumo'min O'tbosarov, Zuxra Ashurova, Gavhar Zakirova kabilar taqdirlangan. 2021-yilga qadar ushbu unvon bilan 95 nafar shaxslar taqdirlanishgan. 2017-2021-yillarda taqdirlash amalga oshirilmagan.

**O'zbekiston Respublikasi xalq yozuvchisi** fahriy unvoni adabiyotni rivojlantirishda alohida xizmat ko'rsatgan, xalq tomonidan keng e'tirof etilgan yuksak badiiy asarlar yaratgan yozuvchilarga, dramaturglar, tanqidchilar va adabiyotshunos olimlarga beriladi. Fahriy unvon nishonning hoshiyalangan tekis yuz tomonida tog'lar va vodiy fonida ochiq kitob, pastki o'ng chekkasida dafna novdasi tasvirlangan. Nishonning chap tomonida ramzlarning pastrog'idan XALQ YOZUVCHISI degan yozuv gorizontol holatda joy olgan [9]. Mustaqillikning dastlabki oylarida 1991-yil 10-oktyabrdagi Prezident farmoni bilan O'zbek adabiyotini rivojlantirishdagi katta xizmati, yuksak badiiy asarlar yaratgani uchun X.To'xtaboyev, O.Umarbekov va Sh.Xolmirzayevlar ushbu unvon bilan taqdirlanadi [3]. 1991-2021-yillar davomida 10 nafar shaxslarga xalq yozuvchisi unvoni beriladi.

**O'zbekiston Respublikasi xalq rassomi** fahriy unvoni atoqli tasviriy san'at arboblari rang tasvir, grafika, haykaltaroshlik, amaliy-dekorativ, teatr va kino san'atini rivojlantirishdagi alohida xizmatlari uchun beriladi. Fahriy nishonning hoshiyalangan tekis yuz tomonida molbert fonida taxta mo'yqalamlari bilan, pastki o'ng chekkasida dafna novdasi tasvirlangan. Nishonning chap tomonida ramzning yuqorirog'ida XALQ RASSOMI degan yozuv gorizontol holatda joy olgan [9]. O'zbekiston Respublikasi davlat mustaqilligi e'lon qilingandan so'ng ilk mukofotlash to'g'risidagi Prezident farmoni 1991-yil 11-sentyabrda O'zbekiston Rassomlar uyushmasi raisi B.F.Jalolovni "O'zbekiston Respublikasi xalq rassomi" unvoni bilan taqdirlash hususida bo'ldi [2]. 2021-yilga qadar 26 nafar shaxslar ushbu unvon bilan taqdirlangan lekin, 2014-yildan keyin 2021-yilgacha taqdirlash amalga oshirilmagan.

**O'zbekiston Respublikasi xalq shoiri** fahriy unvoni adabiyotni rivojlantirishda alohida xizmat ko'rsatgan, respublikada va uning sarhadlaridan tashqarida mashhur bo'lgan yuksak she'riy asarlar yaratgan shoirlarga beriladi. Fahriy nishonning hoshiyalangan tekis yuz tomonida pat-qalam va qog'oz varag'i, pastki o'ng chekkasida dafna novdasi tasvirlangan. Unvonning chap tomonida ramzlarning yuqorirog'idan XALQ SHOIRI degan yozuv gorizontol holatda joy olgan [1]. 1992-yil 24-mayda 407-sonli prezident farmoniga muvofiq Gulhan jurnali bosh muharriri Oydin Xojiyeva va Saodat jurnalining bosh muharriri Halima

Xudoyberdiyevlar mustaqil davlatning ilk xalq shoiri unvoniga sazovor bo'ladi [7]. 2021-yilga qadar 22 nafar shaxslar ushbu unvon bilan taqdirlanganlar. 2017-2021-yillarda taqdirlash amalga oshirilmagan.

**O'zbekiston Respublikasi xalq o'qituvchisi** fahriy unvoni bolalar va yoshlarga ta'lim hamda tarbiya berishda, xalq ta'limini rivojlantirish ishida alohida xizmat ko'rsatgan barcha turdagi umumta'lim maktablarining o'qituvchilariga, oliy o'rta maxsus o'quv yurtlari, hunar-texnika bilim yurtlarining muallimlariga, xalq ta'limi tizimidagi o'quv-tarbiya, uslubiyat va boshqa muassasalarining xodimlariga beriladi. Nishonning hoshiyalangan tekis yuz tomonida maktab binosining fonida darslik, daftar, globus, pastki o'ng chekkasida dafna novdasi tasvirlangan. Nishon markazining yuqorirog'ida, tekis sathdan XALQ O'QITUVCHISI degan yozuv gorizontol holatda joy olgan [9]. Davlatimiz mustaqilligi qo'lga kiritilgandan so'ng, 1992 yil 7-aprelda Sirdaryo viloyati Ilich rayon xalq ta'lim bo'lim mudiri Xolmo'min Shukurov ushbu mukofot bilan ilk taqdirlangan pedagog hisoblanadi [5]. 2021-yilga qadar 326 nafar xalq o'qituvchisi unvoni berilgan.

**O'zbekiston Respublikasida xizmat ko'rsatgan artist** fahriy unvoni respublikada san'atni rivojlantirishda, respublikada ijodiy kadrlarni tayyorlash va tarbiyalashda xizmat ko'rsatgan teatr, kino, estrada, sirk, televideniya va radio eshittirish artistlari va rejissyorlariga, musiqa ijrochilari va ashulachilarga, baletmeysterlarga, orkestr va xor dirijyorlariga, musiqa va boshqa badiiy jamoalarning rahbarlariga beriladi. Nishonning hoshiyalangan tekis yuz tomonida doira, niqob va royal, pastki o'ng chekkasida dafna novdasi tasvirlangan. Nishonning aylanasida bo'ylab XIZMAT KO'RSATGAN ARTIST degan yozuv joy olgan [9]. 1991-yil 28-dekabrda Prezident farmoni bilan 15 nafar madaniyat xodimlari ushbu mukofot bilan taqdirlanadilar. Taqdirlanganlar asosan teatr artistlaridan iborat edi [5]. Shuningdek, Gulshanam Mamazoitova, Dilfuza Rahimova, Lola Eltoyeva, Ozodbek Nazarbekov, Uchqun Tillayev, Ra'no Shodiyeva, Samandar Hamroqulov, Xoshim Arslonov, Dias Raxmatov, Jenisbek Piyazov, Ulug'bek Raxmatullayev va boshqalar taqdirlangan. 1991-2021-yillarda 433 nafar ushbu soha vakillari taqdirlangan. 2017-2021-yillarda taqdirlash amalga oshirilmagan.

**O'zbekiston Respublikasida xizmat ko'rsatgan yoshlar murabbiysi** fahriy unvoni yoshlarga kasb mahoratini o'rgatishda, mehnatga halol va vijdonan munosabatni, yuksak vatanparvarlik va axloqiy fazilatlarini tarbiyalashda alohida xizmat ko'rsatgan xalq xo'jaligi xodimlari va mutaxassislariga beriladi. Nishonning hoshiyalangan tekis yuz tomoni o'rtarog'ida kaftlar e'zoidagi, ochila boshlagan gul g'unchasi, pastki o'ng chekkasida dafna novdasi tasvirlangan. Nishonning aylanasida bo'ylab XIZMAT KO'RSATGAN YOSHLAR MURABBIYSI degan yozuv joy olgan [9]. Mustaqillik qo'lga kiritilgandan so'ng ilk bor ushbu mukofot bilan Chklaov nomli aviatsiya birlashmasi bosh direktorining o'rinbosari - Abdulla Ilyosovich Abbosov taqdirlanadi [3]. Shuningdek, Axbor Imamxodjayev, Shin Agrepina, Mirabror Usmonov va boshqalar taqdirlangan. Fahriy unvonlar ichida eng ko'p taqdirlash aynan ushbu unvon orqali amalga oshirilgan bo'lib, 1991-2016-yillarda 685 nafar fuqarolar taqdirlangan bo'lib, 2017-2021-yillarda taqdirlash amalga oshirilmagan.

**O'zbekiston Respublikasida xizmat ko'rsatgan jurnalist** fahriy unvoni gazeta va jurnallar tahririyatlarining, televideniya va radio eshittirish, axborot agentliklarining matbuotni rivojlantirishda katta xizmat, ijodda va tashkilotchilik faoliyatida alohida o'rnatgan xizmat ko'rsatgan jurnalistlariga, nashriyotlar, boshqa tashkilotlarning ana shunday xodimlariga beriladi. Nishonning hoshiyalangan tekis yuz tomonida avtoruchka va bloknot, pastki o'ng chekkasida dafna novdasi tasvirlangan. Nishonning aylanasida bo'ylab XIZMAT

KO'RSATGAN JURNALIST degan yozuv joy olgan. Respublikamiz mustaqilligi qo'lga kiritilgandan so'ng ushbu unvon bilan birinchilardan bo'lib 3 nafar ko'p yillik halol mehnati, O'zbekiston jurnalistikasini rivojlantirishdagi xizmatlari uchun Pravda Vostoka ro'znomasining xodimlari taqdirlanadi [6]. 2021-yilga qadar 140 nafar vakillar taqdirlangan.

**O'zbekiston Respublikasida xizmat ko'rsatgan iqtisodchi** faxriy unvoni xalq xo'jaligi barcha tarmoqlarining iqtisodiyotni yuksaltirishda alohida xizmat ko'rsatgan yuqori malakali iqtisodchilariga va buxgalteriya hisobi xodimlariga beriladi. Nishonning hoshiyalangan tekis yuz tomonida xalq xo'jaligi obyektlari razmlari tushirilgan O'zbekiston Respublikasi xaritasi fonida kompyuter, pastki o'ng chekkasida dafna novdasi tasvirlangan. Nishonning aylanasi bo'ylab XIZMAT KO'RSATGAN IQTISODCHI degan yozuv joy olgan [9]. Mustaqil bo'lganimizdan so'ng ushbu mukofot bilan ilk bor Toshkent viloyati ijroiya komiteti raisining o'rinbosari viloyat reja komissiyasining raisi Akmal Valiyev taqdirlanadi [5]. 2006-yilga qadar 50 nafar shaxslar taqdirlanib, undan keyingi yillarda taqdirlash amalga oshirilmagan.

**O'zbekiston Respublikasida xizmat ko'rsatgan sanoat xodimi** faxriy unvoni sanoat birlashmalari va korxonalarining, ilmiy-tadqiqot va loyiha-konstruktorlik muassasalarining respublika sanoatini rivojlantirishda alohida xizmat ko'rsatgan xodimlariga beriladi. Nishonning hoshiyalangan tekis yuz tomonida sanoat ob'yektlari, pastki o'ng chekkasida dafna novdasi tasvirlangan. Nishonning aylanasi bo'ylab XIZMAT KO'RSATGAN SANOAT XODIMI degan yozuv joy olgan [9]. 1991-yil 27-sentyabrdagi mashinasozlik sohasidan 49 nafar O'zbekiston Respublikasida xizmat ko'rsatgan sanoat xodimi faxriy unvoni bilan taqdirlanganlarning aksariyati Chkalov nomidagi aviatsiya birlashmasi xodimlari ekanligini ko'rish mumkin [3]. 2016-yilgacha 349 nafar shaxslar ushbu unvon bilan taqdirlanib, 2017-2021-yillarda taqdirlash amalga oshirilmagan.

**O'zbekiston Respublikasida xizmat ko'rsatgan sog'liqni saqlash xodimi** faxriy unvoni ilmiy-tadqiqot, davolash-profilaktika, sanitariya-epidemiologiya va farmasevtika muassasalarining sog'liqni saqlashni rivojlantirishda va tibbiy xizmatni tashkil etish hamda Respublika aholisi sog'lig'ini muhofaza qilishda alohida xizmat ko'rsatgan xodimlariga, shu jumladan o'rta va kichik tabaqa tibbiy xodimlariga beriladi. Nishonning hoshiyalangan tekis yuz tomoni o'rtarog'ida shifokorlarning ramzi bo'lmish ilon chirmashgan qadah, pastki o'ng chekkasida dafna novdasi tasvirlangan. Nishonning aylanasi bo'ylab XIZMAT KO'RSATGAN SOG'LIQNI SAQLASH XODIMI degan yozuv joy olgan [9]. Mustaqillikdan so'ng dastlab ushbu mukofot bilan Chkalov nomli aviatsiya birlashmasi shifoxonasining mudiri - Akrom Nazarovich Sulonov mukofotlanadi [3]. Taqdirlanganlar asosan respublikaning turli

hududlarida faoliyat olib borayotgan shifokorlardan iborat edi [6]. 2016-yilgacha 194 nafar shaxslar ushbu unvon bilan taqdirlanib, 2017-2021-yillarda taqdirlash amalga oshirilmagan.

**O'zbekiston Respublikasida xizmat ko'rsatgan fuqaro aviatsiyasi xodimi** faxriy unvoni havo transportini rivojlantirishda, zamonaviy aviatsiya texnikasini o'zlashtirishda, aholiga va respublika xalq xo'jaligiga namunali xizmat ko'rsatishni tashkil etishda alohida xizmat ko'rsatgan fuqaro aviatsiyasi xodimlari va mutaxassislariga beriladi. Nishonning hoshiyalangan tekis yuz tomonida markazida ufqdan bosh ko'tarayotgan quyosh fonida samoda bulutlar uzra parvoz qilayotgan havo kemasi, pastki o'ng chekkasida - dafna novdasi tasvirlangan. Nishonning aylanasi bo'ylab XIZMAT KO'RSATGAN FUQARO AVIATSIYASI XODIMI degan yozuv joy olgan [10]. Ushbu mukofot bilan ilk bor 1999-yil 27-yanvardagi PF-2207 farmon bilan "O'zbekiston havo yo'llari" Milliy aviakompaniyasining 2 nafar xodimi taqdirlanadi [12]. Asosan milliy aviakompaniya xodimlari uchuvchilar va mexaniklar taqdirlangan. 2016-yilgacha 24 nafar soha vakillari ushbu unvon bilan taqdirlanib, 2017-2021-yillarda taqdirlash amalga oshirilmagan.

**O'zbekiston Respublikasida xizmat ko'rsatgan xalq ta'limi xodimi** faxriy unvoni barcha turdagi umumta'lim maktablarining, oliy va o'rta maxsus o'quv yurtlarining, hunar-texnika bilim yurtlarining, maktabgacha tarbiya bolalar muassasalari va maktabdan tashqari muassasalarining, o'qituvchilar malakasini oshirish bilan shug'ullanuvchi uslubiyat kabinetlari, kurslar va institutlarning respublika xalq ta'limini rivojlantirishda alohida xizmat ko'rsatgan xodimlariga, shuningdek xalq ta'limi boshqa muassasalarining ana shunday xodimlariga beriladi. Nishonning hoshiyalangan tekis yuz tomonida o'rtaroqda och kitob fonida globus va uchburchak chizg'ich, pastki o'ng chekkasida dafna novdasi tasvirlangan. Nishonning aylanasi bo'ylab XIZMAT KO'RSATGAN XALQ TA'LIMI XODIMI degan yozuv joy olgan [9]. Ushbu unvon bilan mustaqillikdan so'ng ilk bor Chkalov nomli aviatsiya birlashmasi bolalar bog'chasining mudiri - Rimma Leonidovna Kochetkova taqdirlangan [3]. 2016-yilgacha 427 nafar shaxslar ushbu unvon bilan taqdirlanib, 2017-2021-yillarda taqdirlash amalga oshirilmagan.

**Xulosa va takliflar.** Xulosa qilib aytganda, faxriy unvonlar jamiyatning turli sohalarida faoliyat olib borayotgan fuqarolarni rag'batlantirishda muhim ahamiyat kasb etmoqda. Mustaqillikdan keyingi yillarda faxriy unvonlar bilan taqdirlash tahlillari shuni ko'rsatadiki, faxriy unvonlar bilan taqdirlashda qat'iy meyorlar o'rnatilmagan bo'lib, ayrim soha vakillari nisbatan ko'proq ayrim soha vakillari esa kamroq taqdirlash amalga oshirilgan. Asosan ma'naviyat-madaniyat sohasi vakillari nisbatan ko'proq taqdirlanganligini alohida ta'kidlash mumkin.

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## UPPER THRESHOLD ANALYSIS OF THE $n$ -DIMENSIONAL DISCRETE SCHRÖDINGER OPERATORS WITH KRONECKER DELTA POTENTIALS

Annotation

In the right side of the essential spectrum of the  $n$ -dimensional discrete Schrödinger operator with  $n + 1$  delta potentials, eigenvalue behaviors is studied. It can be demonstrated that upper threshold resonance and upper threshold eigenvalue emerge for  $n \geq 2$ , and upper super-threshold resonance emerges for  $n = 1$ .

**Keywords:** Discrete Schrödinger operator, resonance, eigenvalue, Fredholm determinant, super-threshold resonance, upper threshold eigenvalue.

### 1 Introduction

Spectral properties of the discrete Schrödinger operators have attracted considerable attention for both combinatorial Laplacians and quantum graphs (for recent summaries see [5],[8],[3],[6], [4], [18],[14] and the references therein). Particularly, eigenvalue behavior of Schrödinger operators on the lattice was considered in [7],[2],[11],[12] and was briefly discussed in [9] and [15], provided the potential is the Dirac delta function.

In [1] an explicit example of a  $-\Delta - V$  on the three-dimensional lattice  $\mathbb{Z}^3$ , which possesses both a lower threshold resonance and a lower threshold eigenvalue, is constructed, where  $-\Delta$  stands for the standard discrete Laplacian in  $\ell^2(\mathbb{Z}^n)$  and  $V$  is a multiplication operator by the function

$$\hat{V}(x) = \mu \delta_{x0} + \frac{\lambda}{2} \sum_{|s|=1} \delta_{xs}, \quad \lambda \geq 0, \mu \geq 0, \quad (1.1)$$

where  $\delta_{xs}$  is the Kronecker delta.

The authors of [12] considered the operator  $H_{\lambda\mu}$  with the potential of the form ((1.1)) and investigated the dependence of the number of eigenvalues of  $H_{\lambda\mu}$  on  $\lambda, \mu$  for  $\lambda, \mu \in \mathbb{R}^2$ . Moreover, they showed that lower threshold eigenvalue and lower threshold resonance appear

when  $n \geq 2$ , and lower super-threshold resonance appears when  $n = 1$ .

There are still interesting spectral properties of the  $n$ -dimensional discrete Schrödinger operators at the right edge of its essential spectrum.

In the present paper, we consider the spectrum of  $H_{\lambda\mu}$  on the Hilbert space of odd  $L^2$ -sequences, specifically, upper threshold eigenvalues and upper threshold resonances for any

$$(\lambda, \mu) \in \mathbb{R}^2 \quad \text{and} \quad n \geq 1.$$

We study, in particular, eigenvalues in  $(2n, \infty)$ , upper threshold eigenvalues, upper threshold resonances and upper super-threshold resonances.

The paper is organized as follows. In Section 2, a discrete Schrödinger operator  $H_{\lambda}^{\circ}$  in the coordinate and momentum representation is described. The spectrum of  $H_{\lambda}^{\circ}$  is investigated in Section 3, and the main result, Theorem 3.10 is formulated.

### 2. Discrete Schrödinger operator on lattice

Let  $\mathbb{Z}^n$  be the  $n$ -dimensional lattice, i.e. the  $n$ -dimensional integer set. The Hilbert space of all odd  $\ell^2$  sequences on the lattice  $\mathbb{Z}^n$  is denoted by  $\ell^2_{\circ}(\mathbb{Z}^n)$ . We denote the  $n$ -dimensional torus (the first Brillouin zone, i.e., the dual group of  $\mathbb{Z}^n$ ) equipped with its Haar measure by  $T^n = (\mathbb{R} / 2\pi\mathbb{Z})^n = (-\pi, \pi]^n$ .

Let  $L^2_{\circ}(T^n)$  denote the subspace of all odd functions of the Hilbert space of  $L^2$ -functions on  $T^n$ .

Let  $\langle \cdot, \cdot \rangle$  be the inner product on the space  $L^2_{\circ}(T^n)$ .

Let  $T(y)$  be the shift operator by  $y \in \mathbb{Z}^n : (T(y)f)(x) = f(x+y)$  for  $f \in \ell^2_0(\mathbb{Z}^n)$  and  $x \in \mathbb{Z}^n$ .

The standard discrete Laplacian  $\Delta$  on  $\ell^2_0(\mathbb{Z}^n)$  is usually associated with the bounded self-adjoint multidimensional Toeplitz-type operator:

$$\Delta = \frac{1}{2} \sum_{\substack{x \in \mathbb{Z}^n \\ |x|=1}} (T(x) - T(0)).$$

Let us define the discrete Schrödinger operator on  $\ell^2_0(\mathbb{Z}^n)$  by

$$\hat{H}_{\lambda\mu} = -\Delta - \hat{V},$$

where the potential  $\hat{V}$  depends on two parameters  $\lambda, \mu \in \mathbb{C}$  and satisfies

$$(\hat{V}f)(x) = \begin{cases} \mu f(x), & \text{if } |x|=0 \\ \lambda f(x), & \text{if } |x|=1, \\ 2 \\ 0, & \text{if } |x|>1 \end{cases} \quad f \in \ell^2_0(\mathbb{Z}^n), x \in \mathbb{Z}^n,$$

which provides  $\hat{H}_{\lambda\mu}$  to be a bounded self-adjoint operator.

The standard Fourier transform  $F : L^2_0(\mathbb{T}^n) \rightarrow \ell^2_0(\mathbb{Z}^n)$  of the form

$$(Ff)(x) = \frac{1}{(2\pi)^n} \int_{\mathbb{T}^n} f(\theta) e^{ix\theta} d\theta, \quad f \in L^2_0(\mathbb{T}^n), x \in \mathbb{Z}^n,$$

and the inverse Fourier transform of the form

$$(F^{-1}f)(\theta) = \sum_{x \in \mathbb{Z}^n} f(x) e^{-ix\theta}, \quad f \in \ell^2_0(\mathbb{Z}^n), \theta \in \mathbb{T}^n$$

define the momentum representation of the Laplacian  $\Delta$  as

$$\hat{\Delta} = F^{-1} \Delta F,$$

where  $\hat{\Delta}$  acts as the multiplication operator:

$$(\hat{\Delta} \hat{f})(p) = -E(p) \hat{f}(p),$$

where  $E(p)$  is given by

$$E(p) = \sum_{j=1}^n (1 - \cos p_j).$$

In the physical literature, the function  $E(p)$ , being a real valued-function on  $\mathbb{T}^n$ , is called the *dispersion relation* of the Laplace operator. We also write the discrete Schrödinger operator in momentum representation.

Let  $H_0 = -\hat{\Delta}$ . The operator  $H_{\lambda\mu}^o$ , in the momentum representation, acts in the Hilbert space  $L^2_0(\mathbb{T}^n)$  as

$$H_{\lambda\mu}^o = H_0 - V_{\lambda\mu}^o \quad (2.1)$$

where  $V_{\lambda\mu}^o$  is an integral operator of convolution type

$$(Vf)(p) = (2\pi)^{-\frac{n}{2}} \int_{\mathbb{T}^n} v(p-s) f(s) ds, \quad f \in L^2_0(\mathbb{T}^n).$$

Here the kernel function  $v(\cdot)$  is the Fourier transform of  $\hat{V}(\cdot)$  computed as

$$v(p) = \frac{1}{(2\pi)^{\frac{n}{2}}} \left( \mu + \lambda \sum_{i=1}^n \cos p_i \right),$$

and it and the equalities

$$\int_{\mathbb{T}^n} \cos s_j f(s) ds = 0, \quad f \in L^2_0(\mathbb{T}^n), j = 1, \dots, n,$$

admit the potential operator  $V := V_{\lambda}^o$  to get the representation

$$H_\lambda^\circ = \frac{\lambda}{2} \sum_{j=1}^n \langle \cdot, s_j \rangle s_j.$$

Here  $\{s_j : j = 1, \dots, n\}$  is an orthonormal system in  $L^2_0(\mathbb{T}^n)$ , where

$$s_j(p) = \frac{\sqrt{2}}{(2\pi)^{\frac{n}{2}}} \sin p_j, \quad j = 1, \dots, n. \tag{2.2}$$

As  $V_{\lambda\mu} = V_\lambda^\circ$  in  $L^2_0(\mathbb{T}^n)$ , instead of (2.1) we use the notation

$$H_\lambda^\circ = H_0 - V_\lambda^\circ \tag{2.3}$$

Now we can state the fundamental proposition below:

**Proposition 2.1.** The relation  $\sigma_{\text{ess}}(H_\lambda^\circ) = \sigma_{\text{ac}}(H_\lambda^\circ) = [0, 2n]$  holds.

*Proof.* The potential operator  $V$  is a finite rank operator and then the essential spectrum of  $H_\lambda^\circ$  fills in  $[0, 2n] = \sigma_{\text{ess}}(H_0)$ .

Let  $H_{\text{ac}}$  denote the absolutely continuous part of the operator  $H_\lambda^\circ$ . One can see that the wave operator

$W_\pm = s - \lim_{t \rightarrow \pm\infty} e^{itH_\lambda^\circ} e^{-itH_0}$  exists and is complete since  $H_\lambda^\circ$  with a finite rank potential. It implies that  $H_0$  and  $H_\lambda^\circ|_{H_{\text{ac}}}$  are unitarily equivalent by  $W_\pm^{-1}H_0W_\pm = H_\lambda^\circ|_{H_{\text{ac}}}$ . As a result  $\sigma_{\text{ac}}(H_0) = \sigma_{\text{ac}}(H_\lambda^\circ) = [0, 2n]$ .

Thus, we shall study the spectrum of  $H_\lambda^\circ$  by studying the spectrum of the operators  $H_\lambda^\circ$  and  $H_\lambda^\circ$ , separately.

### 3. Discrete spectrum of the odd Hamiltonian $H_\lambda^\circ$

#### 3.1. Birman-Schwinger principle for $z \in \square$ , $[0, 2n]$

In the previous sections, we study the spectrum of  $H_\lambda^\circ$  by using the Birman-Schwinger principle for  $n \geq 3$ , and by directly solving  $(H_\lambda^\circ - 2n)f = 0$  for  $n = 1, 2$ . In the case of  $H_\lambda^\circ$  we can proceed in a similar way to the the case of  $H_\lambda^\circ$  and rather easier than that of  $H_\lambda^\circ$  as is seen below.

Let  $z \in \square$ ,  $[0, 2n]$ . As is seen for  $H_\lambda^\circ$ , we can see that

$$(H_0 - z)^{-1}V_\lambda^\circ = S_1S_2.$$

Here  $S_1$  and  $S_2$  are defined by

$$S_1 : \square^n \text{ e } \begin{pmatrix} w_1 \\ \vdots \\ w_n \end{pmatrix} \mapsto \frac{\lambda}{2} (H_0 - z)^{-1} \sum_{j=1}^n w_j s_j \in L^2_0(\mathbb{T}^n),$$

$$S_2 : L^2_0(\mathbb{T}^n) \text{ e } \phi \mapsto \begin{pmatrix} \langle \phi, s_1 \rangle \\ \vdots \\ \langle \phi, s_n \rangle \end{pmatrix} \in \square^n.$$

We set

$$G_\circ(z) = S_2S_1 : \square^n \rightarrow \square^n.$$

with matrix elements

$$s_{ji}(z) = \frac{1}{2} \langle s_i, (H_0 - z)^{-1} s_j \rangle, \quad i, j = 1, \dots, n. \tag{3.1}$$

As the function  $E(p) = E(p_1, \dots, p_n)$  is invariant with respect to the permutations of its arguments  $p_1, \dots, p_n$ , the integrals used for studying the spectrum of the matrix operator  $G_\circ(z)$ :

$$s(z) := s_{jj}(z) = \frac{1}{2} \langle s_j, (H_0 - z)^{-1} s_j \rangle = \frac{1}{(2\pi)^n} \int_{\mathbb{T}^n} \frac{\sin^2 p_j}{E(p) - z} dp, \quad j = 1, \dots, n \tag{3.2}$$

also do not depend on the particular choice of indices  $0 \leq i, j \leq n$ .

The proof of the last equality in (3.2) is clear, since  $E(p) = E(p_1, \dots, p_d)$  is even for any  $p_j$ .

The following assertion states the relation between eigenvalues of the operator  $H_\lambda^\circ$  and eigenvalues of the matrix operator  $G_\circ(z)$ .

**Lemma 3.1** (Birman-Schwinger principle for  $z \in \mathbb{R}$ ,  $[0, 2n]$ )

(a)  $z \in \mathbb{R}$ ,  $[0, 2n]$  is an eigenvalue of  $H_\lambda^\circ$  if and only if  $1 \in \sigma(G_\circ(z))$ .

(b) Let  $z \in \mathbb{R} \setminus [0, 2n]$  and  $Z = \begin{pmatrix} w_0 \\ \vdots \\ w_n \end{pmatrix} \in \mathbb{R}^n$  be such that  $G_\circ(z)Z = Z$ . Then

$$f = S_1 Z,$$

$$f(p) = \frac{1}{(2\pi)} \frac{1}{E(p) - z} \left( \frac{\lambda}{\sqrt{2}} \sum_{j=1}^n \omega_j \sin p_j \right) \tag{3.3}$$

is an eigenfunction of  $H_\lambda^\circ$ , i.e.,  $H_\lambda^\circ f = zf$ .

*Proof.* One can see that  $H_\lambda^\circ f = zf$  if and only if  $f = (H_0 - z)^{-1} V_\lambda^\circ f$ . Then  $z \in \mathbb{R}$ ,  $[0, 2n]$  is an eigenvalue of  $H_\lambda^\circ$  if and only if  $1 \in \sigma((H_0 - z)^{-1} V_\lambda^\circ)$ .

Accordingly, the number  $z \in \mathbb{R}$ ,  $[0, 2n]$  is an eigenvalue of  $H_\lambda^\circ$  if and only if  $1 \in \sigma(S_1 S_2)$  by the fact  $\sigma(S_1 S_2) = \sigma(S_2 S_1) = \{0\}$ .

Consequently, it completes the proof of (a). We can also see that  $S_2 S_1 Z = Z$  if and only if

$$f = S_1 Z \text{ satisfies that } f = (H_0 - z)^{-1} V_\lambda^\circ f.$$

So the function  $f$  coincides with (3.3).

Equalities (3.2) provide that

$$G_\circ(z) = \lambda s(z) I,$$

where

$$s(z) = (2\pi)^{-n} \int_{T^n} \frac{\sin^2 p_1}{E(p) - z} dp$$

is given by the first equality in (3.2). Consequently we have for  $n \geq 1$ ,

$$\delta_s(\lambda; z) = \det(G_\circ(z) - I) = (\lambda s(z) - 1)^n.$$

Since  $G_\circ(z)$  is diagonal, it is very easy to find solution of  $G_\circ(z)Z = Z$ .

It has  $n$  independent solutions:

$$Z_j = \begin{pmatrix} 0 \\ \vdots \\ 1 \\ \vdots \\ 0 \end{pmatrix} \leftarrow j_{th}, \quad j = 1, \dots, n.$$

The corresponding eigenvector,  $H_\lambda^\circ f_j = z f_j$ , is given by

$$f_j(p) = \frac{1}{E(p) - z} \frac{1}{(2\pi)} \frac{\lambda}{\sqrt{2}} \sin p_j, \quad j = 1, \dots, n$$

where  $\lambda = 1/s(z)$ . In particular the multiplicity of  $z$  is  $n$ .

The unique singular point of  $\frac{1}{E(p) - 2n}$  is  $p = \bar{\pi}$ , and in the neighborhood of  $p = \bar{\pi}$ , we have  $E(p) \approx |p - \bar{\pi}|^2$ .

Then the following lemma is fundamental, and its proof is straightforward.

**Lemma 3.2.** Let  $h(p) = \frac{\varphi(p)}{E(p) - 2n}$ , where  $\varphi \in C(T^n)$ . Then (a)-(e) follow.

(a) It follows that  $h \in L^2_o(T^n)$  for  $n \geq 5$ , and  $h \in L^1_o(T^n)$  for  $n \geq 3$ .

(b) Let  $1 \leq n \leq 4$  and  $h \in L^2_o(T^n)$ . Then  $\varphi(\bar{\pi}) = 0$ .

(c) Let  $1 \leq n \leq 4$  and  $|\varphi(p)| < C |p - \bar{\pi}|^{\alpha_n}$  for some  $C > 0$  and  $\alpha_n > \frac{4-n}{2}$ . Then  $h \in L^2_o(T^n)$ .

(d) Let  $n = 1, 2$  and  $h \in L^1_o(T^n)$ . Then  $\varphi(\bar{\pi}) = 0$ .

(e) Let  $n = 1, 2$ ,  $|\varphi(p)| < C |p - \bar{\pi}|^{\alpha_n}$  for some  $C > 0$  and  $\alpha_n > 2 - n$ . Then  $h \in L^1_o(T^n)$ .

**3.2. Birman-Schwinger principle for  $z = 2n$**

We can extend the Birman-Schwinger principle for  $z = 2n$ .

We extend the eigenvalue equation  $(H_\lambda^\circ - 2n)f = 0$  in  $L^2_o(T^n)$  to that in  $L^1_o(T^n)$ .

We consider the equation

$$(E(p) - 2n)f(p) - \frac{\lambda}{(2\pi)^n} \sum_{j=1}^n \sin p_j \int_{T^n} \sin p_j f(p) dp \tag{3.4}$$

in  $L^1_o(T^n)$ .

We also describe (3.4) as  $(H_\lambda^\circ - 2n)f = 0$ . We can see that  $\sin p_j / E(p) \approx 1/|p|$  in the neighborhood of  $p = 0$ , and then  $\sin p_j / E(p) \in L^1_o(T^n)$  for  $n \geq 2$ .

By (e) of Lemma 3.2 and  $V_\lambda^\circ f \in C(T^n)$  we can see that

$$L^2_o(T^n) e f \mapsto (H_\lambda^\circ - 2n)^{-1} V_\lambda^\circ f \in L^2_o(T^n), \quad n \geq 3 \tag{3.5}$$

$$L^1_o(T^n) e f \mapsto (H_\lambda^\circ - 2n)^{-1} V_\lambda^\circ f \in L^1_o(T^n), \quad n \geq 2 \tag{3.6}$$

Thus for  $n \geq 2$  we can extend operators  $S_1$  and  $S_2$ . Let  $n \geq 2$  and  $Z = \begin{pmatrix} w_0 \\ \vdots \\ w_n \end{pmatrix}$ .

Operator  $\bar{S}_1 : \square^n \rightarrow L^1_o(T^n)$  is defined by

$$\bar{S}_1 Z = \frac{1}{(2\pi)} \frac{\lambda}{\sqrt{2}} \frac{1}{E(p)} \sum_{j=1}^n w_j \sin p_j$$

and  $\bar{S}_2 : L^1_o(T^n) \rightarrow \square^n$  by

$$\bar{S}_2 : L^1_o(T^n) e \phi \mapsto \begin{pmatrix} \int_{T^n} \phi(p) s_1(p) dp \\ \vdots \\ \int_{T^n} \phi(p) s_n(p) dp \end{pmatrix} \in \square^n.$$

Then  $\bar{S}_1 \bar{S}_2 : L^1_o(T^n) \rightarrow L^1_o(T^n)$ . Thus  $G_o(2n) = \bar{S}_2 \bar{S}_1 : \square^n \rightarrow \square^n$  is described as an  $n \times n$  matrix.

Let  $n \geq 2$ . We have (1)  $\lim_{z \rightarrow 2n^+} G_o(z) = G_o(2n)$  and (2)  $\sigma((H_\lambda^\circ - 2n)^{-1} V_\lambda^\circ)$ ,  $\{0\} = \sigma(G_o(2n))$ ,  $\{0\}$ .

Hence for  $n \geq 2$ ,

$$G_o(2n) = \lambda s(2n)I \tag{3.7}$$

and  $\bar{\delta}_s(\lambda, z)$  is defined by

$$\bar{\delta}_s(\lambda, z) = \begin{cases} \delta_s(\lambda, z) & z \in (2n, \infty) \\ (\lambda s(2n) - 1)^n & z = 2n \end{cases} \tag{3.8}$$

**Remark 3.3** In (3.7) and (3.8) we define  $\bar{\delta}_s(\lambda, z)$  and  $G_o$  for  $n \geq 2$ . We note however that  $s(2n) < \infty$  for  $n \geq 1$ . Thus

$G_o$  and  $\bar{\delta}_s(\lambda; z)$  are well defined for  $n \geq 1$ .

**Lemma 3.4** (Birman-Schwinger principle for  $z = 2n$ ). Let  $n \geq 2$ .

(a) Equation  $(H_\lambda^\circ - 2n)f = 0$  has a solution in  $L^1_o(T^n)$  if and only if  $1 \in \sigma(G_o(2n))$ .

(b) Let  $Z = \begin{pmatrix} w_0 \\ \vdots \\ w_n \end{pmatrix} \in \mathbb{R}^n$  be the solution of  $G_o(2n)Z = Z$  if and only if

$$f(p) = \overline{S_1} Z(p) = \frac{1}{(2\pi)^n} \frac{1}{E(p)} \frac{\lambda}{\sqrt{2}} \sum_{j=1}^n \omega_j \sin p_j \tag{3.9}$$

is a solution of  $(H_\lambda^\circ - 2n)f = 0$ , where  $w_1, \dots, w_n$  are actually described by

$$\omega_j = \frac{\sqrt{2}}{(2\pi)^{2-n}} \int f(p) \sin p_j dp, \quad j = 1, \dots, n \tag{3.10}$$

*Proof.* Let us consider equation  $(H_\lambda^\circ - 2n)f = 0$  in  $L^1_e(T^n)$ . So,  $f = (H_0 - 2n)^{-1} V_\lambda^\circ f$  in  $L^1_e(T^n)$ . Accordingly,  $L^1$ -solution of  $H_\lambda^\circ f = 2nf$  exists if and only if  $1 \in \sigma((H_0 - 2n)^{-1} V_\lambda^\circ)$ , and it follows that  $L^1$ -solution of  $H_\lambda^\circ f = 2nf$  exists if and only if  $1 \in \sigma(\overline{S_1 S_2})$ . Since  $\sigma(\overline{S_1 S_2}) \setminus \{0\} = \sigma(G_e^{2n}) \setminus \{0\}$  the proof of (a) is complete. One can also see that  $\overline{S_2 S_1} Z = Z$  if and only if  $f = \overline{S_1} Z$  satisfies that  $f = (H_0 - 2n)^{-1} V_\lambda^\circ f$ . So the function  $f$  coincides with (3.9). This fact completes the proof of (b).

**3.3 Eigenvalues of  $H_\lambda^\circ$**

Set

$$\lambda_s = \frac{1}{s(2n)}.$$

Note that  $\lambda_s = 1$  for  $n = 1$ . We divide  $(\lambda, \mu)$ -plane into two half planes  $S_\pm$  and the boundary  $S_0$ . Set

$$S_- = \{(\lambda, \mu) \in \mathbb{R}^2; \lambda > \lambda_s\}, S_0 = \{(\lambda, \mu) \in \mathbb{R}^2; \lambda = \lambda_s\},$$

$$S_+ = \{(\lambda, \mu) \in \mathbb{R}^2; \lambda < \lambda_s\}.$$

See Figure 1.

**Lemma 3.5.** Let  $n \geq 1$ . Then (a)-(c) follow:

- (a) Let  $(\lambda, \mu) \in S_- \cup S_0$ . Then  $\overline{\delta_s}(\lambda; \cdot)$  has no zero in  $(2n, +\infty)$ .
- (b) Let  $(\lambda, \mu) \in S_0$ . Then  $\overline{\delta_s}(\lambda_s; 2n) = 0$  and  $z = 2n$  has multiplicity  $n$ .
- (c) Let  $(\lambda, \mu) \in S_+$ . Then  $\overline{\delta_s}(\lambda; \cdot)$  has a unique zero in  $(2n, +\infty)$  with multiplicity  $n$ .

*Proof.* Since  $c(z) - d(z) > 0$  is strictly monotonously increasing in  $(2n, +\infty)$ , we get

$$c(\lambda; z) \leq c(\lambda_c; z) < c(\lambda_c; 2n) = 0, \quad \text{if } \lambda_c \leq \lambda < 0,$$

$$c(\lambda; z) = -1, \quad \text{if } \lambda = 0,$$

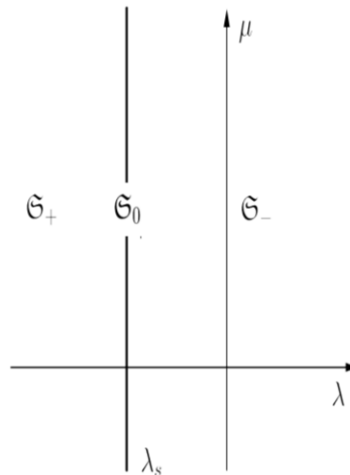


Figure 1: Regions of  $S_\pm$  for  $n \geq 1$

which prove (a) and (b). Since  $c(\lambda; 2n) > c(\lambda_c; 2n) = 0$  and  $\lim_{z \rightarrow +\infty} c(\lambda; z) = -1$  there exists

$z \in (2n, +\infty)$  such that  $c(\lambda; z) = 0$ . By the monotonicity of  $c(\lambda; \cdot)$  this zero is a unique and has multiplicity one. Hence (c) is proven.

By Lemma 3.5 we can see spectral properties of  $H_\lambda^\circ$ .

**Lemma 3.6** (Eigenvalues of  $H_\lambda^\circ$ ) Let  $n \geq 1$ . Then (1)-(3) below follow:

(1) Let  $(\lambda, \mu) \in S_- \cup S_0$ . Then there is no eigenvalue in  $(2n, +\infty)$ .

(2) Let  $(\lambda, \mu) \in S_+$ . Then there is an  $n$ -fold eigenvalue in  $(2n, +\infty)$ .

*Proof.* This lemma follows from Lemmas 3.5, and the fact that  $z \neq 0$  is an eigenvalue if and only if  $\overline{\delta}_s(\lambda; z) = 0$ .

**3.4. Threshold eigenvalues and threshold resonances for  $H_\lambda^\circ$**

In the previous sections we consider zeros of  $\overline{\delta}_r(\lambda, \mu; z)$  and  $\overline{\delta}_c(\lambda; z)$  for  $z \in (2n, +\infty)$ .

Let  $(\lambda, \mu)$  and  $z \in (2n, +\infty)$  be solution of  $\overline{\delta}_r(\lambda, \mu; z) = 0$  or  $\overline{\delta}_c(\lambda; z) = 0$ . Then  $z \in \sigma_p(H_\lambda^\circ)$ .

In this section we summarise spectral properties of  $H_\lambda^\circ$  derived from zeros of  $\overline{\delta}_r(\lambda, \mu; z)$   $\overline{\delta}_c(\lambda; z)$ .

**Definition 3.7** (Threshold eigenvalue and threshold resonance at  $2n$ ). Let  $f$  be a solution of  $(H_\lambda^\circ - 2n)f = 0$ .

(1) If  $f \in L_o^2(T^n)$  (resp.  $f \in L_o^2(T^n)$ ), we say that  $2n$  is a upper threshold eigenvalue of  $H_\lambda^\circ$  (resp.  $H_\lambda^\circ$ ).

(2) If  $f \in L_o^1(T^n)$ ,  $L_o^2(T^n)$  (resp.  $f \in L_o^1(T^n)$ ,  $L_o^2(T^n)$ ), we say that  $2n$  is a upper threshold resonance of  $H_\lambda^\circ$  (resp.  $H_\lambda^\circ$ ).

(3) If  $f \in L_o^\tau(T^n)$ ,  $L_o^1(T^n)$  (resp.  $f \in L_o^\tau(T^n)$ ,  $L_o^1(T^n)$ ) for any  $0 < \tau < 1$ , we say that  $2n$

is a upper super-threshold  $H_\lambda^\circ$  (resp.  $H_\lambda^\circ$ ). Then the solutions of equation  $(H_\lambda^\circ - 2n)f = 0$  are given by

$$f_j(p) = \frac{1}{(2\pi)\sqrt{2}} \frac{\lambda_s \sin p_j}{E(p)}, \quad j = 1, \dots, n \tag{3.11}$$

*Proof.* From  $\overline{\delta}(\lambda_s, 2n) = 0$  and Lemma 3.4 the lemma follows.

For  $n = 1$  we can directly see that  $(H_\lambda^\circ - 2n)f = 0$  has no solution in  $L^1$ , but it has a super-threshold resonance. We see this in the next proposition.

**Proposition 3.9** (Super-threshold resonance). Let  $n = 1$  and  $\lambda = \lambda_s = 1$ .

Then  $(H_\lambda^\circ - 2n)f = 0$  has solution  $f \in L_o^\tau(T)$ ,  $L_o^1(T)$  for any  $0 < \tau < 1$ .

I.e.,  $0$  is a super-threshold resonance of  $H_\lambda^\circ$ .

*Proof.*  $(H_{\lambda_s}^\circ - 2n)f = 0$  yields that  $f(p) = C \frac{\sin p}{E(p) - 2n}$ , where  $C = \frac{\lambda_s}{2\pi} \int_\tau \sin pf(p) dp$ .

Note that however  $\sin p / (E(p) - 2n) \notin L_o^1(T)$ , but we can see that  $\sin p / (E(p) - 2n) \in L^\tau(T)$  for any  $0 < \tau < 1$  since  $\sin p / (E(p) - 2n) \sim 1/|p - \pi|$  near  $p = \pi$  and  $\int_\tau |p - \pi|^{-\tau} dp < \infty$ .

**Theorem 3.10** (1) Let  $n = 1$ . Then  $2n$  is neither a threshold resonance nor a threshold eigenvalue, but for  $(\lambda_s, \mu)$ ,  $2n$  is a super-threshold resonance.

(2) Let  $n = 2$ . Then  $2n$  is a threshold resonance at  $\lambda = \lambda_s$ .

(3) Let  $n \geq 3$ . Then  $2n$  is a threshold eigenvalue at  $\lambda = \lambda_s$  and its multiplicity is  $n$ .

*Proof.* (1) follows from Proposition 3.9. Let  $n \geq 2$ . Then the solution of  $(H_\lambda^\circ - 2n)f = 0$  is given by (3.11). Since

$$\frac{\sin p_j}{E(p)} \in L_o^1(T^n) \setminus L_o^2(T^n), \quad n = 2$$

$$\frac{\sin p_j}{E(p)} \in L_o^2(T^n), \quad n \geq 3$$

we have  $f \in L^1_0(T^n)$ ,  $L^2_0(T^n)$  for  $n = 2$ , and  $f \in L^2_0(T^n)$  for  $n \geq 3$ . Then (2) and (3) follow and the multiplicity of 0 is  $n$ .

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## THE EFFECT OF FEEDBACK ON WRITING FROM AUTOMATED EVALUATION SYSTEM IWRITE 2.0

Annotation

Automated Writing Evaluation System (AWE system) is widely applied in college English writing courses. The system can provide language learners feedback in time and reduce the burden of language teachers on correcting paper writing. The research aims to investigate the impact of automated evaluation system feedback in the process of teaching writing in English as Foreign Language (EFL) class. The research chooses 115 sample from the automated writing evaluation system iWrite 2.0, and the writing task is the same as the writing part in College English Test 4. The participants are non-English major language learners and are from the Level-A class because the mark of English is more than 115 in the College Entrance Examination. The research analyzes the process of making some corrections based on the feedback supplied by iWrite 2.0, textual features of writing samples and different kinds of mistakes. The research concludes the automated scoring system can help language-learners correct language mistakes, such as spelling, connotation, grammar and so on, but provide less suggestions on content or structure. After correcting the writing for several times, the mark of samples could not be higher, which illustrates the language learners need more reading and listening to improve their ability. The language teachers can clarify the common mistakes and collect some samples to give some instruction on writing in class.

**Key words:** Impact, Feedback, Automated Evaluation System, Writing

**Introduction.** Automated Writing Evaluation System (AWE system) is widely applied in English writing courses. The research aims to improve writing teaching and learning through analyzing feedback from the automated writing evaluation system iWrite 2.0. 115 language learners from Level A participate in the research and complete the writing task. The participants are non-English major language learners and have a better ability of language learning. The research analyzes the feedback supplied by iWrite 2.0, including features of vocabulary, textual features, and different types of errors. The research concludes iWrite 2.0 can help language learners correct some errors, such as spelling, connotation, grammar and so on, but language learners have a negative attitude towards writing. The language teachers can classify the errors, analyze the positive and negative suggestions and give more instruction in writing courses to improve writing teaching and learning.

**Literature Review.** Automated Essay Scoring (AES) or Automated Writing Evaluation (AWE) system appears in 1960s. Professor Page develops Page Essay Grade (PEG) which assesses essays from the dimension of text characteristics and does some regression analysis. (谢, 2020)

With the development of science and technology, Automated Writing Evaluation system is used widely in the tests, and some researchers improve the functions of system to provide a more accurate scoring result. Landauer, Laham invents Intelligent Essay Assessor (IEA), which provides scores and assessment according to grammar, genre, and some potential semantic analysis. E-rater, Intellimetric and Intelligent Essay Assessor is a more complicated system with the analysis of lemma, syntax, and text structure.

In some international high-stake language tests, Automated Writing Evaluation system is also important to assess writing ability of language learners who are going to go abroad for study. In TOEFL, even human raters must assess the essays, the system also scores and evaluates from vocabulary, structure, errors, and content. Vocabulary is assessed from complexity and average length; structure is from organization and development; errors include grammar

errors, genre, usage and so on; content is assessed from key words and collocation. (Deane, 2013)

The research by western professors includes the following parts: the reliability of system and development of new functions (Wand & Brown, 2007), the achievement of language learners (Eillot & Mikulas, 2004), and the application of AWE in writing courses. (Attali, 2004)

In China, Pigai system and iWrite 2.0 are two AWE systems applied in English writing most widely, and many researchers have done some research. Pigai system evaluates the essays from average length of sentence, usage of different sentence structure, spelling, grammar, and vocabulary. However, the system provides less advice on structure, content, and organization. (何, 2013)

iWrite 2.0 can immediately evaluate students' compositions from four dimensions (language, content, organization, and mechanics) and highlight their errors and types. (Li, & Xiao, 2020) The system is the first one to build a word associate network with less than 5 key words to assess the production from the relevance and coherence of the essay. In China, iWrite 2.0 has been applied by a lot of language teachers, and some researchers have conducted the application research. The writer searches for the related articles on China National Knowledge Infrastructure (CNKI) with the key word iWrite 2.0, and there are 21 articles. The researchers focus on the application of iWrite 2.0 in teaching model or methodology of writing, such as how to improve writing ability based on feedback provided by iWrite 2.0. (谢, 2020; 冯, 2021; 潘&杨, 2022 ; ) iWrite 2.0 can reduce the load of teachers on assessment, language learners can correct some language errors on time, and improve autonomous learning ability. (何&龚, 2017).

Few researchers do some studies on the feedback by iWrite 2.0, classify the errors, analyze the reasons for the errors, and provide some advice on writing teaching in classroom.

**Analysis on Feedback from iWrite 2.0.** The research chooses 115 samples from iWrite 2.0 system, and the topic of writing task is "Whether e-books will replace paper books".

115 language learners from Level A complete this writing task without time limit. Total score is 15, which is common in ordinary English tests. After submitting the composition, language learners can correct the errors based on suggestions by iWrite 2.0, so that the score of composition can be higher. iWrite 2.0 also supplies some types of feedback.

2.1 Analysis on feedback of writing  
iWrite 2.0 can record the whole process of writing, and display the results from the times of submission, comparison of different versions, final mark, duration of writing, and whether there is plagiarism.

Times of submission		Final mark		Duration of writing(min)		Plagiarism (Percentage)	
min	max	min	max	min	max	min	max
1	14	2.9	12.4	1	957	0	73.7%

Table 1. Feedback of writing

Language learners can correct some errors according to the suggestion given by iWrite 2.0 and submit for many times to acquire a higher mark, but language learners submitting for more than 1 time just account for 52.17%. The lowest mark is 2.9, because the language learner did not complete the task and there are a lot of language errors. 4 language learners with scores below 9 account for 3.48%, which illustrates most language learners are better than average level. Some ones have a higher mark after submission for many times, but some ones can have a high mark for their better writing ability. The shortest duration of writing is 1 minute for correcting some language errors and submitting again. Among 115 learners, 4 learners suspected of plagiarism. Compared with other versions, there are similar sentences in

their compositions, but 1 learner may copy 73.7% of another one.

### 2.2 Analysis on feedback of text features

iWrite 2.0 provides data of text features from lexical features, lexical difficulty, sentence analysis and readability analysis.

#### 2.2.1 Lexical features

iWrite 2.0 can make statistics on lexical features, including token, type, lemma, Type-token Ratio (TTR), LTTR, and families. (Table 2) The statistics of lexical feature can be the index to illustrate the vocabulary language learners have mastered. The higher TTR is, the richer vocabulary is, and the more vocabulary language learners master. (张, 2020)

Tokens	Types	Lemma	TTR	LTTR	Families
169	111	104	0.66	0.62	79
165	110	104	0.67	0.63	81
180	115	108	0.64	0.60	86
180	115	108	0.64	0.60	87
208	132	125	0.63	0.60	101
208	130	124	0.62	0.60	100

Lexical feature (iWrite 2.0)

	Tokens		Types		Lemma		TTR		LTTR		Families	
	min	max	min	max	min	max	min	max	min	max	min	max
	165	236	52	133	51	142	0.47	0.79	0.47	0.77	36	117
<b>avg.</b>	169		100		96		0.60		0.58		75	

Table 2. Lexical feature

The statistics illustrate the repetition of vocabulary is a common phenomenon. Language learners have acquired a few vocabularies, but they would like to use the words repeatedly for lack of ability to distinguish the synonyms and antonyms while writing a composition. However, there are some special samples. One composition with 90 words and TTR is 0.70, but

one composition with 219 words and TTR is 0.49, which illustrates the number of words is not proportional to TTR.

#### 2.2.2 Lexical difficulty

In iWrite 2.0 system, there are some lexicons, such as College English Test 4 (CET-4), active words, Longman written words, and academic words.

Nation Family ...	CET-4 Level (%)	Active Words (...)	Longman Writ...	Academic Wor...
2.96	79.29	68.64	80.47	2.96
4.24	81.21	69.09	81.21	3.03
4.44	80.00	68.33	80.00	2.22
4.44	80.56	68.33	80.56	2.22
3.85	81.25	69.71	80.29	2.40

Lexical difficulty (iWrite 2.0)

The statistics illustrate Nation Family level is above 3, vocabulary of CET-4 can reach to 80.83%, and vocabulary of Longman Written words account for 81.62%. Vocabulary language learners used are high-frequency vocabulary. Active vocabulary accounts for 71.52%, which is consistent with language features. However, the frequency of academic vocabulary is low, which demonstrates language learner would like to use oral words in writing and lack of academic words.

### 2.2.3 Sentence analysis

Sentence analysis includes the number of paragraphs, sentence, clauses, average sentence length, average paragraph length, and syntactic complexity.

Paragraphs	Sentences	Clauses	Avg Sent Len	Avg Para Len	Syntactic C...
4	11	7	16	2	0
3	10	7	18	3	1
3	11	8	17	3	1
3	13	8	15	4	0
3	14	10	16	4	0

Sentence analysis (iWrite 2.0)

	Paragraphs	Sentences	Clauses	Avg Sent Len	Avg Para Len	Syntactic Complexity
Avg	3.44	11.08	7.14	16.5	3.14	0.17

Table 3. Sentence analysis

Statistics of sentence analysis demonstrate most compositions consist of 3 or 4 paragraphs, a common structure in English writing. Some simple clauses are used frequently, and language learners use some long sentences in composition with the low syntactic complexity, because they are worried about making language errors and acquiring a lower score.

### 2.2.4 Readability analysis

iWrite 2.0 provides readability analysis from Flesh-Kincaid Grade Level and Flesch Reading Ease.

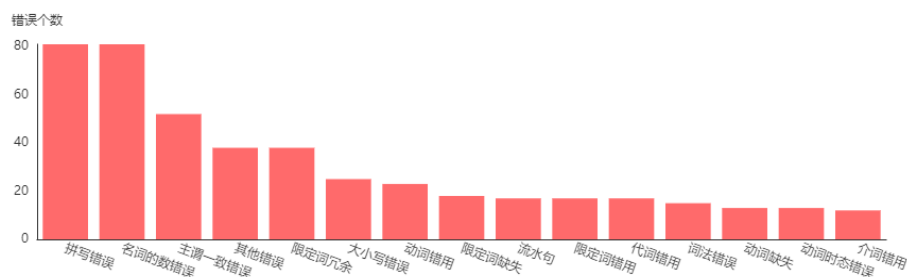
Flesh-Kincaid Grade Level	Flesch Reading Ease
8.56	61.09
9.01	59.85
8.82	60.98
7.77	64.00
7.85	65.26

### Readability analysis (iWrite 2.0)

The average Flesh-Kincaid Grade Level reaches to 8.00, which means students in Grade 8 can understand the text. The average Flesch Reading Ease is 65.27. The readability analysis demonstrates language learners need to improve the complexity of text from vocabulary, sentence complexity and content of text.

### 2.3 Analysis on feedback of errors

iWrite 2.0 evaluates the text from language, content, organization, and mechanics, and divide the language errors into different types, including spelling errors, error of the number of nouns, error of subject-predicate agreement, addition of qualifiers, preposition/pronoun/verb misuse, omission of verbs, noun, adjective or other words, error of tense, misuse of punctuation and so on.



Error analysis (iWrite 2.0)

Total	Error type	Number	Ratio
2347	Spelling errors	317	13.51%
	Errors of the number of nouns	298	12.70%
	Errors of subject-predicate agreement	195	8.31%
	Addition of qualifiers	192	8.18%
	Misuse of verbs	171	7.29%

Table 4. Statistics of errors

The researcher makes the statistics of errors and analyzes the reasons for the 5 most frequent errors. There are 2347 errors in writing, and iWrite 2.0 divide them into more than 28 types. The most frequent errors are spelling errors (13.51%), errors of the number of nouns (12.70%), errors of subject-predicate agreement (8.31%), addition of qualifiers (8.18%), and misuse of verbs (7.29%).

### 2.3.1 Spelling errors

Among these types of errors, spelling errors are the most frequent. Every language learner makes some spelling mistakes while writing on iWrite 2.0. Some learners are not careful enough to type every word, such as “**taday**” “**pepole**” “**decices**” “**firt**” “**becouse**”..... Some learners have a wrong memory of words, such as “**origion**”(origin), “**advantages**”(advantages), “**clearier**”(clearer), “**convinient**”(convenient)...because the same learner makes the same mistake while writing. After completing the task, the researcher asks the learners to write the words on paper, and they also have the spelling errors.

### 2.3.2 Errors of the number of nouns

Errors of the number of nouns are also made by many learners. The topic is “Whether e-books will replace paper books”, and a lot of learners do not pay attention to “e-books”, a plural noun, which may affect usage of “e-books” or “e-book” while writing. Before a single noun, there must be a “a/an”.

eg: **E-book** and paper book should coordinate with each other.

**E-book** is convenient today that people can read everywhere...

There are some other errors of the number of nouns because learners are not clear about the single or plural form of the noun or they are not careful about usage of these nouns.

eg: At last, paper books can be read at any time without worrying about battery **problem**.

Firstly, with the development of the science technology, cell phones are becoming more and more popular in people's daily **life**.

What's more, e-books also have plenty of **disadvantage**.

### 2.3.3 Errors of subject-predicate agreement

Errors of subject-predicate agreement are also frequent in writing. Subject-predicate agreement means predicate verbs should agree with the subject in person and number. (王, 2020) Among errors of subject-predicate agreement, most of them can due to use of “e-book” or “e-books”.

eg: In conclusion, e-books **has** more advantages.

On the whole, e-books **brings** more convenience to us,.....

In some simple sentences, learners have these errors because of carelessness or misunderstanding of the overall concept. Learners may consider “e-books” as an overall concept.

eg: For another thing, using Chinese characters **make** us express ourselves arbitrarily.

Written language **bear** the weight of writer's emotion.

For language learners, non-predicative verbs are difficult, especially when non-predicative verb is used as a subject, they may make some mistakes.

### 2.3.4 Addition of qualifiers

Misuse of qualifiers is very common. Chinese language learners make some mistakes when talking and writing. When they learn English in primary school or junior middle school, they may remember a lot of principles of using qualifiers, but in ordinary study, it is easy for them to add “the” or “a/an” before nouns incorrectly.

eg: With **the** technology growing fast, e-books will play an important part in our daily life.

A research produced a few years ago showed that students who use paper in the exam score higher than those who use electronic materials.

Some errors may lead to omission of other components of the sentence.

eg: E-books **which** are more abundant than paper books.

The reason **that** is the convenience of e-books.

### 2.3.5 Misuse of verbs

Misuse of verbs includes lack of verbs, addition of verbs and wrong use of tenses. Learners may miss verb, especially “is/are” before some adjectives because of the effect of Chinese.

eg: As is known to all, with the development of technology, **e-books came into being**.

To sum up, the paper books will be weakened by e-books, but **it hard to replace**.

In some sentences, learners may use two verbs as the predicate. Because a lot of learners have the sentence in Chinese in their minds then translate into English, so that they make some grammar mistakes.

eg: But some other people **consider it is impossible** for e-books to replace paper books.

E-book **is very do harm to** our eyes and make us be unfamiliar with writing.

The researcher finds some other errors are also divided into wrong use of tenses, such as misuse of passive voice of verbs.

eg: Even you can write in the book randomly and **it will be remained** with the book permanently.

But another people **consider e-books are** more convenient than paper books.

**Research Result.** The researcher interviews some language learners and language teachers about applying iWrite 2.0 in writing courses. Based on the analysis and interview, the research concludes the following results.

### 3.1 Learners' attitude towards writing

During the interview with these learners, the researcher finds some of them have a negative attitude towards writing. They consider writing being an important part in English study, but they are confused about how to improve writing. When they have a topic to write about, they have the main structure and idea without more details and content.

The learners who submit their writing for one time and never correct language errors for a high mark think the task is not a test, so they read the suggestions iWrite 2.0 provides without any correction. Some learners spend a short period completing their task or copying some parts from others to save time because deadline is coming soon.

### 3.2 Text features

According to the analysis on text features, it is easy for language learners to complete a writing task with 120-180 words. However, vocabulary language learners can use in their writing is limited and lack of diversity. In China, language learners acquire vocabulary by remembering the words and phrases. They are not clear about similarities and differences among synonyms and other phrase with similar meaning.

Although language learners try to write some complex sentences or clauses for a higher mark, they may make some grammar mistakes. A composition of 3 or 4 paragraphs is a better one which is accepted by most language learners. However, the readability shows content of writing is easier because of repetition of vocabulary, more simple sentences, and lack of content and details.

### 3.3 Improvement of writing courses

Analyzing the errors in writing, language teachers can classify the feedback into positive ones and negative ones and pick up some key points with examples to give more instruction in writing courses.

As language learners are used to learning English in their own methods, and never realize some errors, language teachers should help them correct and learn in a more efficient way. Acquiring vocabulary is the most important for learners, and the most effective way is to read more and listen to more materials but not remember words or phrases by mechanical memory.

The researcher also finds some suggestions iWrite 2.0 displays are not accurate, especially some grammar errors. Therefore, language teachers need to compare the different types of errors and analyze the reasons for these errors.

**Conclusion.** The language learners in this research come from Level A. They have a better ability in learning English, so they have a high mark in writing courses, but the result can not stand for the average level in this university. Only 5 most frequent errors are analyzed in this research. More samples from different levels should be included to clear up some errors and help more language learners improve their writing.

The research analyzes the feedback from language teachers' terminal, and in further study, more feedback from language learners' terminal should be analyzed.

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## ERNEST XEMINGUEYNING “ALVIDO, QUROL!” ROMANI TARJIMASIDA XARAKTER IN'IKOSI

Annotatsiya

Mazkur maqolada muayyan so'z san'atkori ijodiga mansub bo'lgan badiiy asarni bir tildan ikkinchi tilga tarjima qilishda asardagi xarakterlar to'laonligini bera olish masalalari ko'rilgan. Bunda mohir mutarjim Ibrohim G'afurov tomonidan o'zbek tiliga o'g'irilgan mashhur AQSh adibi, Nobel mukofoti laureati Ernest Xemingueyning “Alvido, qurol!” romani tahlil qilinadi.

**Kalit so'zlar:** So'z san'ati, tarjima san'ati, qiyofa, xarakter in'ikosi, xarakter psixologiyasi, milliy kolorit, talqin, tasvir, qayta yaratish.

**Kirish.** Muayyan so'z san'atkori ijodiga mansub bo'lgan badiiy asarni bir tildan ikkinchi tilga tarjima qilishda xarakter to'laonligini bera olish mutarjimdan katta mas'uliyat va mashaqqat talab qiladi. Mashhur amerika adibi Ernest Xeminguey asarlarining o'zbekcha tarjimalarini shu nuqtai nazardan tahlil qilish muayyan nazariy umumlashmalar chiqarishga imkon beradi.

Xarakter yaratish badiiy prozaning eng muhim shartidir. Badiiy asarlardagi xarakterlar o'zlarining kuchli jozibasi, individual bo'yoqlari bilan kitobxonning bir umr yodida qoladi. E.Xemingueyning “Alvido, qurol!” romanidagi qahramonlar Genri, Ketrin va Fergysonlar ana shunday xarakterlar jumlasiga kiradilar.

**Mavzuga oid adabiyotlar tahlili.** Sovuq urushdan so'ng o'tgan asrning 70-yillarida dunyoda tinchlik uchun kurash nihoyatda jiddiy tus oldi. Adabiyotimizda urushga qarshi va tinchlik uchun kurash motivlari bilan sug'orilgan asarlar ko'lami ortdi. Adiblarimiz urushni la'natlovchi qator asarlarni yaratdilar. Xuddi shu davrda mohir tarjimon Ibrohim G'afurov mashhur AQSh adibi, Nobel mukofoti laureati E.Xemingueyning “Alvido, qurol!” romanini o'zbek tilida e'lon qildi.

**Tadqiqot metodologiyasi.** “Alvido, qurol!” romanida yozuvchining olg'a surgan g'oyasi umuminsoniydir. Shu jihatdan ham mazkur roman urush nimaligini o'z ko'zi bilan ko'rgan, uning insoniyat boshiga keltiradigan ofatlarini boshidan o'tkazgan adibning urushga qarshi manifestidir.

Romanning syujeti qisqa va lo'nda. Unda birinchi jahon urushi davrida Italiya armiyasi safida xizmat qilgan amerikalik ofitserning hayoti va uning avval urushga ishonchi, keyin esa urushning bema'ni bir narsa ekanini anglashi tasvirlanadi. Romanda tasvirlangan voqealar faqat Genrining urushning asl mohiyatini anglashi bilangina tugamaydi, balki Ketrin bilan uning o'rtasidagi muhabbat romanning asosiy syujet chizgilaridan biridir. Asar nihoyasida Ketrin tug'ruqxonada olamdan o'tadi. Genri esa qurolini tashlab, urushdan yuz o'giradi. Romanda bu ikki yosh taqdiri misolida birinchi jahon urushining insoniyat boshiga solgan kulfatlari real aks ettirilgan.

Asarda yaratilgan qiyofalar yozuvchining g'oyaviy niyatini amalga oshishiga xizmat qiladi. Qiyofalar asosan asarning bosh qahramonlari – Genri va Ketrin atrofiga yig'ilganlar. Biroq ulardan birortasi ham asarning oxirigacha bosh qahramonlar bilan birga bo'lmaydilar – asarning ma'lum bir qismida o'zlariga yuklatilgan g'oyaviy vazifani bajarib, syujetdan chiqib ketadilar. Ketrinning dugonasi Fergyson ana shunday qiyofalardan biridir.

**Tahlil va natijalar.** Ulkan miqyosdagi hayot tasviri orqali kattayu kichik qiyofalarning butun boshli galleriyasini yaratib, ularni ma'lum bir g'oyaga bo'ysundirish, ulardan ibratli ma'no chiqarish oson ish emas. Xemingueyning buyuk san'atkor sifatidagi mahorati ham ana shunga borib taqaladi.

Adib tasvirlagan katta hayot manzarasida harakat qilayotgan odamlarni asl nusxadagidek hayotiy qilib tarjimada berish masalasi esa tarjimon oldidagi eng murakkab masalalardan biridir.

Shu o'rinda Genri bilan Fergyson o'rtasida bo'lib o'tgan suhbatni ko'raylik:

“- Sizlarning to'ylaringiz bo'lmaydi.

- To'y qilamiz.

- Yo'q, uylanmaysiz.

- Nega?

- To'ygacha urishib qolasizlar.

- Biz hech qachon urishmaymiz.

- Ulgurasiz hali.

- Biz hech qachon urishib qolmaymiz.

- Bo'lmasa, o'lasiz. Yo urishib qolasiz, yo o'lasiz.

Doim shunday bo'ladi. Hech kim uylanmaydi.

- Bizga hech narsa bo'lmaydi.

- Shunday bo'lsin, faqat janjal qilmanglar, uni ko'z qorachig'idek asrang.

- Yaxshi.

- Ko'zingizga qarang. Men uning qo'lida urush chaqalog'i bo'lib qolishini istamayman.

- Juda ajoyib qizsiz-da, Ferji.

- Ajoyib-pajoyibi yo'q. Yaltoqlik qilmang menga.

Oyog'ingiz tuzukmi?” [1]

Genri bilan Fergyson o'rtasidagi mazkur suhbatda Genrining Ketringa bo'lgan mehr-muhabbati haqida so'z ketsa ham, u aslida muallifning har qanday urushga (xoh u yurt uchun urush bo'lsin, xoh insonlar o'rtasidagi) bo'lgan munosabati mahsulini ifodalaydi. Keltirilgan dialogning ilk satrlaridayoq Fergysondan “To'yimizga borasizmi?” - deya iltifot bilan so'ragan Genriga u tomdan tarasha tushgandek “Sizlarning to'ylaringiz bo'lmaydi”, deya hukm chiqaradi. Mazkur jumla inglizchada “You'll never get married!” [2] deb berilgan. Rus tarjimoni bu jumlaning aynan asliyatdagidek “Вы никогда не женитесь” mazmunida tarjima qilgan va o'zbek tiliga “Sizlarning to'ylaringiz bo'lmaydi”, deb o'g'irilgan. Bu javobda mantiqiy bog'liqlikni ko'ramiz. Fergysonning bunday qat'iy gapirishiga uning psixologik holati sabab. U har qanday urushdan nafratlanadi. Uning oqibatlaridan nafratlanadi. Fergyson bu haqida “the children of war” deydi [2]. Rus tarjimoni bu iborani “Смотрите же. Я не желаю, чтобы она осталось с младенцем военного времени на

pykax”, deb o'g'irgan. Asliytdagi iborani rus tarjimoni “urush davri chaqalog'i bilan” tarzida berib asliytdagi jumla va g'oya mazmuniga putur yetkazgan bo'lsa, o'zbek mutarjimimiz muallifning asl maqsadini tushungan holda mazkur jumlaning “urush chaqalog'i” deb o'g'irib to'g'ri yo'l tutgan. Zero, urush chaqalog'i va urush vaqtida tug'ilgan chaqaloq o'rtasida mazmun jihatidan ancha tafovut bor. Bu tafovut shundaki, “urush chaqalog'i” zamirida faqatgina urush davridan qolgan yodgor farzand emas, balki har qanday urush oqibatida otasiz qolgan bola tushunchasi yotadi. Shundan kelib chiqib mutarjimimiz “janjal qilminglar” degan ibora o'rniga “urushmanglar” degan so'zni ishlatganida edi, asar qahramonining ruhiy holatini yanada ochib berishga erishgan bo'lar edi.

Ko'rib turganimizdek, tarjimada xarakterlarni qayta yaratishda, ularning ruhiy holatini o'quvchiga yetkazib berishda asliytdagi dialoglarga to'g'ri so'z tanlay bilishning o'rni muhim.

Keltirgan tarjima misolimizdagi Fergiyusonning “Yaltoqlik qilmang menga” degan iborasini tahlil qilsak. Fergiyuson nutqidagi inglizcha “flatter” so'zining [4, 185] lug'atdagi ruscha variantlarini ko'raylik:

льстить;

приукрашивать; преувеличивать достоинства;

быть приятным; ласкать (взор, слух)

Rus tarjimoni Y.Kalashnikova inglizcha bu so'zning ruscha lug'aviy tarjimasini bo'lgan yuqorida keltirilgan birorta ham variantni qo'llashni lozim topmagan. U “подлизывайтесь” so'zini qo'llaydi. Rus tilidagi “подлизаться” fe'lining o'zbek tilida “xushomadgo'ylik qilmoq”, “laganbardorlik qilmoq”, “birovning tovonini yalamoq”, “yaltoqlanmoq” kabi muqobillari mavjud. O'zbek tarjimoni esa asarning ruscha tarjimasidan kelib chiqib “yaltoqlanmoq” fe'lini tanlaydi. Aslida esa Genri “подлизываться” ham qilayotgani yo'q, “yaltoqlanayotgani” ham yo'q. U shunchaki urush tufayli yuragi nafratdan ezilgan Fergiyusonni biroz yumshatmoqchi bo'layapti. Shuning uchun “Yaltoqlik qilmang menga” degan jumlaning o'rniga “Meni yumshatishga urinmang” degan ibora berilganida edi, tarjima yetuk tarjima bo'lgan bo'lar edi.

Romanning o'zbek tiliga tarjimasida u yoki bu qahramon qiyofasining naqadar to'g'ri yoki noto'g'ri qayta yaratilgani haqida so'z yuritar ekanmiz, shu yerda yana bir qiyofa shuhratparast ofitser qiyofasining o'zbekcha variantiga nazar solsak. Muallif bu xarakter orqali urushda faqat o'z manfaatlarini o'ylaydigan, shon-shuhratga ega bo'lish yo'lida hech narsadan qaytmaydigan, hayiqmaydigan noshud bir nusxani tasvirlaydi:

“ - You guys think here out anything to war” [2].

Mazkur jumla ruschada:

“ - Молодчики вроде вас всегда воображают, что война – пустое дело”. [3]

O'zbekchada:

“ - Bizga o'xshagan azamatlar urushni mensimaydilar”.

[1]

Tabiatan maqtanchoq, shuhratparast shaxs ekanini yoritish uchun Ettorening yonidagilariga aytgan bu gapini Ibrohim G'afurov xarakter mantiqidan kelib chiqib, matnga erkin, ijodiy yondoshgan holda tarjima qilgan. “Молодчики вроде вас всегда воображают, что война – пустое дело” iborasining o'zbekcha variantida “Bizdek azamatlar urushni mensimaydi” deb berilishi o'quvchiga qahramonning kibridan, manmansirashidan, shuhrat quli ekanidan darak beradi. Bu yerda mutarjimning tarjimadagi bu hil tamoyili uning mazkur xarakter psixologiyasini yaxshi o'zlashtirganidan dalolatdir.

Genri qiyofasiga nazar solsak. U jang maydonlarida juda ko'p narsalarni anglab yetadi. Ayniqsa u xizmat qilayotgan qo'shinning ortga chekinishi, ularning otib tashlanishlari Genri ongida keskin burilish yasaydi. Genriga

navbat kelishidan oldin jandarmlar bir podpolkovnikni quyidagicha so'roqqa tutadilar:

“- Siz va sizga o'xshaganlar tufayli varvarlar vatanimizning muqaddas chegaralarini buzib o'tishdi.

- Bema'ni gap, - dedi podpolkovnik.

- Sizga o'xshagan sotqinlar bizni g'alaba ne'matlaridan mahrum qilishdi.

- Siz o'zingiz hech chekinib ko'rganmisiz umringizda? – so'radi podpolkovnik.

- Ital'yanlar chekinmasliklari kerak...

- Agar meni otib tashlamoqchi bo'lsangizlar, - dedi podpolkovnik, - o'tinaman, boshqa so'roq qilib o'tirmay otib tashlang. Bu so'roq juda bema'ni.

U cho'qinib oldi. Ofitserlar bir-birlari bilan g'ujullashib olishdi. Bittasi bloknotiga allanimalarni yozdi”[1].

Inglizchadagi “fruits” [2] va ruscha variantdagi “плоды” o'zbekchada “mevalar” deb o'girilsa ham bo'lar edi, ammo bu so'z matndagi ma'noni bersa ham, personaj xarakterining muhim belgilarini ko'rsatishga “ne'mat” so'zichalik qodir bo'lmasdi.

Kuchli irodaga ega bo'lgan Genrining o'ylari haqiqiy insonlarga xos bo'lgan ichki kechinmalardan iborat. Mutarjim bosh qahramonning ushbu ichki kechinmalarini mahorat bilan qayta tiklagan:

“U bir soniya ham yashamagan, faqat ona quchoq'idagina tirik bo'lgan. – deb kuyinib o'ylaydi Genri o'zining dunyo yuzini ko'rmay turib vafot etgan farzandi haqida. – Men necha martalab uning qimirlaganini sezgandim. Keyingi paytlarda esa bilinmay qolgan edi-ya. Balki u o'shandayoq bo'g'ilib qolganidir. Bechora chaqaloq. Nega ham men unday bo'g'ilib o'lmadim. Afsus. Yo'q, afsus emas. Ehtimol o'lib ketganimda, yana buncha o'limlarni boshimdan kechiraman bo'lardim. Endi Kettrin o'ladi. Bularning hammasini nima keragi bor, hatto bilmaysan ham, bilib ulgurolmaysan” [1].

Keltirilgan parchadagi fikr-o'ylar Genri hayolidan Kettrin dunyodan ko'z yummasidan besh-o'n daqiqa oldin o'tadi. Genrining o'ylari uning haqiqiy muhabbat egasi ekanligidan, o'z farzandi va ayolini chin dildan yaxshi ko'rishidan dalolat beradi. Genri kabi matonatli kishilar tasviri Xemingueyning xarakter yaratish tamoyillarining bosh xususiyatidir. Ana shu tamoyillarning tarjima asarga ham san'atkorona ko'chirilishi, ya'ni og'ir vaziyatga tushgan matonatli kishi – Genri qiyofasining yorqin ifodalanishi mutarjimning ham katta mahoratidan darak beradi.

**Xulosa va takliflar.** Personaj milliy xarakterining asosiy xislati tarjima asarda ham o'z ifodasini topishi zarurligi qanchalik muhim bo'lsa, muallif tomonidan ma'lum estetik vazifa yuklatilgan detallarga alohida e'tibor berish ham shunchalik muhimdir, chunki detallarning noto'g'ri tarjimasini muallif uslubini buzishga olib keladi. Shu sababli tarjima nazariyasi milliy koloritli so'zlarga alohida e'tibor berib, ularni har bir xalqning o'ziga xos leksik birliklari bilan ifodalashni talab qiladi.

Badiiy asarda yaratilgan qiyofaning ma'naviy-ahloqiy xususiyatlari portret orqali namoyon bo'ladi va har bir ijodkor o'zi yaratgan qiyofani kitobxon ko'z oldida aniq gavdalandirib turuvchi portretni chizadi. Adabiyotshunos olim Matyoqub Qo'shjonov aytganidek: “Portret tasviriy san'atda va badiiy adabiyotda hayot voqeligini bevosita ko'rsatishning eng muhim omillaridan” [5, 160] biri hisoblanadi. Binobarin, yozuvchi tipiklashtirgan xarakterning o'ziga xos tomonlarini mujassamlashtiruvchi detallardan asosiysi bo'lgan portret tasvirini tarjimada berish mutarjim oldidagi murakkab vazifalardan biridir.

Portret qahramon masalasi bilan chambarchas bog'liq bo'lib, asarning g'oyaviy-badiiy xususiyatini belgilovchi komponentlardan biri hisoblanadi. Har bir ijodkor o'z qahramonining badiiy portretini yaratar ekan, dunyoqarashi va

estetik saviyasidan kelib chiqqan holda unga ma'lum bir ma'no yuklaydi. Bu ma'no qahramon xarakterini to'ldirishga, uni yanada yaqqolroq ko'rsatishga qaratilgan bo'ladi. Shuning uchun ham badiiy tarjimada qahramon portretini, tasvirning obrazlilikini boshqa til vositalari bilan qayta yaratish har qanday tarjimondan katta mahorat, san'at va ma'suliyatni talab qiladi. Hech qachon bir tildagi biror obrazli so'z ikkinchi tildagi xuddi shunday obrazli so'zga to'g'ri kelavermaydi.

Yozuvchi o'z asariga qahramonlar, personajlar va hayotiy unsurlar tanlar ekan, uning bu ishi doimo ma'lum maqsadga yo'naltirilgan bo'ladi. Shu sababli adib har bir

obrazga ma'lum ma'no yuklaydi va uni individual sifatlar bilan tasvirlaydi. Ana shu ma'no va maqsadga xos so'zlatadi, harakat qildirtiradi va bunda foydalanilgan har bir leksik-stilistik unsur juda muhim ahamiyatga egadir.

Mutarjim Ibrohim G'afurov ham Ernest Xemingueyning "Alvido, qurol!" romanini tarjima qilishda personajlar portreti chizgilaridagi belgilarni tashlab ketmay o'g'irgan. Bunda u badiiy tasviriy vositalarni, o'xshatish va qiyoslashlarni buzmay ag'daradi va bu bilan portretlarda ifodalangan asliyatdagidek kuchli emotsional-ekspressivlikka erishadi.

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## BIOGUMUSNING O'SIMLIKLAR O'SISHI VA RIVOJLANISHI HAMDA HOSILDORLIGIGA TA'SIRI

Annotatsiya

Ushbu maqolada o'simliklar o'sishi va rivojlanishi, ekologik sof mahsulot yetishtirish kabi biologiya, ekologiya va agronomiyaning dolzarb muammolariga qaratilgan. Ushbu maqoladagi tadqiqotlar eng murakkab metabolik jarayonlar - o'simliklar o'sishi va rivojlanish qonuniyatlari, ulardan barqaror hosil yetishtirish maqsadlariga qaratilgan. Bugungi kunda o'simliklardan ekologik sof mahsulot olishga va hosildorligini oshirishga hamda sifatini yaxshilashga xizmat qiluvchi organik dehqonchilikka, jumladan, biogumusga bo'lgan e'tibor kundun-kunga ortib bormoqda. Vermikompost bilan qayta ishlangan organik chiqindilar don-dukakli ekinlar yetishtirish, bog'dorchilik, polizchilik, sabzavotchilik, gulchilik va ko'kalamzorlashtirishda muvaffaqiyatli qo'llanilib kelinmoqda.

**Kalit so'zlar:** Kaliforniya chuvalchangi, biogumus, vitaminlar, vermikompost, mikroflora, organik dexqonchilik, utilitatsiya.

**Kirish.** Chuvalchanglar tuproq tarkibidagi organik moddalarni (chirindi, go'ng, sabzavot va meva qoldiqlari) iste'mol qilib, ichakdan o'tkazish jarayonida biologik faol moddalar bilan boyitadi va natijada chuvalchang chiqindisi yoki o'simliklarni yaxshi rivojlanishi uchun zarur bo'lgan bebaho biogumusga aylanadi. Bunday biogumus begona o't urug'lari va zararli aralashmalarni o'z ichiga olmaydi. Biogumusda gelmintlarning tuxumlari va lichinkalari, patogen protozoalarning kistalari bo'lmaydi. Uning tarkibida o'simliklar tomonidan to'g'ridan-to'g'ri o'zlashadigan juda ko'p makro va mikroelementlar, o'simlikni o'stiruvchi bir qator moddalar, vitaminlar, antibiotiklar, 18 ta aminokislotalar va foydali mikroflora mavjud bo'lib, biogumusning kimyoviy reaksiya muhiti neytraldir.

**Mavzuning dolzarbligi.** Hozirgi kunda butun yer yuzida bo'lgani kabi, O'zbekistonda ham dolzarb muammolardan biri - o'simliklardan olinayotgan oziq-ovqat mahsulotlaridan sifati va ekologik sof mahsulot yetishtirish hisoblanadi. Farg'ona viloyati sharoitida Kaliforniya chuvalchangi yetishtirish, vermikompost texnologiyasi asosida biogumus tayyorlash va uni o'simliklar rivojlanishi hamda hosildorligini oshirishga ta'sirini ilmiy asoslangan holda o'rganish bo'yicha bajarilgan tadqiqotlar mavjud emas. Bu esa ushbu tadqiqotning benihoya dolzarbligini ko'rsatib beradi.

**Mavzuga oid adabiyotlar tahlili.** Tuproq chuvalchanglarining o'simliklar rivojlanishi hamda hosildorlikni oshirishdagi ahamiyatini o'rganish dunyoda, ayniqsa mamlakatimizda yangidan-yangi ko'plab tadqiqotlarni o'tkazishga extiyojni keltirib chiqaradi. Chuvalchanglarni hamda biogumusni ilmiy-tadqiqot maqsadlarida o'rganish ishlari dunyo miqyosida ham mamlakatimizda ham ayniqsa, Farg'ona viloyati sharoitida juda kam o'rganilgan deyshimizga asoslar yetarli.

Vermikompost - bu turli xil organik chiqindilarni biogumus deb nomlanuvchi qimmatbaho mahsulotga aylantirish uchun keng qo'llaniladigan tejamkor va chiqindisiz texnologiyadir [1]. Charlz Darvin 1881 yilda nashr etgan "Tuproq chuvalchanglari faoliyati va ularning hayot tarzi natijasida tuproq qatlamining shakllanishi" nomli klassik asarida shunday deb yozgan edi: "Tuproqqa chuvalchanglar tomonidan ishlov berib kelingan va ular tomonidan ishlov berilaveradi. Chuvalchanglar o'simliklarning o'sishi uchun yerni shu tarzda tayyorlaydilar. Butun mavjud vegetativ qatlam allaqachon chuvalchanglarning ichaklaridan bir necha marta o'tgan va yana ko'p marta o'tib ketadi. Ular butun tuproqni yaxshilab aralashtiradilar, xuddi bog'bon eng nafis

o'simliklari uchun maydalangan tuproqni tayyorlayotgani kabi. Yer qobig'ida bunday muhim o'rinni egallaydigan boshqa hayvonlarni uchratish mushkul"[2].

Vermikultivatsiyaning fan sifatida paydo bo'lishini XX asrning 30-yillari deb atash mumkin. Aynan o'sha paytda AQSH (Kaliforniya) davlatida sanoat miqyosida yomg'ir chuvalchangidan foydalanishda ilmiy-amaliy tadqiqotlar boshlangan. 1939 yilda amerikalik doktor Tomas J.Barret oshxonasi yaqinida kompost uyulgan joyda chuvalchanglar soni ko'payganiga, u yerda tuproq juda g'ovak, yumshoq, mayin ekanligiga ahamiyat qaratgan. U o'simliklar ostiga bu kompostni chuvalchanglar bilan birga olib kelib sola boshlagan, natijada esa hosildorlik sezilarli darajada oshganini, o'simliklarning mevalari kattalashib, tashqi ko'rinishi va ta'mi ham yaxshilanganini kuzatgan. 1959 yilda doktor T.Barret qizil gibrid zotning, ya'ni ixtisoslashgan Kaliforniya qizil chuvalchanglarini ishlab chiqarish uchun patent olgan. Buyukbritaniyaning Rotamsted tajriba stansiyasida Klayv Edvards 1980 yillarda yomg'ir chuvalchanglarining besh turini Eisenia fetida (Savigny), Eisenia andrei (Bouche), Dendrobaena veneta (Rosa), Eudrilus eugeniae (Kinberg) va Perionyx excavatus (Perrier) vermitekhnologiyada qo'llash samarali ekanligini aniqladi [3]. G.N.Visotskiy tuproqlarni paydo bo'lishi va tuzilishida hamda daraxt ildizlarining tarqalishida chuvalchanglarning roliga katta e'tibor berdi. U tadqiqotlari natijasida Dendrobaena mariupoliensis Wyssotzky nomini olgan yirik yomg'ir chuvalchangining yangi turini kashf etdi [4]. [5, 6] tomonidan olib borilgan tadqiqotlar yomg'ir chuvalchanglari, ularning tuproq hosil bo'lishidagi roli haqidagi ma'lumotlarni kengaytirdi va chuqurlashtirdi. Biogumusda yuqumli kasalliklarning patogenlari yo'qotiladi, zararkunanda organizmlardan bartaraf etiladi, qayta ishlangan substratning fermentativ va mikrobiologik faolligi shakllanadi [7]. Biogumus o'simliklarga zarur bo'ladigan makro va mikroelementlar, fermentlar, vitaminlar va o'simliklar o'sishini ta'minlaydigan gormonlarni o'z ichiga oladi [8]. Turkiyada qora qarag'ay ko'chatlarining sifatini aniqlashda hibogga olinadigan parametrlar ildiz bo'yni diametri, balandligi, mustahkamlik ko'rsatkichi kabi ba'zi morfologik xususiyatlari, vazni, ildiz miqdori va fiziologik xususiyatlari, o'simlikning suv sig'imi bilan bog'liq tadqiqotlar olib borilgan [9]. Biogumusni kanopning "Purini" navini fiziologik holati va hosildorligiga ta'siri tajribadan o'tkazilgan. Tajribada biogumus ta'sirida o'simliklarning barglarida xorofill konsentratsiyasining statistik jihatdan sezilarli o'sishi

kuzatilgan [10]. [11] tomonidan olib borilgan tadqiqot natijalarida vermikompostni 10 % meyorda qo'llash o'simliklarning o'sish parametrlarini sezilarli darajada oshirgan. Qishloq xo'jalik ekinlaridan yuqori va sifatli hosil yetishtirish, o'simliklarni kimyoviy vositalardan himoya qilish uchun dehqonchilik tizimiga vermikulturani kiritish orqali erishish mumkin [12]. Organik chiqindilarni qayta ishlash texnologiyalaridan biri bu organik chiqindilardan qimmatli o'g'it - biogumus ishlab chiqaradigan chuvalchanglardan foydalangan holda vermikompost qilishdir [13]. Vermikultivatsiya texnologiyasi natijasida hosil bo'lgan organik o'g'it ekologik va iqtisodiy samaradorligi bo'yicha barcha ma'lum o'g'itlardan oshib ketadi va uni ishlab chiqarish yuqori rentabellikka ega [14]. Hindistonlik tadqiqotchilar Eisenia fetida chuvalchangi yordamida guruch somoni va qog'oz chiqindilariga sigir go'ngi aralashirib vermikompostlash ustida tadqiqot o'tkazib, vermikompost tarkibida NPK miqdori eng yuqori bo'lganligini kuzatdilar [15]. Biogumusning o'simliklarga ijobiy ta'siri masalalariga bag'ishlangan ilmiy izlanishlarni [16, 17, 18] kabi olimlarning tadqiqotlarida ham kuzatish mumkin.

**Tadqiqot metodologiyasi.** Kaliforniya qizil chuvalchangining tuzilishi, biomassasi, populyatsiya dinamikasi, oziqlanish xususiyatlari, rivojlanishi, antropogen omillarning ta'siri, gidrotermik sharoit va yomg'ir chuvalchanglarining ko'pligi o'rtasidagi bog'liqlikni o'rganish yarim stasionar sharoitda amalga oshirildi. Kaliforniya qizil chuvalchangini olish uchun an'anaviy maxsus usullardan foydalanilgan [19, 20]. Tadqiqot jarayonida fenologik va biometrik kuzatuvlar olib borildi, shuningdek, mevaning vazni, miqdori va sifati bo'yicha hosildorlik hisobga olindi. Matematik-statistik tahlillar «Metodiki opitnogo dela» [21] dispersion usullarida amalga oshirildi. Jadval ma'lumotlari, diagrammalar va grafiklar «Microsoft Excel» dasturi asosida bajarildi.

**Tahlil va natijalar.** Biogumusning tarkibida ko'p miqdorda makro va mikroelementlar bo'lib, ular o'simliklar tomonidan oson o'zlashtiriladi. Bundan tashqari o'simliklarni tez o'stiruvchi moddalar: vitaminlar, antibiotiklar, 20 ga yaqin mikroelementlar va foydali mikrofloralar mavjud bo'lib, kasallik tarqatuvchi mikroorganizmlar bo'lmaydi. Biogumusda aktiv fermentatsiya jarayoni bo'lishi natijasida ko'p miqdorda biologik faol moddalar, ya'ni auksinlar va geteroauksinlar hosil bo'ladi. Bu moddalar yosh nihollarni bir joydan ikkinchi joyga ko'chirib o'tkazganda kasallantirmaydi, ularni yangi joyda hatosiz tutib qolishini ta'minlaydi, urug'larni unib chiqishini tezlashtiradi, o'simliklarni kasalliklarga chidamligini oshiradi, tez o'sish va rivojlanishiga ijobiy ta'sir qiladi [22].

O'simlik urug'larini unib chiqishi va ularning mahsuldorligini aniqlash maqsadida bir qator tadqiqotlar o'tkazdik. Farg'ona viloyati Uchko'prik tumani xususiy tadbirkor Nurali Ahmedovning issiqxonasida pomidorning "Sonato" navi ko'chati o'tqazilgan maydonlarni 0,5 gektariga agrotexnik qoidalarga amal qilgan holda biogumus o'g'iti solinib parvarish qilindi. Tajribadagi pomidor maydonlariga 0,5 gektar maydonga 2,5 tonna biogumus solindi. Biogumus bilan o'g'itlangan maydonlar bir xil rejimda, ya'ni harorat kechasi 18-23°C, kunduzi 27-33°C harorat ushlab turildi, suv bilan ikkala maydon kerak vaqtda sug'orib borildi. Vegetatsiya davrida biogumus solingan pomidorlar juda tez va sog'lom o'sdi, kasalliklarga deyarli uchramadi, yerdagi namlik nazoratdagiga nisbatan 3-4 kun uzoqroq saqlandi. Hosil yig'ishtirish davrida biogumusni ta'siri yana ham samarasini berdi. Nazoratda 1 m<sup>2</sup> maydondan 9,2 kg pomidor yig'ishtirib olindi, tajribadagi maydondan esa 13,4 kg hosil yig'ishtirib olindi yoki nazoratga nisbatan 42 % ko'p hosil olindi (1-2 jadval).

1-jadval

"Sonato" pomidor navining biometrik ko'rsatkichlari

Tadqiqot variantlari	Olingan o'rtacha ko'rsatkichlar			
	Poyaning balandligi, sm	Poyadagi bo'g'im oraliqlari soni, dona	Yon kurtaklar soni, dona	Poyadagi shoxlar soni, dona
Nazorat	55,1	4,9	6,5	4,3
2,5 t biogumus	57,4	5,3	7,6	5,2

Izoh: tajribalar 0,5 gektarli issiqxonada olib borilgan.

2-jadval

"Sonato" pomidor navining hosildorlik ko'rsatkichlari

Tajriba variantlari	Harorat, °S		Hosildorlik tonna			1 m <sup>2</sup> maydondan olingan hosildorlik, kg
	kunduzi	kechasi	Tovar	Tovar emas	Jami	
Nazorat	27-33	18-23	18,5	0,5	19	9,2
2,5 t biogumus	27-33	18-23	21,1	0,4	21,5	13,4

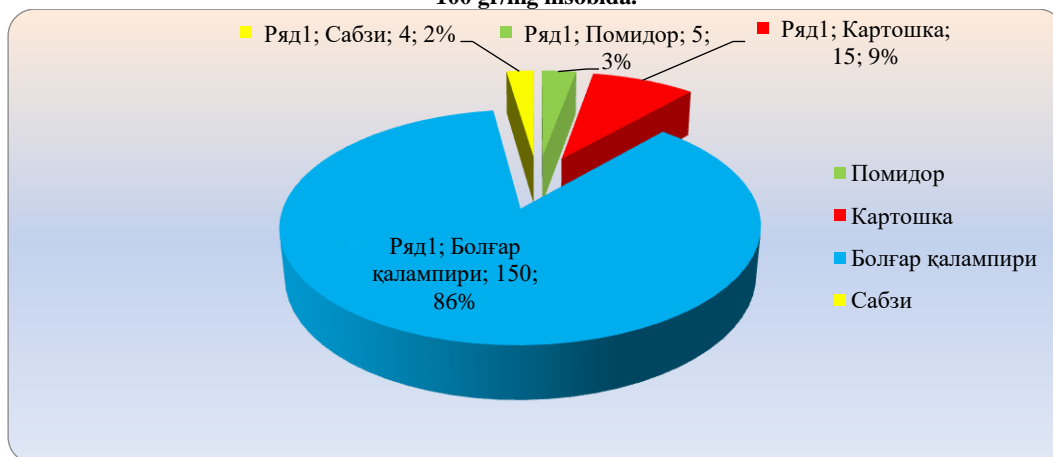
Izoh: tajribalar 0,5 gektarli issiqxonada olib borilgan.

Rediskaning issiqxona sharoitida yetishtiriladigan mahalliy "Lola" navini urug'ini unib chiqishini 0,5 gektar maydonga 2,5 tonna biogumus solgan holda olib borilgan tadqiqotlarda rediska urug'i sepilgandan so'ng harorat 220S da ushlab turildi. Biogumus qo'llanilgandagi urug'lar biogumus qo'llanilmagan variantdagiga nisbatan bir kun oldin unib chiqdi. Ertasi kuni biogumus solingandagi urug'larni unib chiqishi 66,7 % ni tashkil qildi, biogumus solinmagandagi urug'larni unib chiqishi faqat 6,2 % ni tashkil qildi. Urug'larni umumiy unib chiqishi biogumus solingan variantlarda biogumus qo'llanilmagan variantga nisbatan 72,7 % ni tashkil

qildi. Biogumusni miqdorini orttirilishi (8 %) ko'zlangan natijani bermadi, ya'ni nazoratdagiga nisbatan faqat 13 % gina ortdi. Tajriba natijalari shuni ko'rsatdiki, biogumus urug'larni unib chiqishiga kuchli ta'sir ko'rsatib, ularni meyorini unib chiqqan nihollarga ijobiy ta'sir ko'rsatadi.

Xuddi shu issiqxonada pomidor, bolg'ar qalampiri, kartoshka, sabzi o'simliklariga go'ng+mineral o'g'itlar va biogumus solib parvarish qilindi. Ularning mevalaridagi vitamin S ning miqdori niqlanganda tajriba natijalari kutilgandan ham yuqori bo'ldi (1-2 rasmlar).

1-rasm. Biogumus qo'llanilganda meva tarkibidagi vitamin S miqdori, 100 gr/mg hisobida.



2-rasm. Go'ngi+mineral o'g'it qo'llanilganda meva tarkibidagi vitamin S miqdori, 100 gr/mg hisobida.

Yuqoridagi 1-2 rasmlar ma'lumotlaridan ko'rinib turibdiki, biogumus o'simlik mevalarining tarkibidagi vitamin S ni miqdorini ko'paytiradi, ya'ni biogumus solingan pomidor mevasida vitamin S ning miqdori go'ng+mineral o'g'it solingan mevalarga nisbatan 6 marta, kartoshkada 3 marta, bolg'ar qalampirida 2 martadan ko'proq, sabzida 5,5 marta ko'pligi aniqlandi.

**Xulosa.** Pomidorning isiqxonada yetishtiriladigan "Sonato" navi ekilgan 0,5 gektar maydonga 2,5 tonna biogumus solindi. Biogumus bilan o'g'itlangan maydonlarda

harorat kechasi 18-23°S, kunduzi 27-33°S da ushlab turildi. Nazoratda 1 m2 maydondan 9,2 kg pomidor yig'ishtirib olindi, biogumus qo'llanilgan maydondan esa 13,4 kg hosil yig'ishtirib olindi yoki nazoratga nisbatan 42 % ko'p hosil yetishtirildi. Biogumus o'simlik mevalarining tarkibidagi vitamin S ni miqdorini ko'paytirdi, ya'ni biogumus solingan pomidor mevasida vitamin S ning miqdori go'ng+mineral o'g'it solingan mevalarga nisbatan 6 marta, kartoshkada 3 marta, bolg'ar qalampirida 2 martadan ko'proq, sabzida 5,5 marta ko'pligi aniqlandi.

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## ETNOMADANIYATINI O'RGANISHNING NAZARIY-METODOLOGIK ASOHLARI

Annotatsiya

Dunyoda etnomadaniyatlarning tarixiy, ijtimoiy-madaniy jihatlarini, etnomadaniyat transformatsiyasiga ta'sir etuvchi omillarni o'rganish bo'yicha ilmiy tadqiqot ishlari olib borilmoqda. Etnomadaniyatning rivojlanishiga ijtimoiy muhit, davlat boshqaruvi, siyosiy vaziyatning ta'siri va unda aholining ijtimoiy onglik darajasini aniqlash, madaniy o'ziga xoslikni saqlash, yo'qolgan yoki asta-sekin «erib borayotgan» an'analar va xalqlar madaniyatining tarixiy zanjirlarini qayta tiklash, etnomadaniyatni asrash orqali megatsivilizatsiyada milliy identifiklikni saqlashga oid ilmiy tadqiqotlarni takomillashtirishga ehtiyoj oshmoqda.

**Kalit so'zlar:** madaniyat, etnomadaniyat, etnos, qadriyat, urf-odat, millat, jamiyat.

Etnik guruhlar va etnik madaniyatni, ularning ijtimoiy-madaniy dinamikasi va urf-odatlarini o'rganishning dolzarbligi zamonaviy dunyoda etnik guruh mavjudligi bilan bog'liq ko'plab muammolar mavjudligidan kelib chiqadi. Yer yuzidagi har bir shaxs u yoki bu etnik guruhga mansub bo'lib, etnik madaniyatning tashuvchisi hisoblanadi. Bugungi kunda etnik kelib chiqishga asoslangan eng murakkab va keskin ziddiyatlarni kuzatish mumkin.

Etnomadaniyatlarning yo'qolib ketish xavfi va an'anaviy madaniyatni qayta tiklashning iloji yo'qligi to'g'risida ko'p fikrlar mavjud. Bu etnik madaniyat va uning tashuvchilari mavjudligida aks etadigan barcha masalalar majmuasi emas. Etnosni o'rganishdagi qiyinchiliklar ushbu hodisani turlicha talqin qilishning mavjudligidadir.

Etnik madaniyat - bu umumiy kelib chiqishi va birgalikda yashashi bilan bog'langan (ta'bir joiz bo'lsa, «qon va tuproq» bilan birlashgan) odamlar madaniyatidir. Uning asosiy xususiyati - mahalliy cheklash, ijtimoiy makonda qattiq mahalliylikdir. Unda oila yoki mahalla darajasida avlodlar-avlodga o'tib kelayotgan an'analar, bir marta va abadiy qabul qilingan urf-odatlar kuchi ustunlik qiladi. Etnos mavjudligining zaruriy sharti bo'lgan etnik madaniyat millat mavjudligiga nisbatan shunday bo'lishni nazarda tutadi. Etnos va millatni farqlash, bu bilan etnik madaniyatni milliylikka tushirmaslik kerak [1].

Etnomadaniyatni tadqiq qilishda, dastlab, «etnos», «etnik guruh» kabi tushunchalarga oydinlik kiritib o'tish joiz. Etnos (yunoncha - «xalq»; ingl. - ethnos; nem. - Ethnos) - tabiiy-tarixiy jarayonlar natijasida tarkib topgan kishilar guruhidir [2]. Etnos so'zi xalq atamasining sinonimi bo'lib, tarixiy kelib chiqishi bir bo'lgan, bir hududda yashaydigan, yagona til va madaniyatga ega bo'lgan, xo'jalik-madaniy tiplari bir bo'lgan odamlar jamoasidir. «Etnos» so'zi XIX asr oxiridayoq turli xil ma'nolarda ishlatila boshlandi. Masalan, L.G.Morgan «etnos» so'zini insoniyat rivojlanishining ma'lum bir dastlabki bosqichi sifatida qo'llaydi.

Ilm-fanda keltirilgan «etnos» tushunchasining nazariyalari, yondashuvlari va tushunchalarining tahlili ushbu ko'p qirrali hodisani to'liq tavsiflashga imkon beradi. Birinchi marta «etnos» tushunchasi 1923 yilda rus olimi S.M.Shirokogorov tomonidan ishlatilgan va ilmiy muomalaga kiritilgan. U etnosning jadal rivojlanishini amalga oshiruvchi barcha komponentlarning (madaniy, ijtimoiy-psixologik, biologik va boshqalar) sintezini aniqlashga harakat qildi.

L.N.Gumilev «etnos» tushunchasiga ba'zi xususiyatlarni kiritdi. U etnosning mavjud bo'lishi va rivojlanishiga imkon beradigan xususiyatlarni bayon qildi. Ular quyidagilarni o'z ichiga olgan: ma'lum bir hududning

hamjamiyati, yagona landshaft va ushbu hududda yashovchi aholi xulq-atvorining shakllangan modeli [3]. L.N.Gumilev ochiq tizimlarning umumiy nazariyasini etnosferaga tatbiq etdi. Bunda tadqiqotchi etnosning biologik asoslariga e'tibor qaratadi. Ushbu holat etnik guruhni o'zini o'zi anglashi uchun muhim rol o'ynaydi. Shunday qilib, etnik hamjamiyat - bu etnos ichida nikoh tuzish orqali rivojlanib, tarjima funksiyasini bajaradigan ijtimoiy organizm, ya'ni, tili, madaniyati, urf-odatlarini, xatti-harakatlarining etnik modeli va boshqalarni yangi avlodga o'tkazadi [4].

Y.Bromleyning qarashlari esa etnosning dualistik nazariyasi bilan ifodalanadi. Unga ko'ra etnos tor va keng ma'noda talqin qilinadi. Birinchi holda, etnos «etnikos» deb nomlangan boshlagan va umumiy til, madaniyat va o'z-o'zini anglash bilan birlashtirilgan jamoat sifatida tavsiflangan. Keng ma'noda hududiy va siyosiy xususiyatlarning parametrlariga qo'shimcha qilishni nazarda tutadi [5]. Keng ma'nodagi etnos yoki etnojtimoiy tuzilmaga ta'rif berar ekan, Y.V.Bromley shunday yozadi: «Etnik ko'rinishni ijtimoiy-iqtisodiy holat bilan mustahkam aloqadorligini alohida ta'kidlash kerak, chunki ular o'zaro bog'liqdir. Etnos agar yagona (umumiy) bir davlat tarkibida mavjud bo'lsa, ushbu o'zaro aloqadorlik yanada muhimdir. Bu holatda tarkib topayotgan o'ziga xos tuzilma nafaqat hududiy-siyosiy, balki ijtimoiy-iqtisodiy umumiylikka ham ega bo'ladi». Umuman olganda, Bromleyning fikricha, etnos - aniq bir hudud, til, kelib chiqish, madaniyat umumiyligi, o'z-o'zini etnik anglash va o'z etnik nomi (etnonimi)ga hamda o'ziga xos turmush tarziga ega bo'lgan kishilar guruhidir» [6]. Uning ta'kidlashicha, etnos irq emas va har bir etnosning tarkibida ikki yoki undan ortiq irqalar mavjud.

S.V.Luriye ham etnosga tegishli ta'rif beradi: «Etnos - bu dunyodagi inson faoliyatining xususiyatini belgilaydigan o'ziga xos madaniy modellar bilan ajralib turadigan va har bir jamiyat uchun uzoq vaqt davomida, shu jumladan, katta ijtimoiy-madaniy davrlar davomida har bir jamiyat uchun o'ziga xos bo'lgan madaniy modellar korrelyatsiyasini saqlashga qaratilgan maxsus qonunlarga muvofiq faoliyat ko'rsatadigan ijtimoiy hamjamiyatdir». Ushbu ta'rif etnik madaniyatni birlashtirish va parchalanishdan himoya qilishga qodir tuzilma sifatida ifodalaydi.

Tadqiqotlarda keltirilishicha, «etnos» termini maxsus adabiyotlarda paydo bo'lganiga garchi ancha vaqt bo'lgan bo'lsa-da, lekin alohida kishilar guruhini anglatuvchi ibora tarzida faqatgina XX asrning ikkinchi yarmidan e'tiboran etnogenez va etnik tarix, umuman etnik jarayonlarga qiziqishning kuchayishi natijasidagina yanada keng ilmiy iste'mol doirasiga kirdi» [7]. Yuqorida aytib o'tganimizdek,

etnos tushunchasi adabiyotlarda tor va keng ma'noda ishlatiladi. Tor ma'noda hudud, til, madaniyat, urf-odat, tarixiy taqdirning birligi tushunilsa, keng ma'noda yuqoridagilar bilan birga ijtimoiy, iqtisodiy umumiylik ham tushuniladi. Shuningdek, O'zbekiston xalqi, Yaponiya xalqi iboralari ham ishlatiladi.

Akademik A.Asqarovning fikricha, etnos - bu biologik hosila emas, balki ijtimoiy hodisadir. U kishilik taraqqiyotida ma'lum bir bosqichning hosilasidir. Etnos o'zining shakllanish jarayonida, ya'ni etnogenez bosqichida va undan keyin ham har xil tarixiy sabablarga ko'ra, uning tarkibiga yangidan-yangi etnik qatlamlar qo'shilib boradi [8]. Bu jarayonda etnik aloqatlarining shakllanishi uzoq davom etadi. Yuqorida keltirib o'tilganidek, L.N.Gumilev esa aksincha, etnos ijtimoiy emas, balki bio-geografik hosiladir, etnos biosferaning tarkibiy qismi bo'lgani bois undagi qonuniyatlarga bo'ysunadi, - deb ta'kidlaydi [9].

Milliy munosabatlar tizimini o'rgangan olim A.Achilidzevning fikricha, «milliy» sifati «millat» so'zidan kelib chiqqan. Lekin «millat» tushunchasi, nafaqat muayyan etnik birlik, balki «davlat» ma'nosini ifodalash uchun ham xizmat qiladi. Masalan, «milliy daromad», «milliy qurolli kuchlar», «milliy valyuta», «milliy kutubxona», «milliy bog'» kabi birikmalarda u «davlat»ning ma'nodoshi sifatida kelmoqda. Demak, «milliy mafkura»ni faqat bitta millat, etnosning manfaatlari bilan bog'lash to'g'ri emas. U muayyan, masalan, O'zbekiston davlati (jamiyati)ning mafkurasi ma'nosini ham anglatadi [10].

Mahalliy etnologiya «etnos» va «xalq» atamalarini bir ma'noda ishlata boshladi. Hozirgacha, kundalik hayotda ushbu tushunchalar sinonimdir. Shu bilan birga, ushbu so'zning ko'plab hosilalari har qanday etnik jamoalar va munosabatlarni tavsiflash va belgilash uchun ishlatiladi. Bularga, masalan, «etnik» tushunchasi, etnik guruhlar yoki o'ziga xosliklarning o'ziga xos xususiyatlari mavjudligini anglatuvchi kategoriya sifatida kiradi. Ushbu atamani tez-tez ishlatish zamonaviy jamiyatlarining ko'p millatli xususiyatini tavsiflaydi. Agar biz ushbu konsepsiyaning mazmuniga murojaat qilsak, zamonaviy etnologiyada ham uning ta'rifida yakdillikka kelishmagan.

«Etnik» atamasining o'zi fanimizga Yevropa etnologiyasi, aniqrog'i rus fanidan kirib kelgan. Yevropa fani vakillari etniklik ma'lum bir etnik guruhning madaniy xususiyatlarining majmui deb hisoblashadi. Ushbu tarkib ingliz tilida so'zlashadigan etnologiyaga xosdir. Bu yerda etnik guruh unga zid bo'lgan kengroq ijtimoiy-madaniy muhit segmenti sifatida namoyish etiladi. Ushbu xususiyatlar etnik deb ta'riflangan o'ziga xos madaniy xususiyatlarining mavjudligi bilan ifodalanadi. Aksariyat tadqiqotchilarning ta'kidlashlaricha, etniklik o'ziga xos etnik guruh bilan boshqalardan ajralib turadigan kishilarga xosdir.

Shunday qilib, biz «etnos - bu umumiy nom va o'z-o'zini anglash (shu jumladan, umumiy kelib chiqish tarixiy afsonasi), umumiy til va madaniyat bilan birlashtirilgan va o'zini shu kabi boshqa jamoalardan ajratib turadigan ijtimoiy birlashma (kvazigrup yoki guruh)» deb ayta olamiz [11]. Agar biz etnos haqida tizim sifatida gapiradigan bo'lsak, unda, shubhasiz, xarakterli tarkibiy elementlar va aloqalar mavjud. Har qanday tizim nafaqat tarkibiy elementlarning mavjudligi, balki ular orasidagi bog'liqlikning mavjudligi bilan ham tavsiflanadi. Shu munosabat bilan etnos dinamik tizim ekanligini ta'kidlash lozim.

Rivojlanish dinamikasi va doimiy energiya va entropiya almashinuvi avloddan avlodga meros bo'lib qolgan mavjud ma'lumot zaxiralari hisobiga amalga oshiriladi. Bunday holda, an'ana tizimning ishlashi uchun muhim bo'lgan asosiy rolni o'ynaydi. U borliqning ijtimoiy va tabiiy shakllari bilan intensiv aloqada. Etnos va madaniyatning o'zaro aloqasi shuni ko'rsatadiki, madaniy tushunchalarni etnos nazariyasiga murojaat qilishi to'g'ridan-to'g'ri

bog'liqdir. Jahon amaliyotida etnos va ularning madaniyati rivojlanishining ko'plab konseptual modellari keltirilgan. Etnik madaniyat dinamikasiga oid bir qator asosiy gipotezalar asosli hisoblanadi.

Faylasuflar, siyosatshunoslar va sotsiologlar tomonidan ilgari surilgan muammolarni hal qilish ssenariylari yechimlarning muhim doirasini - muqarrar ravishda sivilizatsiyalar to'qnashuvidan (S.Xantington) ko'p qutbli dunyo qarama-qarshiligiga qadar (K.Vals) o'z ichiga oladi. Sivilizatsiyalarni rivojlantirish variantlari global o'zgarishlarni tahlil qilishga asoslangan va dunyoning yetakchi davlatlari o'rtasida dunyo resurslari, geosiyosiy ta'sir va iqtisodiy hukmronlik uchun qarama-qarshilikning muqarrarligi to'g'risidagi tezisni o'z ichiga oladi. Shu munosabat bilan J.K.Galbrayt ushbu hodisani yanada puxta ta'riflash zarurligiga e'tibor qaratib, mamlakatning mahalliy sharoitga moslashmagan G'arbning iqtisodiy va boshqa modellari o'zlashtirishga shoshilishi bu hodisaning obro'sizlanishiga, global o'zgarishlarni e'tiborsiz qoldirishga va izolyatsiya yo'lini tutishga intilishga olib kelishi mumkinligini ta'kidlaydi.

E.Taylorning fikricha, «Madaniyat yoki sivilizatsiya keng etnografik ma'noda tushuniladi, bu bilimlar, e'tiqodlar, san'at, axloq, qonunlar, urf-odatlar va shaxs tomonidan jamiyat a'zosi sifatida ega bo'lgan har qanday boshqa qobiliyat va odatlarni o'z ichiga olgan murakkab yaxlitlikdir» [12]. Ayrim g'arb olimlari madaniyat va sivilizatsiya tushunchalarini sinonim sifatida ishlatadilar. Ammo, bu noto'g'ri. Sivilizatsiya ma'lum bir zamon va makondagi ijtimoiy taraqqiyotni, madaniyat esa inson faoliyati natijasida yaratilgan moddiy va ma'naviy boyliklarni anglatadi.

Etnomadaniyatning falsafiy, ijtimoiy, tarixiy jihatlari, transformatsiyasi ko'plab o'zbek faylasuflari, tarixchi va etnograflari tomonidan o'rganilgan. Ushbu tadqiqotlarda xalq madaniyati, omma madaniyati, uchinchi, aniq bir etnos madaniyatining mohiyati (U.H.Qoraboyev) [13], etnomadaniyatning estetik funksiyalari, shakllari, turlari, uning milliy taraqqiyotdagi ahamiyati (O.Nishonova) [14], xalq madaniyatidagi an'anaviylik, tarixiylik va zamonaviylikning madaniy taraqqiyotga xizmat qilishi (U.O'tanova) [15] asoslab berilgan.

O'zbek urf-odatlari, bayram, marosim, an'alarini o'rgangan U.H.Qoraboyev: "o'zbek xalqining bayram-marosim madaniyati shu qadar boy va rang-barangki, ularni tabiat, mehnat, diniy e'tiqod, oilaviy hayot, ijtimoiy-siyosiy, madaniy-ma'rifiy, san'at va sport kabi turlarga bo'lib tadqiq etish mumkin" [16], - deydi. U.Qoraboyev bayram-marosimlarni davrga ko'ra: eng qadimgi odatlar, antik davr bayramlari, o'rta asr bayramlari, XVI-XIX asr bayramlari, XX asr bayramlariga bo'lib o'rganadi. Turiga ko'ra esa, mavsumiy xalq bayramlari, oilaviy marosimlar, diniy bayramlarga bo'ladi. Shuningdek, zamonaviy bayramlarni: umumxalq bayramlari, madaniy va ma'rifiy bayramlar, sport bayramlari, mehnat va tabiat bayramlariga bo'lib tadqiq etadi [17].

U.Qoraboyev xalq og'zaki ijodi xususida ham to'xtalib, shunday deydi: "Xalq og'zaki ijodining askiya, doston, mushoira, lof, kulgi-hikoya, asotir (mif), afsona, ertak, latifa; an'anaviy musiqa ijodining alla, yalla, yor-yor, alyor, terma, ashula, marosim qo'shiqlari va musiqa folklori asosida vujudga kelgan oilaviy ansambllar, folklor-etnografik guruhlar, xalq havaskorlik jamoalari; xalq teatr-tomoshha ijodining masxarabozlik, qo'g'irchoqbozlik; xalq amaliy bezak ijodining naqqoshlik, kulolchilik, o'yimakorlik, zardo'zlik, zargarlik, to'qimachilik turlarini; tabiat bilan bog'liq bo'lgan ijodning rang-barang tur va janrlari tahlili ko'rsatishicha, ular avlodlar ongini, badiiy tafakkurni, estetik qarashlarni taraqqiy ettirib, ijtimoiy hayotning barcha sohalarida ijodkorlikni rivojlantirgan, xalqni o'z tarixi va taqdiri haqida o'ylashga, bunyodkorlikka undagan. Shuning uchun ijodiy merosni tiklash va kamol toptirish xalqning

barcha ijtimoiy-madaniy sohalaridagi faolligini oshirishda muhim omil bo'ladi"[18]. Darhaqiqat, xalq ijodi mudom odamlarni izlanishga, ijodkorlikka, yetuklikka undagan. Odatda ijodkor insonni ongi ezgu g'oyalar, bunyodkorlik o'yi bilan band bo'ladi. Shuningdek, ularda estetik did, badiiy tafakkur rivojlangan bo'ladi. Qolaversa, xalq ijodi, etnomadaniy merosda yoshlarga o'rnatilgan bo'la oladigan ideallar ham mavjud. Bu haqda O.Nishonova shunday yozadi: "Etnomadaniyat – xalqning tarixiy-madaniy paradigmasidan chuqur joy olgan, uning yadrosiga aylangan, hayotiy, badiiy-estetik, falsafiy-gnoseologik, transsendental izlanishlari jarayonida shakllangan moddiy va ma'naviy boyliklar tizimi. Unda nafaqat o'tmish tajribalari, kelajak haqidagi tasavvurlar, sotsium duch kelayotgan vazifalarni hal etishga yo'naltirilganlik, balki inson qalbini, ruhini go'zal tuyg'ular, estetik g'oyalar bilan boyitish maqsadi ham mujassam"[19]. O'zbek etnomadaniyatini rivojlantirishdan maqsad, nafaqat milliylikni ta'minlash, balki etnomadaniy merosdagi ideallar vositasida yoshlarni to'g'ri tarbiyalashdan ham iboratdir.

O.Nishonova etnomadaniyatga quyidagicha ta'rif beradi: "Etnomadaniyat xalqning, millatning uzoq ijtimoiy-tarixiy rivojlanish jarayonida yaratgan moddiy va ma'naviy boyliklari, turmush tarzi, tili, urf-odatlari, tashqi dunyoni o'zlashtirish va o'zgartirish va o'zini, o'zligini idrok etish, anglash usullari, xullas, etnosning, millatning mavjudligini ifoda etuvchi ijtimoiy voqelikdir"[20]. Darhaqiqat, etnomadaniyat ijtimoiy voqelik bo'lib, etnosning o'ziga xos moddiy, ma'naviy, maishiy va ma'rifiy boyliklarini, olamni idrok etish tajribalarini o'z ichiga oladi. O.Nishonovanning fikricha, etnomadaniyat ikki qismdan, ichki va tashqi iborat. Ichki qism etnomadaniyatning yadrosi bo'lib, deyarli transformatsiyaga uchramaydi. Tashqi qism zamonga moslashib, o'zgarib turadi, "milliy madaniyatda ikki – kunaro o'zgarib, transformatsiyaga uchrab, goho o'zini o'zi rad etib turadigan ustki qatlam va etnomadaniyatga kirgan, barqaror, muqim artefaktlardan iborat o'zak qatlam, yadro mavjud"[21]. Tashqi qismga fan, ta'lim, kiyinish madaniyati, uy-joy qurilishi, xo'jalik yuritish usuli kabilardan iborat.

U.Utanova o'zbek xalqi madaniyatining rivojlanish bosqichlarini quyidagicha davrlashtiradi:

- antik davr xalq madaniyati;
- zardushtiylik davri xalq madaniyati;
- Turk xoqonligi davri xalq madaniyati;
- islom davri xalq madaniyati;
- chor Rossiyasi hukmronligi davri xalq madaniyati;
- sho'rolar davri xalq madaniyati;
- mustaqillik yillari xalq madaniyati [22].

U.Utanovanning fikricha, o'zbek xalqi madaniyatining ijtimoiy-tarixiy genezisi eramizdan avvalgi ikki minginchi yilliklarga borib taqaladi. O'tgan to'rt ming yil davomida xalq ijod qilishdan, madaniy boyliklar yaratishdan to'xtamagan [23]. O'zbek xalqining an'analarga sodiqligi tufayli hatto bosqinlar davrida ham etnik madaniyat saqlab qolingan. Shuningdek, etnik madaniyatning "ustki qatlami" tashqi ta'sirlar natijasida transformatsiyaga uchragan.

U.Utanovanning ta'kidlashicha, "Xalq madaniyati inson, xalq ekzistensial mavjudligining sharti, ijtimoiy makonidir. Ushbu makonsiz ular, ya'ni inson va xalq o'z hayotidan ma'no topa olmaydi, borliqning mohiyatini anglashga hojat sezmaydi. Insonni serhis, sertuyg'u, barkamollikka talpinib yashashga aynan xalq madaniyati chorlagan. Xalq madaniyati insonni shakllantiruvchi ijtimoiy muhitdir; u ushbu muhitni o'zlashtirib, o'rganib, o'zi ham madaniy boylik yaratib, avlodlararo munosabatlarda vorisilikni, tarixiy rivojlanishda tadrijiylikni ta'minlagan"[24]. Xalq madaniyati namunalarining muallifi ko'pincha noma'lum, noaniq bo'ladi. Jumladan, xalq og'zaki ijodining muallifi xalq

Yuqoridagi tahlillardan ma'lum bo'ladiki, etnomadaniyatning u yoki bu tomonini o'rgangan olimlarning

qarashlarida katta tafovut yo'q. Etnomadaniyat tushunchasiga har bir mutaxassis o'z sohasi, tadqiqot doirasi, yo'nalishidan kelib chiqib, yondashgan.

Etnik madaniyat - bu asosan kundalik hayotga, kundalik madaniyatga tegishli bo'lgan madaniy xususiyatlar to'plami. Uning yadrosi va tashqi qismi mavjud. Etnik madaniyatga mehnat qurollari, odob-axloq, urf-odatlar, marosim va qadriyatlar, bino va inshootlar, kiyim-kechak, oziq-ovqat, transport vositalari, uy-joy, bilim, e'tiqod, xalq ijodiyoti turlari va shu kabilardan iborat.

Mutaxassislar etnik madaniyatning ikki qatlamini ajratib ko'rsatadilar:

- o'tmishdan meros bo'lib qolgan madaniy elementlar asosida shakllangan tarixiy dastlabki (quyi) qismi;
- tarixiy jihatdan kech (yuqori), yangi shakllanishlardan, zamonaviy madaniy hodisalardan iborat qismi.

Pastki qatlam ko'p asrlik an'analarda mustahkamlangan eng barqaror elementlarni o'z ichiga oladi. Madaniyatning yangilanishi ekzogen (tashqi) va endogen (tashqi ta'sirsiz madaniyat ichida vujudga keladigan) bo'lishi mumkin. Endogen jarayonlar tarixan uzoq vaqt davomida mavjud bo'lgan va qadriyatlarini avlodlardan avlodga yetkazish mexanizmi bo'lib xizmat qiluvchi avlodlararo an'analarga tegishli hisoblanadi.

Ijtimoiy-madaniy o'zgarishlarni izohlovchi turli xil nazariyalar orasida uchta asosiy yondashuvni ajratib ko'rsatish mumkin. Ularning dastlabkisi tadrijiy yondashuv bo'lib, bu butun insoniyatning taraqqiyot yo'lining yagona va mushtarakligidan kelib chiqadi. Yana bir yondashuv esa aylanma yoki tamadduniy yondashuv bo'lib, insoniyat yaratgan umumbashariy madaniyatda alohida tamaddunlar, o'ziga xos madaniyatlar mavjudligiga asoslanadi. Uchinchisi, ijtimoiy-sinergetik, bir necha o'n yillar oldin paydo bo'lgan tamoyil bo'lib, u jamiyatga nisbatan murakkab chiziqli bo'lmagan o'z-o'zini rivojlantiruvchi tizimlar nazariyasidan foydalanadi. Sinergetik yondashuv an'anani o'z-o'zini rivojlantirish jarayoni sifatida ko'rib chiqadi, uning rivojlanishi tashqaridan emas, balki ichkaridan belgilanadi. Bu yondashuv etnomadaniy an'analarni geografik, tarixiy va iqtisodiy sohalarining birligi va o'zaro ta'sirida ko'rib chiqishga imkon beradi. Etnomadaniyatning moddiy, ma'naviy va badiiy sohalarini rivojlantirishning notekisligi ushbu madaniyatning o'ziga xosligini shakllantiradi. Bu nazariyalarning barchasi ijtimoiy-madaniy jarayonlarning fazoviy-zamoniy talqiniga taalluqlidir. Ijtimoiy-madaniy dinamikaga aniqlangan uchta yondashuv juda shartli bo'lib, ular xalqlar yoki madaniyatlar o'rtasidagi qarama-qarshilikni anglatmaydi, aksincha, ular bir-birini to'ldirishga mo'ljallangan. Ularning farqlari madaniyatni o'rganish asosidagi metodologiyaning o'ziga xos xususiyatlari, tadqiqotchilar tayanadigan ijtimoiy jihatlarining o'ziga xos xususiyatlari bilan bog'liq [25].

Shuningdek, mutaxassislar etnomadaniyatni tadqiq etishda bir nechta usullarni ham taklif etadilar. Masalan, strukturaviy-funksional usul, aksiologik usul, qiyosiy tahlil usuli shular jumlasidandir. Strukturaviy-funksional usul bilan etnomadaniyatning asosiy funksiyalari, marosim, urf-odat, ijtimoiy aloqa, transformatsiya, moslashish va boshqa munosabatlar o'rganiladi. «Etnik jarayonlarni tadqiq qilishda funksionalizmni farqli xususiyati shundan iboratki, mazkur yo'nalish tarafdorlari madaniyatni o'zaro aloqador, umumlashgan xususiyatlardan tashkil topgan, deb hisoblaydilar. O'z navbatida shuni ham alohida ta'kidlab o'tish joizki, funksionalizm tarafdorlari uchun madaniyatning tarixiy o'zgarishi muammosi muhim ahamiyat kasb etmagan» [26]. Aksiologik usul bilan etnomadaniyatning har bir qirrasini, uni tashkil etuvchi elementlarni qadriyat sifatida ajratib o'rganish mumkin. Masalan, surxon etnomadaniyatining har bir tarkibiy qismi, surxoncha raqs yoki hunarmandchilik buyumlari, surxoncha liboslar, baxshichilik san'ati kabilardan alohida

qadriyatlar sifatida ko'riladi. Zamonaviy sivilizatsiya sharoitida etnomadaniyatlar oldida paydo bo'lgan muammolarni zamonaviy insonning boshlang'ich qadriyatlarini konseptual falsafiy tahlilisiz, uning ehtiyojlarini tanqidiy o'rganmasdan, o'z-o'zini anglash yo'llarini, o'zi yaratgan madaniy qadriyatlarga munosabatini anglash shakllarisiz hal qilib bo'lmaydi. Bu muammolarning asosiy mohiyati inson bo'lib, tobora ko'payib borayotgan, shu jumladan global xarakterdagi muammolarni hal qilish uchun o'z imkoniyatlarini zamonaviy dunyoda qayta ko'rib chiqishga kuch topishi kerak. Qiyosiy tahlil usuli surxon etnomadaniyatida faqat shu etnomadaniyatga xos bo'lgan va universal, jahon madaniyati boyligiga aylangan etnomadaniy unsurlarning o'ziga xosligini kashf qilish imkonini beradi.

Shuni ta'kidlash kerakki, ma'naviy sohadagi etnomadaniy qadriyatlar nafaqat milliy qadriyatlarni, o'z navbatida ulkan intellektual boyluk va umuminsoniy qadriyatlarni ham rivojlantirishning muhim manbaidir, Etnik madaniyatlarining rang-barang palitrasini hududiy o'rganish eng muhim vazifalardan biridir. An'anaviy etniklikdan sivilizatsiya darajasiga keskin o'tishni boshlagan zamonaviy

etnomadaniyatlarining rivojlanishi va faoliyati muammolari dolzarb bo'lib qolmoqda.

Etnomadaniyatni shaxslararo, millatlararo, madaniy-sivilizatsion o'zaro aloqalarni o'rganish uchun maqbul model sifatida ko'rib chiqish global darajadagi nazariy va uslubiy muammo hisoblanadi. Etnomadaniyat birinchi navbatda etnik o'ziga xos xususiyatlarga ega bo'lgan madaniy elementlar va tuzilmalar to'plami sifatida namoyon bo'ladi. Etnomadaniyatni o'zaro ta'sir qiluvchi kanal sifatida ko'rib chiqish, o'zaro ta'sir o'tkazish jarayonida amalga oshiriladigan etnomadaniyat funksiyalarini aniqlashga imkon beradi.

Xulosa shuki, hozirgi kunni madaniy anglash va kelajakni bashorat qilish o'tgan sivilizatsiya natijalariga murojaat qilmasdan mumkin emas. Aynan o'tmish bilan o'zaro bog'liqlikda jamiyat eng muhim mezonni topadi, busiz u mavjud bo'lolmaydi. Tarixga murojaat qilmaslik har bir jamiyat uchun o'zini har doim nol sikldan boshlash xavfini tug'diradi, hayotning o'tgan davrlarini qayta-qayta takrorlayveradi. Pirovardida, bu jarayon umumiy insoniyat sivilizatsiyasiga hissa qo'shadi, milliy jihatdan maxsus va universallikni sintez qiladi.

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## PRIORITIES FOR ENSURING THE QUALITY OF HIGHER EDUCATION

Annotation

The article outlines the priorities for the systematic reform of higher education, raising the process of training highly qualified personnel with modern knowledge and high spiritual and moral qualities, independent thinking to a qualitatively new level, modernization of higher education, development of social sphere and economic networks based on advanced educational technologies. In this regard, it postulates the selection of students on the basis of their abilities and predispositions towards scientific research in order to promote holistic learning and intellectual development among students.

**Key words:** Competitiveness, behavioral aptitude, scholastic execution, technical foundation, higher education, innovation.

**Introduction.** Higher education has been growing in popularity and demand, but it's been difficult to keep up with the demand. Some ideas include creating incentives for quality and more efficiently prioritizing state resources for higher education. The availability of education is considered vital for the overall progress and development of a nation. Therefore, it is essential to ensure that education is accessible to all individuals regardless of their social, economic or personal circumstances. The concept of competitiveness has been extensively studied in academic literature, and refers to the ability of an individual or a firm to compete effectively in a given market. This includes factors such as pricing strategies, product quality, marketing campaigns, customer service, and innovation. Strong competitiveness can lead to increased market share, profitability, and overall success.

Hypothesis of Instructive Efficiency by Walberg [1. 96p.] decided three bunches of nine components based on emotional, cognitive and behavioral aptitudes for optimization of learning that influence the quality of scholastic execution: Inclination (capacity, improvement and inspiration); instruction (sum and quality); environment (domestic, classroom, peers).

At the same time, according to the results of the study of the state of the higher education system by the Working Group established by the decree of the president of the Republic of Uzbekistan No. F-4724 of October 8, 2016, a number of higher education institutions still have low scientific and pedagogical potential, the provision of educational processes with information and methodological and educational literature does not meet [1].

Attitude change impacts vocational training content; practical knowledge of educational environment crucial for task-solving. The research on vocational education focuses on several approaches to professional training. A future specialist needs not only knowledge of psychology and techniques but also developed consciousness and culture. The personal module is important for training. The educational process should form the necessary knowledge and skills for the student. [2]

**Method.** In the context of the new Uzbekistan, it is deemed significant to reinforce the material and technical foundations of tertiary education establishments, augment their scientific and methodological proficiency, and advance research endeavors within the higher education system. Considerable emphasis was placed on enhancing the integration of tertiary education establishments with academic scientific domains, augmenting the efficacy of scientific endeavors of the educators, and encouraging substantial

participation of proficient students in scholarly pursuits. Considerable efforts have been devoted to enhancing the education system across various tiers, encompassing the enhancement of tertiary and secondary specialized education, the advancement of scientific studies, and the adoption of cutting-edge pedagogical structures and technologies.

Challenges in higher education include: 1) Entrance exams not optimized; 2) Standards not based on foreign experience, too many non-specialty subjects, and difficulty acquiring full knowledge; 3) Insufficient material and technical base, lack of attention to new institutions and repairs; 4) Delays in using interactive and innovative technology. Traditional education teaches students to only acquire ready-made knowledge, causing an increase in red tape and neglect of credit-module education. [3]

Nowadays, things are changing quickly in the country. This means we need to make changes to higher education too. We should make the facilities and tools better, and the teaching should be even better quality. We should also try to get more people to go to university.

The statistics show that in Uzbekistan, only 163 people out of every 1,000 who are over 25 years old have gone to college. Only a small amount, 12%, of all people in the country have a higher education. When we look at the numbers of Central Asian countries, we can see that their numbers are higher than this one. In 2017, Kazakhstan had over 17 million people. There were 122 universities with over 496,000 students. Kyrgyzstan has over 7 million people and there are 56 universities there. These universities have more than 230,000 students. In Uzbekistan, there weren't many universities for the 32 million people living there. Only 81 universities, 15 regional branches, and 7 foreign branches were available in 2017. At the end of 2016, there were 260,905 students in total. Based on the information from that time, Z. Saipov talks about something interesting by showing graphs that tell us how many people in Central Asia and Afghanistan have gone to college. The report says that Kazakhstan has the most coverage for higher education at 54%. Kyrgyzstan has 41% coverage. Uzbekistan and Afghanistan have 10% coverage, and Turkmenistan has 8% coverage [4].

The year 2018 witnessed an expansion in collaborative endeavors with esteemed international institutions of higher learning. In the year 2019, concrete steps were undertaken to initiate the establishment of departments and affiliated institutions with universities located in Russia, South Korea, the United States, Germany, and Italy. The prospects for undergraduate and postgraduate students to pursue further

academic pursuits overseas have been broadened. Greater levels of education and qualifications among professionals in society are conducive to accelerated and enhanced developmental outcomes. In the year 2018, an aggregate of thirteen novel higher education establishments is scheduled to commence their operations within the national territory, encompassing the International University of "Silk Road" Tourism in Samarkand, the Almalyk branch of the "National Technological Research" University of the Russian Federal State Autonomous University, and the Puchon University of South Korea in Tashkent[2].

The "Concept of Developing the Higher Education System of the Republic of Uzbekistan until 2030" was recently approved through the issuance of a presidential decree by the President of the Republic of Uzbekistan on October 8, 2019. The primary objectives of the systemic restructuring of higher education as articulated in this Concept pertain to elevating the training of proficient personnel with contemporary knowledge and elevated moral and ethical standards to a markedly superior level. Additionally, the modernization of higher education, identification of strategic objectives for fostering advancement in the social sphere and economy, and utilization of pioneering educational technologies are underscored as fundamental components of this reform initiative [5].

In order to address the initial research inquiry, we have employed the findings from the quantitative components of the preliminary survey. The findings exhibited considerable ambiguity, suggesting that additional variables contributed to the impact of the swift digital transition on digital learning. Subsequently, attention is directed towards the nuanced outcomes achieved through the interviews, aimed at addressing the second research inquiry's intricacies. This inquiry extends towards unveiling supplementary elements, furnishing exhaustive narrations on the effects of swift alterations on pupils and personnel, and the involvement of educational establishments and higher education frameworks in shaping these events. The results of the ultimate survey reflected the previously discovered data throughout all geographical areas and also offered further insight into the potential of digital education.

Due to the unique commencement positions, contextual limitations, and requisites of diverse institutions, a universal solution for digital learning implementation does not exist. Diverse manifestations of challenges related to digital learning were observed during our study. Nonetheless, we discovered that certain overarching themes recurred across diverse contexts. The data at hand exhibit a lack of clustering based on the categorization of Higher Education Institutions (HEIs) or geographical regions.

**Result.** The interdisciplinary field of science and technology studies serves to expose the intricate interconnections and mutual impacts that exist among science, technologies, and society. The research focus of this discipline has shifted from exclusive inquiry into human beings to a comprehensive examination of the tools and instruments that are involved in human activities and interactions. The ambivalent utilization of technologies and scientific innovations has piqued the curiosity of scholars, prompting them to scrutinize the development of science and technology under the sway of distinct individuals. The investigation of technological development has garnered significant attention from a range of industries and business structures, with a focus on both theoretical concepts and empirical research. As such, there is a need for periodic structural analyses and forecasts within the fields of science and technology to facilitate economic flows and establish social and cultural links on both a global and local scale.

The augmented focus on domains that amalgamate scientific accomplishments, technological advancements,

communal and personal interests can elucidate the exigency for the proliferation of research in science and technology studies. Climate change necessitates the implementation of sustainable technologies and solutions in the worldwide production procedures. As such, researchers and engineers undertake scientific inquiries and engage in diverse measures to develop and offer sustainable concepts. As a result, it is imperative for society to instill sustainable concepts into the framework of cultural norms. Moreover, individuals must confront novel sustainable dilemmas and alterations in their quotidian existence. The aforementioned concepts are incorporated into the itinerary of gatherings organized by global institutions, summits, and worldwide colloquiums. The relevance of these matters is documented in a multitude of international papers and surveys.

The tasks aim to improve the industry and organize it to modern standards. Increasing higher education by 50% in regions will occur through public-private partnerships and non-governmental institutions. By 2030 is the goal. Demand for reforms and rapid development of higher education has tripled admission quota in Uzbekistan. Graduates with higher education increased from 9% in 2016 to 28% in 2021, with plans to reach 50-60% soon. In 2021, state grants were allocated to support young people with disabilities, graduates of orphanages and children's towns, and women from low-income families [3].

The most notable technological trend in today's education industry is the emergence of solutions for mobile devices. New ways to solve problems on small devices. Mobile solutions have changed the way things are done. Mobile solutions have changed the approach to "provisioning". Unwavering, it would seem, the position where we can take online courses, cramps the digital format of receipts on the screens of smartphones and tablets. The advantages of this format are many: useful technology, economy of time, and, take the entity to the best libraries in the world. It includes helpful technology, saves time, and considers the entire thing. The most popular web sites that are using in universities are coursera.org, MOOC – courses, online education system. All of it are helping to find out useful information and to learn easier than without it. Good communication also helps build a positive relationship between the two, which can lead to better outcomes for the student in terms of academic performance and overall experience. People usually send important information through emails. We should pay attention to the latest trends. Individuals can use special websites to send short text messages over the Internet. This is called SMS and it helps them communicate with other people quickly and easily. They can talk to each other using apps on the Internet, like Messenger, and on websites like Facebook.

First, it is necessary to consider the concept of "quality of education" and its interpretation by scientists and specialists. Fred A. Koslowski III [6] classified the quality of higher education as follows:

- 'excellent quality' as a result of the reputation and experience of academic staff;
- 'quality based on production', since the service meets the specifications and can thus be used by those for which it was developed;
- 'product-based quality', as the level of student learning on the basis of an appropriate curriculum and academic staff increases;
- 'value-based quality' is acceptable for achieving productivity at an affordable price;
- 'based on user satisfaction', taking into account the needs, desires and preferences of students.

The evolution of society has brought about a significant change in the way that education is perceived and delivered. It is imperative that we address this matter in a

comprehensive and systematic manner, in order to provide learners with the necessary skills and knowledge to navigate the increasingly complex and dynamic world in which we live. The guarantee of a superior level of education remains a crucial matter, given the transformative impact of technology and the societal advancements that have occurred. In light of these shifts, it becomes imperative to approach this issue in a thorough and structured manner, so as to equip learners with the requisite competencies and cognizance to effectively negotiate the intricate and constantly-evolving milieu in which we function.

**Conclusion.** The attainment of economic growth is contingent upon the availability of personnel possessing advanced qualifications. In the contemporary era, it has become increasingly imperative for firms to adopt innovative strategies and to continuously improve their products and services to maintain their competitive edge. In order to succeed in this challenging environment, firms must not only focus on their domestic market, but also expand their operations to

international markets. The ability to identify and respond to the unique needs and preferences of consumers in different regions of the world is key to global success. Furthermore, firms must adopt effective communication strategies and form strategic partnerships with other firms and organizations. By doing so, firms can leverage their strengths and resources to achieve mutual benefits and enhance their competitiveness in the global marketplace. There is a pressing need to address this issue in order to guarantee that educational services effectively meet the needs of students and facilitate their academic and professional development. In the domain of educational services, the issue of maintaining a high standard of education is a matter of substantial concern. This matter necessitates prompt attention to ensure that the educational services rendered are able to meet the requirements of students effectively and promote their academic and vocational progress. The quality of educational services directly affects not only the demand for graduates in the labor market, but also the effectiveness of the educational organization.

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## POLITENESS STRATEGIES IN CROSS-CULTURAL COMMUNICATION

Abstract

The article provides an overview of the main theories of politeness and how they arise within particular cultures. It also examines the different ways in which politeness is expressed in different cultures, including the use of honorifics, indirect language, and polite expressions and gestures. By understanding the cultural and linguistic context of politeness, the article provides a valuable resource for researchers, educators, and anyone interested in cross-cultural communication.

**Key words:** Face theory, politeness theory, linguistic politeness, social self-image, face-saving, face-threatening acts, positive face, negative face, linguistic context, social harmony, and communication.

**Introduction.** The concept of politeness is a universal phenomenon, but the norms and strategies of politeness differ across cultures. Understanding these differences is crucial for effective communication and building positive relationships with people from different cultures. This scientific article aims to explore the different politeness theories and strategies across cultures. The article will provide an overview of the main theories of politeness and how they arise within particular cultures.

Politeness is a concept in linguistics that refers to the use of language in a way that shows consideration for the feelings and needs of others. Politeness theory is a theory that appeared within the framework of pragmatic approach in linguistics and branch of pragmatics developed by Penelope Brown and Stephen Levinson in the 1970s. The theory draws heavily upon Erving Goffman's concept of face theory and has advanced this concept with a particular focus on how and why we are polite to others. Brown and Levinson's politeness theory, first published in 1978, generated a wealth of conceptual and empirical research, undertaken in the theoretical and methodological traditions of a number of social sciences, such as anthropology, developmental psychology and psycholinguistics, linguistics, sociolinguistics, pragmatics, applied linguistics, and communication. The theory has been widely influential in the field, but it has also been subject to criticism and refinement. One of the criticisms of the theory is that it fails to recognize that politeness can vary around the world. Nonetheless, politeness theory remains an important concept in linguistics and has led to a substantial increase in the number of politeness studies in recent years.

**Literature review.** Works by R. Gianni and X. Arndt, R. Lakoff, E. Goffman, P. Brown and S. Levinson, Geoffrey Leech, Jonathan Culpeper put the beginning of serious theoretical studies of linguistic politeness. Description of certain aspects of the category of politeness, analysis of the previous experience of foreign researchers, a new interpretation of this category can be found in the studies of R. Ratmair, N.I. Formanovskaya, T.V. Larina, V.I. Karasik, E.A. Zemskaia and other Russian scientists.

According to the theory, politeness is a way of mitigating face threatening acts and maintaining social harmony. Linguistic politeness can be expressed in various ways such as through the use of indirect language euphemisms and hedges.

For example: Instead of saying you're wrong a polite speaker might say I'm not sure I agree with you.

Politeness can also be expressed through nonverbal cues such as tone of voice facial expressions and body

language. Research on linguistic politeness has generated a wealth of conceptual and empirical research undertaken in the theoretical and applied domains. Brown and Levinson's politeness theory has been widely influential in the field but it has also been subject to criticism and refinement. Other researchers have proposed alternative models of politeness such as the facework model and the rapport management model.

Face theory is a concept in linguistics that refers to the positive social value a person claims for themselves in a given interaction. The concept of face was first introduced by sociologist Erving Goffman, who defined it as the positive social value a person claims for themselves by virtue of their social identity and personality. The study of face, or face work, is related to our everyday concept of respect and politeness, familiar from expressions such as 'to save face' or 'to suffer a loss of face'. Face theory is an important aspect of politeness theory, which holds that people use various politeness strategies to protect the face of others when addressing them. Under politeness theory, there is a positive and a negative face. Positive face reflects the desire to have one's self-image approved of by others, while negative face is a part of personality that desires not to be imposed upon. The theory identifies four politeness strategies a speaker uses when dealing with face-threatening acts to the listener: bald on record, positive politeness, negative politeness, and off-record.

Politeness theory has been subject to criticism. One criticism is that it is ethnocentric in its approach as it fails to recognize that politeness can vary around the world. Additionally, some critics argue that the theory is too focused on the individual and does not take into account the social and cultural context in which communication takes place. Finally, some scholars argue that the theory is too simplistic and does not account for the complexity of human communication. These criticisms highlight the need for a more nuanced and culturally sensitive approach to the study of politeness in communication.

The Grand Strategy of Politeness is a concept proposed by Geoffrey Leech in his politeness theory. It refers to the overall approach that speakers take to express politeness in their language use. Leech's theory proposes six maxims of politeness that guide the use of language in social interactions: tact, generosity, approbation, modesty, agreement, and sympathy. These maxims are used to balance the speaker's own interests with the interests of the listener, and to maintain social harmony and avoid conflict. The Grand Strategy of Politeness involves selecting the most appropriate maxims to use in a given situation, based on factors such as the social context, the relationship between the speakers, and the cultural

norms of politeness. The theory distinguishes between positive and negative politeness, with positive politeness being used to express friendliness and solidarity, and negative politeness being used to avoid imposing on others. The Grand Strategy of Politeness has been widely influential in the field of pragmatics and has been applied to a range of contexts, including language teaching, business communication, and cross-cultural communication.

Leech's politeness maxims have been subject to criticism. One major criticism by Smith J. claims that Leech's model considers linguistic behavior as inherently polite or impolite, which is a consequence of his distinction between absolute and relative politeness. This criticism suggests that linguistic behavior cannot be inherently polite or impolite, as politeness is context-dependent and varies across cultures and languages. Additionally, studies have found that slang violates some of Leech's politeness maxims, such as the approbation maxim, modesty maxim, and agreement maxim. However, other studies have applied Leech's politeness maxims to analyze conversational data and found that they can be useful in understanding politeness strategies in communication. Despite the criticisms, Leech's politeness maxims remain a widely used framework for analyzing politeness in language.

**Research of methodology.** The following article was based on analytical, comparative-typological and quantitative and data processing methods. Politeness theory differs across cultures as each culture has its own way of showing politeness. The major theories of politeness have focused primarily on explicating how politeness arises within particular cultures, and then making cross-cultural comparisons. The theory is based on Western cultural norms and values, which may not be applicable to other cultures. Some cultures may value directness over indirectness, and what is considered polite in one culture may be considered impolite in another. Therefore, applying politeness theory to cross-cultural communication requires a nuanced and culturally sensitive approach that takes into account the cultural context in which communication takes place. It is important to recognize and respect cultural differences in communication styles and to avoid imposing Western cultural norms on other cultures.

Different cultures have different ways of showing politeness, and some examples of different politeness strategies across cultures include:

In Japan, the use of indirect language and the avoidance of direct confrontation is a common politeness strategy.

In many Middle Eastern cultures, the use of honorific titles and formal language is an important politeness strategy.

In China, the use of indirect language and the avoidance of direct criticism is a common politeness strategy.

In Chinese culture, politeness is highly valued and is expressed through a variety of conventionalized strategies. Some examples of conventionalized politeness in Chinese culture include the use of honorifics, indirect language, and polite expressions and gestures. The concept of "face" is also important in Chinese culture, and people often use polite language and behavior to avoid causing embarrassment or loss of face to themselves or others. The use of indirect language and euphemisms is also common in Chinese culture, particularly when expressing criticism or negative feedback. Additionally, the use of gift-giving and other forms of hospitality is a common way of expressing politeness and building positive relationships in Chinese culture. Overall, understanding the conventionalized politeness strategies in Chinese culture is crucial for effective communication and building positive relationships with Chinese speakers.

Conventionalized politeness in Russian culture includes a variety of linguistic strategies that are unique to the language and culture. Some examples of conventionalized politeness in Russian culture include the use of honorifics, indirect language, and polite expressions and gestures. In Russian requests, negative politeness behavior is often expressed through indirectness and elaborate linguistic strategies. Studies have also shown that there is a clear frequency pattern found in the use of specific verbal markers of politeness, such as greeting, leave-taking, expressing gratitude, and apology. The use of these markers varies depending on the sociolinguistic context and cultural diversity of the communicative domain. Overall, understanding the conventionalized politeness strategies in Russian culture is crucial for effective communication and building positive relationships with Russian speakers.

In many Western cultures, the use of please and thank you, as well as the use of formal titles and language, is a common politeness strategy.

In some African cultures, the use of proverbs and indirect language is a common politeness strategy.

In Uzbek culture, the use of formal pronouns and titles is an important politeness strategy. One of the famous Uzbek linguist Husain Vaiz Koshifiy, appropriated to cite the classification of speech etiquette of those who have reached the level of education and those who have not: [Koshifiy 1997:227]

Xusain voiz Koshifiyning so'zlashish odobi klassifikatsiyasi- voyaga yetmaganlar uchun

•Har kimning ahvoliga qarab, munosib so'z aytsin

•Dag'allik qilmasin, lutf va muloyim bilan gaprsin

•Gapirayotganda tabassum qilib, ochilib gapirsin

•Ovozini baland ko'tarmasin, eshituvchilarga malol kelmaydigan qilib gapirsin

•Odamga nafi tegadigan ma'noli gaplar gapirsin

Agar so'zning qadr qimmatini bo'lmasa, uni tilga olmasin, chunki ulug'larning so'zi ba'misoli ulug'dir, agar urug' puch yoki chirigan bo'lsa, uni qayerga ekmang unib chiqmaydi.

Author’s translation:

Husain voiz Koshifiy made a classification of strategies of politeness for adults and teenagers separately. Below is Koshifi's classification of politeness and conversational etiquette:

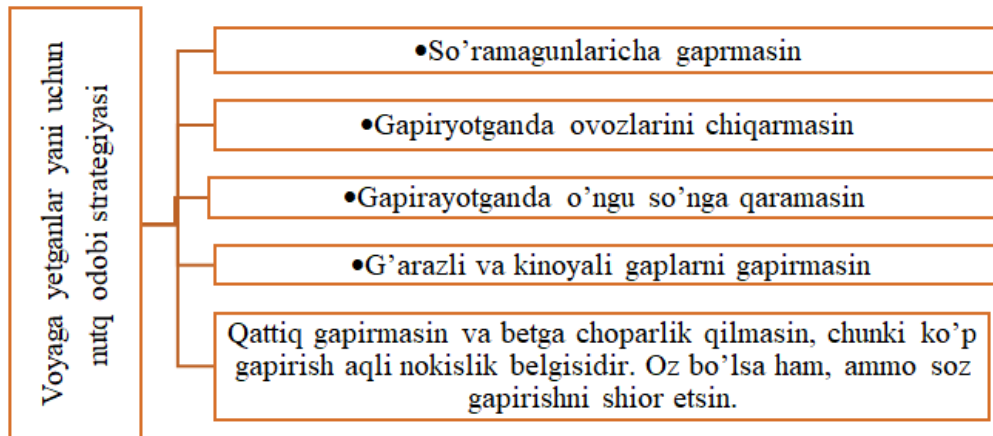
- To speak appropriately, depending on everyone's situation

- Do not be rude, speak kindly and politely
- Smile and speak openly while speaking

- Do not raise your voice, speak in such a way that it does not bother the listeners

- Speak meaningful words that benefit people
- If the word has no value, don't mention it, because the words of the great ones are always great, if the seed is rotten or putrid, no matter where you plant it, it will not sprout.

In the same way, the speech etiquette strategy of adults, i.e. adults, is also presented in Koshifi:



[Koshifiy 1997:227-228]

In the same way, the speech etiquette strategy of adults, i.e. adults, is also presented in Koshifi:

(Author’s translation)

Etiquette and speech act strategy by Koshifi:

Don't talk unless asked

Do not raise your voice when you speak

Do not look to the right while speaking

Do not speak malicious and sarcastic words

Do not speak loudly and do not be rude, because talking too much is a sign of a bad mind

Even if it is little, let it be a slogan to speak up

Koshifi's speech etiquette rules have still not lost their relevance and are fully applied to politeness strategy today. The result of comparing Brown and Levinson's strategy of politeness with Koshifi's strategy of speech etiquette shows that in each society and nation, politeness covers the associative field in different ways and what is called politeness in some nations may be called manners or speech etiquette in another nation.

These examples highlight the importance of understanding cultural differences in politeness strategies in order to communicate effectively and respectfully across cultures.

Learning about politeness norms in a foreign culture can be done in several ways. One way is to conduct research on the culture's communication style and norms of politeness. This can be done by reading books, articles, and other materials on the culture, as well as by talking to people who are familiar with the culture. Another way is to observe and listen to how people in the culture communicate with each other, paying attention to their use of language, tone, and nonverbal cues. It is also important to be aware of one's own cultural biases and assumptions, and to approach the culture with an open mind and a willingness to learn. Additionally, it is important to be respectful and sensitive to the cultural norms of politeness, and to adapt one's communication style accordingly in order to build positive relationships with people from different cultures.

**Conclusion.** In conclusion, politeness is a universal phenomenon, but the norms and strategies of politeness differ across cultures. Understanding these differences is crucial for effective communication and building positive relationships with people from different cultures. The article has provided an overview of the main theories of politeness and how they arise within particular cultures. It has also examined the different ways in which politeness is expressed in different cultures, including the use of honorifics, indirect language, and polite expressions and gestures.

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## O'ZBEKISTON MILLIY UNIVERSITETIDA IQTISODIY VA IJTIMOYIY GEOGRAFIYANING SHAKLLANISHI VA RIVOJLANISHI

Annotatsiya

Maqola O'zbekistonning to'ng'ich oliy o'quv yurtida iqtisodiy va ijtimoiy geografiya sohasidagi ilmiy tadqiqotlari tarixiga bag'ishlangan. Turli davriy bosqichlarda O'zbekiston Milliy universitetida rivojlangan ijtimoiy-geografik tadqiqotlarning asosiy yo'nalishlari ajratilgan va tavsiflangan.

**Kalit so'zlar:** Iqtisodiy va ijtimoiy geografiya, kompleks tadqiqotlar, ekspeditsiyalar, qishloq xo'jalik geografiyasi, aholi va shaharlar geografiyasi, sotsial geografiya, kafedra.

**Kirish.** O'tgan asrning oxiri va yangi yigirma birinchi asrning boshlarida O'zbekiston iqtisodiy va ijtimoiy geografiyasining yirik namoyandasi, taniqli olim, professor Abdusami Soliyevich Soliyevning ta'biri bilan aytganda, har bir mamlakatning yagona milliy universiteti, yagona milliy teatri bo'ladi. Ular millatning fani va madaniyatining ko'zgusi hisoblanadi. Bu borada, avval boshda Turkiston xalq universiteti, keyinroq O'rta Osiyo davlat universiteti, Toshkent Davlat universiteti va hozirda O'zbekiston Milliy universiteti deb nomlangan mazkur oliy ta'lim dargohi haqiqatdan ham Markaziy Osiyoda zamonaviy ilm-fanning to'ng'ich oliy o'quv yurti hisoblanadi.

O'zbekiston Milliy universiteti o'zining bir asrdan ko'proq vaqt mobanidagi tarixiy rivojlanishi barobarida, nafaqat mamlakatimiz, balki Markaziy Osiyo respublikalarida fan taraqqiyotiga ulkan xissa qo'shdi. Uning bag'ridan shakllanib chiqqan hamda turli sohalariga mansub bo'lgan ko'plab oliy o'quv yurtlari, ilmiy tadqiqot muassasalari bugungi kunga kelib, o'z sohasining etakchi ilm dargohlariga aylangan.

Ushbu 2023 yilda, mazkur O'zbekistonning eng keksa va shu bilan birga navqiron oliy ta'lim dargohi – O'zbekiston Milliy universitetining tashkil topganiga 105 yil to'ldi. O'tgan yillar mobaynida mazkur universitet ko'pchilik fan sohalariga bo'yicha yirik tadqiqotlar markaziga aylandi. Binobarin, mamlakatimizda ko'plab fan sohalariga va shular qatorida geografiya fani va uning turli yo'nalishlari bo'yicha yirik ilmiy maktablarni vujudga kelishida Milliy universitet alohida o'rin tutadi. Bu borada mazkur tadqiqotda iqtisodiy va ijtimoiy geografiyaning shakllanishi va rivojlanishida Milliy universitetning tutgan o'rni va rolini tadqiqiga alohida e'tibor qaratilgan.

Mazkur tadqiqotning maqsadi shundan iboratki, O'zMUning butun faoliyati davomida iqtisodiy va ijtimoiy geografik tadqiqotlarning tarixiy va tadrijiy rivojlanishi va uzluksizligi barobarida iqtisodiy-ijtimoiy geografiyaning shakllanishi va rivojlanishini o'rganishdan iboratdir.

Bunda quyidagi vazifalar belgilab olingan: 1) O'zMUda iqtisodiy va ijtimoiy geografiya shakllanishi va rivojlanishining tashkiliy hamda institutsional jihatlarini, avvalo iqtisodiy va ijtimoiy geografiya kafedrasining tarixini o'rganish; 2) Universitet rivojlanishining turli bosqichlarida

ijtimoiy geografik tadqiqotlarning asosiy yo'nalishlarini ajratish va tavsiflash; 3) Universitetning yirik olimlarini vatanimiz iqtisodiy va ijtimoiy geografiyasini rivojlanishiga qo'shgan xissasini ko'rsatish.

**Mavzuga oid adabiyotlarning tahlili.** Kishilik jamiyatida ro'y berayotgan ijtimoiy-iqtisodiy voqea-hodisalarning vaqt davomida uzluksiz o'zgarib borishi aksariyat fanlarning shakllanishi va rivojlanishiga bevosita ta'sir ko'rsatadi. Iqtisodiy geografiya fanining alohida tarmoqlarini shakllanishi va rivojlanishida ingliz iqtisodchi olimi U.Petti hamda nemis G.Axenvallning statistikasi, nemis olimlari I.Tyunen, A.Veber, V.Kristaller va A.Lyosh kabilar tomonidan ishlab chiqilgan shtandort (shtandort – joylashdirish, qulay joy kabi ma'nolarni bildirgan) g'oyalari ham alohida o'rin tutadi. Shuningdek, V.M.Chetirkin, G.M.Cherdansev, A.N.Rakitnikov, K.I.Lapkin, N.G.Sapenko, N.V.Smironov, Z.M.Akramov, R.U.Raximbekov, A.Soliev, O.Abdullayev, Yu.Ahmadaliyev, X.Nazarova, K.Gadoyev, V.Fedorko, Sh.Qurbonov va boshqalar mazkur yo'nalishda ilmiy ishlar olib borishgan.

**Tadqiqot metodologiyasi.** Jamiyat taraqqiyotini fanning rivojisiz tasavvur qilib bo'lmaydi. Fan esa ijtimoiy ehtiyoj, buyurtmalar asosida rivojlanadi. Tabiiyki, fan texnika va jamiyat taraqqiyoti o'zaro aloqador. Shuning uchun fanning negizi bo'lgan ilmiy tadqiqot jarayoni ham ijtimoiy-iqtisodiy taraqqiyot talabi va ehtiyoji asosida amalga oshiriladi. Har bir fanning paydo bo'lishi va rivojlanishida unda yaratilgan g'oyalar, metodologiyalar muhim mazmunga ega.

Respublikamizda ham ko'p yillik ilmiy tadqiqotlar natijasida iqtisodiy va ijtimoiy geografiyaning bir qator yo'nalishlari tashkil topdi va rivojlanib kelmoqda. Bu borada O'zbekistonda dastlab aholi geografiyasi, shaharlar geografiyasi va urbanizatsiya masalalarini o'rganishga ko'proq e'tibor qaratilgan bo'lsa, hozirgi kunda ijtimoiy sohalar geografiyasida ilmiy ishlar olib borilmoqda.

**Tahlil va natijalar.** O'zMUda iqtisodiy va ijtimoiy geografiyaning vujudga kelishi universitetning ilk davriga borib taqaladi. 1920-yillarning boshlaridanoq universitetning geograf va iqtisodchilari O'zbekiston va butun O'rta Osiyo iqtisodiy geografiyasining dolzarb muammolariga bag'ishlangan keng qamrovli tadqiqotlarni yo'lga qo'yishgan edi. Ushbu tadqiqotlar iqtisodiy rayonlashtirish nazariyasi va



amaliyoti, mintaqa ishlab chiqarish kuchlarini, birinchi navbatda, qishloq xo'jaligini joylashtirish va rivojlantirish istiqbollari ilmiy asoslash bilan chambarchas bog'liq bo'lgan.

Bu davrda bajarilgan ishlar, avvalambor, G.N.Cherdansev nomi bilan bog'liqdir. U 1936 yilda O'zbekiston ishlab chiqarish kuchlarini joylash-tirish va rivojlantirishga bag'ishlangan ilmiy tadqiqotlari asosida dissertatsiya himoya qilmasdan turib, iqtisod fanlari doktori ilmiy darajasiga sazovor bo'ldi. Shuningdek, respublikada iqtisodiy geografik tadqiqotlarning rivojlanishiga professorlar V.M.Chetirkin, N.N.Kojanov, N.K.Yaroshevich, Yu.I.Poslavskiyalar (taniqli geomorfolog olim, professor O.Yu.Poslavskayaning otasi) ham o'zlarining katta hissalarini qo'shdilar [1;5].

O'zMUda iqtisodiy va ijtimoiy geografiyaning rivojlanishida geografiya fanlari doktori, professor V.M.Chetirkin alohida o'rin tutadi. U 1920 yillarda O'zbekiston Davlat reja qo'mitasi rayosatida ishlagan paytda, 1926 yilda "O'zbekiston. Xalq xo'jaligi holati va uni rivojlanishi" nomli yirik monografik asar chop ettirdi.

O'rta Osiyo davlat universitetida 1935-yili geologiya-tuproqshunoslik-geografiya fakulteti tashkil etildi. Uning tarkibida, avvalo tabiiy va iqtisodiy geograflarni birlashtirgan geografiya kafedrasini ish boshladi. Uni dastlabki yillarda M.I.Silishinskiy, V.P.Andreev, 1937-yildan boshlab esa regional tabiiy geografiya va glyatsiologiya fanining yirik vakili N.L.Korjnevskiy boshqardi.

1940 yilda Toshkentga qaytib kelgan V.M.Chetirkinning tashabbusi bilan SAGUning geografiya kafedrasini asosida tabiiy hamda iqtisodiy geografiya kafedralari tashkil qilindi. Iqtisodiy geografiya kafedrasining birinchi mudiri qilib dotsent V.G.Kuznesov tayinlandi.

1941 yilda Toshkentga sobiq Ittifoqning Yevropa qismida bosib olingan hududlaridan evakuatsiya qilingan o'qituvchi va ilmiy xodimlarning katta guruhi etib keladi. Bu davrda iqtisodiy geografiya kafedrasining tarkibiga professorlar M.G.Kadek (1941-1944 yillarda kafedraga mudirlik qilgan), S.D.Muravevskiy, dotsentlar A.N.Rakitnikov, M.G.Reyser, A.A. Kononovlar kelib qo'shildi. Aynan manashu qisqa va muhim bo'lgan davrda universitetda iqtisodiy geografiyaning rivojlanishi uchun mustahkam poydevor yaratildi. 1943 yilda iqtisodiy geografiya yo'nalishi bo'yicha ilk bor aspirantura ochildi, aspirantlar uchun muntazam ilmiy-metodik seminarlar olib borildi, bunda V.M.Chetirkin murabbiylik qildi. Binobarin, 1944 yilda V.M.Chetirkin tomonidan "Turon geofatsiyasi" nomli doktorlik dissertatsiya ishi himoya qilindi. Mazkur tadqiqot O'rta Osiyoni tabiiy geografik va tabiiy-qishloq xo'jaligi rayonlashtirish nazariyasi va amaliyotini rivojlantirishda o'ziga xos bosqich bo'lib xizmat qildi [2].

1944 yilda evakuatsiya qilingan professorlar va dotsentlar, shu jumladan, professor G.N. Cherdansevning Toshkendan ketganlaridan so'ng, kafedraga professor V.M. Chetirkin mudir qilib tayinlandi. Shuningdek, u 1945 yildan boshlab yangi tashkil etilgan mustaqil geografiya fakulteti dekani vazifasini bajardi.

O'rta Osiyo davlat universitetining iqtisodiy geografiya kafedrasini 1949-1954 yillarda geografiya fanlari nomzodi, dotsent R.S.Lobach boshqardi. Aytish joizki, bu olim shu kafedrada tashkil etilganidan boshlab ishlagan. R.S.Lobach 1949 yilda geografiya fanlari doktori, professor V.M. Chetirkinning ilmiy rahbarligida "Ustyurt platosini xo'jalik jihatdan o'zlashtirishning omillari va istiqbollari"ga bag'ishlangan nomzodlik dissertatsiya ishini himoya qildi.

Bu yillarda kafedra a'zolari O'zbekiston Fanlar akademiyasi tomonidan 1950-1953 yillarda tashkil etilgan Farg'ona vodiysi ishlab chiqarish kuchlarini o'rganish bo'yicha kompleks ekspeditsiya ishida qatnashdilar. Keyingi yillarda geografiya fanlari nomzodi, dotsent R.S. Lobach

O'zbekistonning turli mintaqalari qishloq xo'jaligini rivojlantirish muammolari ustida ko'p ishladi. U 1962 yilda R.A. Xodiyev tomonidan muvaffaqiyatli himoya qilingan nomzodlik dissertatsiya ishiga rahbarlik qildi.

1954-1959 yillarda iqtisodiy geografiya kafedrasini geografiya fanlari nomzodi, dotsent N.G.Sapenko boshqardi. U ko'proq sanoat geografiyasi, O'rta Osiyo va O'zbekistonni iqtisodiy rayonlashtirish masalalari bilan shug'ullandi. 1954 yilda dotsent N.G.Sapenko geografiya fanlari nomzodi N.V.Smirnov bilan birgalikda ilk bor O'zbekiston iqtisodiy geografiyasi darsligini chop ettirdilar.

1960 yilda iqtisodiy geografiya kafedrasini mudiri bo'lib turgan N.G.Sapenko o'rta Osiyo geografiya fanlari nomzodi, dotsent N.V. Smirnov kafedrasini boshqardi. U 1950 yillarda O'zbekiston iqtisodiy geografiyasida yangi yo'nalish – shaharlar geografiyasini boshlab berdi.

Kafedra a'zolari 1960 yillarda Samarqand va Buxoro viloyatlari (Zarafshon ekspeditsiyasi), Surxondaryo viloyati, Qarshi dashti, Toshkent viloyatining tog'li hududlariga yushtirilgan kompleks mintaqaviy ekspeditsiyalarda faol ishtirok etishni davom ettirdilar. Bu davrda kafedraning ilmiy-tadqiqot yo'nalishlari yanada kengaydi, jumladan agrogeografik va geourbanistik yo'nalishlar shakllandi. Shuningdek, kafedraning kadrlar salohiyati mustahkamlandi, unga yosh fan nomzodlari T.I.Raimov, S.Saidkarimov, O.B.Ata-Mirzayevlarning kelib qo'shilishi bilan kuchaydi. 1970 yil 1 yanvardan boshlab, iqtisodiy geografiya kafedrasiga yirik olim va fan tashkilotchisi, qishloq xo'jalik geografiyasi bo'yicha yirik mutaxassis – professor Z.M.Akramov mudir etib tayinlandi. Z.M.Akramov ko'p yillar davomida kafedra bilan bir qatorda O'zbekiston Fanlar akademiyasi Geografiya bo'limini boshqardi.

1970 yillarda ToshDUda iqtisodiy geografik tadqiqotlar asosan ikki yo'nalishda, ya'ni qishloq xo'jalik geografiyasi hamda aholi va shaharlar geografiyasi yo'nalishlarida rivojlandi [3]. Birinchi, ya'ni qishloq xo'jaligi yo'nalishi bo'yicha ilmiy-tadqiqot ishlarini Z.M.Akramovning o'zi boshqargan bo'lsa, 1970 yillardagi geourbanistik tadqiqotlarning tashkilotchisi, 1971-1977 yillarda ToshDUning geografiya fakultetini boshqargan dotsent T.I.Raimov bo'lib hisoblanadi.

1972 yilda O'zbekiston demografiya fanining asoschisi, iqtisod fanlari doktori, professor M.Q.Qoraxonov tashabbusi bilan ToshDU qoshida O'rta Osiyoda yagona bo'lgan aholishunoslik ilmiy-tadqiqot laboratoriyasiga asos solindi. Mazkur laboratoriyani 1976 yildan 1987 yilgacha geografiya fanlari nomzodi, dotsent O.B. Ata-Mirzayev (1992-yildan geografiya fanlari doktori, professor) boshqardi. O'zbekistonda demografik tadqiqotlarni vujudga kelishi va rivojlanishida katta ahamiyatga ega bo'lgan ushbu laboratoriyada turli yillarda M.Bo'riyeva (1987-1998 yillarda mudir), Z.X.Rayimjonov, B.Ya.Goldfarb, S.N.Kononenko, O.Saidaxmedov, O. Ergashev va boshqalar mehnat qilishgan [4].

1984 yilda iqtisodiy geografiya kafedrasiga geografiya fanlari nomzodi, dotsent A.S.Soliyev mudir etib tayinlangan. U bundan ikki yil o'tib, 1986 yilda Moskva shahrida SSSR Fanlar Akademiyasi Geografiya institutida doktorlik dissertatsiyasini himoya qildi, 1988 yilda esa professor ilmiy unvoniga ega bo'ldi. Aytish joizki, kafedraning uzoq yillik tarixi professor A.S.Soliyevning nomi va faoliyati bilan chambarchas bog'liq, binobarin u kafedrani 1984 yildan 2010 yilgacha, ya'ni uzluksiz 26 yil boshqardi. Bu davrda aholi va shaharlar geografiyasi kafedraning asosiy ilmiy tadqiqot yo'nalishiga aylangan bo'lsa, aksincha agrogeografik yo'nalishning mavqei kuchsizlandi. Kafedrada sekin-asta turli noan'anaviy mavzu va tadqiqot ob'ektiga ega sotsial geografik tadqiqotlarning vujudga kelishiga sharoit yaratildi. Jumladan, ular qatoriga sotsial ekologiya (H.T.Tursunov), xizmat ko'rsatish sohalari geografiyasi (M.I.Nazarov), fan va ilmiy

tadqiqotlar geografiyasi (X.M.Nazarova), tibbiyot geografiyasini (N.Q.Komilova) kiritish mumkin [9;10].

Iqtisodiy geografiya kafedrasini negizida 1987 yilda mustaqil sotsial geografiya va aholishunoslik kafedrasini tashkil etildi. Kafedraga O.B. Ata-Mirzaev mudir etib tayinlandi. U kafedrani 1998 yilgacha bo'lgan butun faoliyati davrida boshqardi. Bu davrda kafedrada geografiya fanlari nomzodlari, dotsentlar S.S.Saidkarimov, Z.X.Rayimjonov, A.A.Qayumovlar mehnat qilishdi. A.A.Qayumov 1994 yilda o'zining "O'zbekiston mehnat resurslarining shakllanishi va rivojlanishining sotsial-geografik asoslari" mavzusidagi doktorlik dissertatsiyasini himoya qildi [6;8].

Ijtimoiy geografiya va mintaqaviy iqtisodiyot kafedrasini professor A.S.Soliyevdan keyin geografiya fanlari nomzodi, dotsent M.I.Nazarov boshqardi. 2010 yilda demografiya kafedrasining (2000 yilda tashkil etilgan bu kafedrani turli yillarda dotsentlar M.R.Bo'riyeva, Z.N.Tojiyeva, S.S.Zokirovlar boshqarishdi) yopilishi va uni ijtimoiy geografiya va mintaqaviy iqtisodiyot kafedrasiga qo'shilishi bilan kafedraning nomi "ijtimoiy geografiya, mintaqaviy iqtisodiyot va demografiya" deb o'zgartirildi. 2013 yilda esa kafedra ijtimoiy geografiya va demografiya deb qayta nomlandi.

2014 yilda O'zbekiston Milliy universitetida amalga oshirilgan tarkibiy o'zgarishlar natijasida ijtimoiy geografiya va demografiya kafedrasini tabiiy geografiya kafedrasini bilan birlashtirilib, yagona geografiya kafedrasiga aylantirildi. Geografiya kafedrasining mudiri qilib, dotsent M.I.Nazarov tayinlandi. 2016 yildan boshlab, kafedrani geografiya fanlari doktori N.Q.Komilova boshqardi. 2018 yilda Geografiya va tabiiy resurslar fakulteti Geografiya kafedrasini tarkibidan tabiiy geografiya hamda iqtisodiy va ijtimoiy geografiya kafedralari qayta tashkil etildi. Bunda iqtisodiy va ijtimoiy geografiya kafedrasini geografiya fanlari doktori, professor N.Q.Komilova boshqargan bo'lsa, 2018 yildan boshlab to hozirga qadar kafedrani geografiya fanlari doktori, professor Z.N.Tojiyeva boshqarmoqda.

Universitetda olib borilgan dastlabki iqtisodiy geografik tadqiqotlarning asosiy yo'nalishi ishlab chiqarish kuchlarini kompleks mintaqaviy tadqiq qilish bilan bog'liq bo'lgan. Aytish joizki, 1940-1970 yillarda universitetning

iqtisodiy geograflari tomonidan respublika hududlarining xo'jalik xususiyatlarini tizimli o'rganish ishlari, odatda, maqsadli tashkil etilgan ekspeditsiyalar doirasida amalga oshirilgan bo'lib, unda iqtisodiy geograf va iqtisodchilar bilan birgalikda tabiiy geograflar, biologlar, geologlar, gidrogeologlar, tuproqshunoslar va boshqa mutaxassislar ishtirok etishardi [7].

Respublikada bajarilgan kompleks mintaqaviy tadqiqotlar geografiya fanining bosh ilmiy konsepsiyasi – rayonlashtirishni rivojlantirishga xizmat qildi. Ta'kidlash joizki, respublikada rayonlashtirish tadqiqotlari bir necha bosqichlarni bosib o'tdi: avvalo respublikamizning agroiqlimiy, geobotanik, tuproqlar rayonlashtirilishi amalga oshirilgan bo'lsa, keyinchalik bu ishlar negizida kompleks tabiiy geografik rayonlashtirish sxemalari yaratildi. Muhimi shundaki, tabiiy geografik rayonlashtirish sxemalari, odatda, ishlab chiqarish kuchlarini oqilona joylashtirish va rivojlantirish maqsadlarida bajarilgan bo'lib, baholash xarakteriga ega bo'lgan edi. Bu esa, o'z navbatida, O'zbekistonda iqtisodiy (iqtisodiy geografik) rayonlashtirishning rivojlanishiga olib kelgan.

**Xulosa va takliflar.** O'zbekiston Milliy universitetida iqtisodiy va ijtimoiy geografiya fani shakllanishi va rivojlanishining kishqacha ilmiy-tarixiy tahlili universitetda ushbu ilm sohasidagi tadqiqotlarning chuqur ildizlari va boy an'analari mavjudligini ko'rsatdi. O'zMUda iqtisodiy va ijtimoiy geografiyaning rivojlanishida tabiiy geografiya va iqtisod fanlari bilan chambarchas aloqadorlikda bajarilgan kompleks mintaqaviy tadqiqotlar muhim rol o'ynaydi. Iqtisodiy geografiya qishloq xo'jalik geografiyasi, aholi va shaharlar geografiyasi, sotsial geografiya, jamiyatni hududiy tashkil etilishini kompleks tadqiq etish kabi yo'nalishlarning o'zaro bog'liq ravishda shakllanishi va rivojlanishida ifodasini topgan uzoq evolyusion rivojlanish yo'lini bosib o'tdi. Bundan buyon O'zbekiston Milliy universitetida iqtisodiy va ijtimoiy geografiya fanining rivojlanish istiqbollari, eng avvalo, universitet iqtisodiy geograf olimlari tomonidan milliy, mintaqaviy va global darajalardagi dolzarb ijtimoiy-iqtisodiy, demografik, geosiyosiy, ekologik muammolarni zamon talablari darajasida tadqiq etishlari bilan bevosita bog'liqdir.

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## O‘ZBEKISTONDA SPORT TA’LIMI VA MADANIYATINI RIVOJLANTIRISH ISTIQBOLLARI

Annotatsiya

Respublikamizda oxirgi yillarda jismoniy tarbiya va sportni ommalashtirish, aholi o‘rtasida sog‘lom turmush tarzini targ‘ib qilish, imkoniyatlari cheklangan shaxslarning jismoniy reabilitatsiyasi uchun zarur shart-sharoitlar yaratish hamda mamlakatning xalqaro sport maydonlarida munosib ishtirok etishini ta‘minlash borasida izchil chora-tadbirlar amalga oshirilmoqda. Mazkur maqolada O‘zbekiston Respublikasida sport sohasining rivojlanishidagi qonuniy asoslar va yurtimizda jismoniy tarbiya va sport sohasidagi islohotlar haqida ma‘lumot berilgan.

**Kalit so‘zlar:** Yoshlar, sport, qonun, farmon, Prezident kubogi, umid nihollari, barkamol avlod, universiada, olimpiya o‘yinlari.

**Kirish.** O‘zbekistonda har tomonlama sog‘lom yosh avlodni voyaga yetkazish, ularga bilim berish, ma‘naviy barkamol etib tarbiyalash maqsadida jismoniy tarbiya va sport sohasini rivojlantirish bo‘yicha keng ko‘lamli ishlar amalga oshirilmoqda. Buning natijasida O‘zbekiston sport bo‘yicha terma jamoalari osiyo va jahon miqyosida bo‘lib o‘tayotgan musobaqalarda yuqori o‘rinlarni egallamoqda. Mamlakatimizda jismoniy tarbiya va sportni ommalashtirish ijtimoiy siyosatning muhim yo‘nalishlaridan biri etib belgilangan[1]. Chunki sport aholi salomatligini mustahkamlash, yosh avlodni sog‘lom va barkamol etib tarbiyalash orqali jamiyatda sog‘lom turmush tarzini qaror toptiradi. Turli kasalliklar, yoshlar o‘rtasida zararli odatlarning oldini oladi. Sport yuksak madaniyat, vatanparvarlik tuyg‘ularini shakllantirishda ham muhim o‘rin tutadi. Bu sohada erishilgan yutuqlar mamlakatni dunyoga tanitadi, barcha yurtdoshlarga g‘urur-iftixor bag‘ishlaydi.

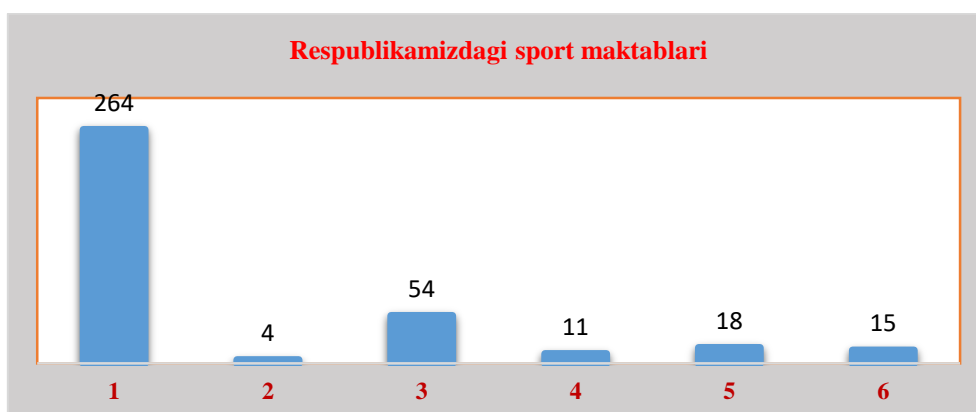
Sportchilar mashg‘ulotlarni maxsus inshootlar, tabiat qo‘ynida qish va issiq kunlarda olib boradi, bu holatlarda, sodir bo‘ladigan tabiiy ofatlar, favqulodda vaziyatlarga tayyorlik darajasi o‘ta muhim sanaladi.

Mavzuga oid adabiyotlar tahlili (Literature review). Respublikamizda yosh avlodning ijodiy va intellektual salohiyatini oshirish va ro‘yobga chiqarish, bolalar va yoshlar o‘rtasida sog‘lom turmush tarzini shakllantirish, ularni jismoniy tarbiya va sportga keng jalb etish muhim ahamiyat kasb etmoqda[1,2].

O‘zbekiston Respublikasining 2015 yil 4 sentabrda “Jismoniy tarbiya va sport to‘g‘risida”gi O‘RQ-394-son Qonuni qabul qilindi, O‘zbekiston Respublikasi Prezidenti tashabbusi va qo‘llab-quvvatlashi bilan “2019-2023-yillar davrida O‘zbekiston Respublikasida jismoniy tarbiya va ommaviy sportni rivojlantirish konsepsiyasi” hamda ushbu konsepsiyani amalga oshirish chora-tadbirlari dasturi tasdiqlandi. Shuningdek, 2017 yil 9 martdagi “O‘zbekiston sportchilarini 2020 yilda Tokio shahrida (Yaponiya) o‘tkaziladigan XXXII Olimpiya o‘yinlari va Paralimpiya o‘yinlariga tayyorlash to‘g‘risida”gi PF-2821-sonli Farmon, 2018 yil 5 martdagi “Jismoniy tarbiya va sport sohasida davlat boshqaruvi tizimini tubdan takomillashtirish chora-tadbirlari to‘g‘risida”gi PF-5368-sonli Farmon hamda mazkur sohaga tegishli boshqa me‘yoriy-huquqiy xujjatlarda belgilangan. 2022-yil

11-aprelda O‘zbekiston Respublikasi Prezidentining “Mahallalarda yoshlarni ommaviy sportga jalb qilishni yangi bosqichga olib chiqish chora-tadbirlari to‘g‘risida”gi PQ-201-son qarori qabul qilindi, Ularning amaliy ahamiyati O‘zbekiston sportchilarining erishayotgan yuqori natijalari hamda xalqaro talablarga javob beradigan sport inshootlari barpo etilishida yaqqol namoyon bo‘lmoqda[3,4].

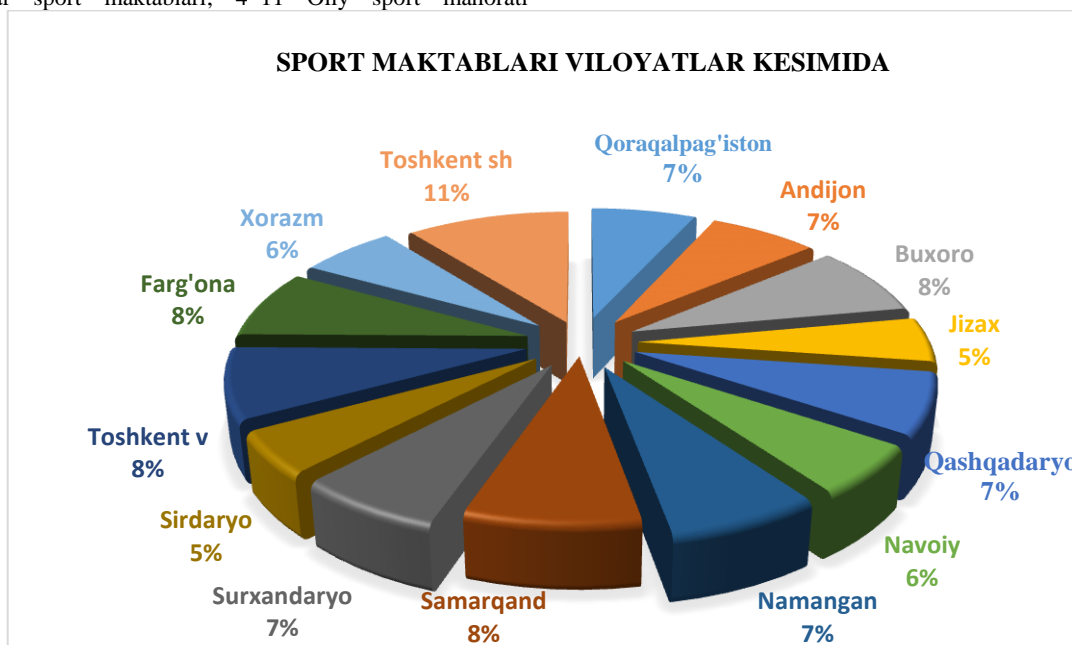
**Tadqiqot metodologiyasi.** Mavjud ma‘lumotlarni tahlil qilish natijalari shuni ko‘rsatadiki, mamlakatimizda 2022-yil holati bo‘yicha jami 367 dan ortiq bolalar va o‘smirlar uchun sport maktablari va kollejlarda faoliyat yuritmoqda[5,6].



1–264 ta Bolalar va o'smirlar sport maktablari; 2–4 ta Olimpiya zahiralari ixtisoslashtirilgan bolalar va o'smirlar sport maktablari; 3–54 ta Ixtisoslashtirilgan bolalar va o'smirlar sport maktablari; 4–11 Oliy sport mahorati

maktablari; 5–18 ta Sport turlari bo'yicha ixtisoslashtirilgan maktab internatlar; 6–15 ta Olimpiya zahiralari kollejlari.

1-rasm. Respublikadagi sport maktablari.



2-rasm. Sport maktablari viloyatlar kesimida.

Yoshlarga berilayotgan bunday imkoniyatlar juda ham unimli foydalanayotgani esa hammani birdek xursand qilmoqda. Buni natijalardan ham ko'rishimiz mumkin. Yurtimiz vakilari so'ngi 2018-yilgi Osiyo o'yinlarida jami 70 ta, jumladan 21 ta oltin, 24 ta kumush va 25 ta bronza medalini qo'lga kiritib, umumjamoa hisobida 5-o'rinni egalagan edi. Joriy yilning o'tgan davrida esa xalqaro musobaqalarda jami 442 ta, jumladan 145 ta oltin, 134 ta kumush va 163 ta bronza medali qo'lga kiritildi[6,7].

2022-yilda Xitoyning Xanchjou shahrida o'tkazilishi kerak bo'lgan yozgi Osiyo va Paraosiy o'yinlari 2023-yilning sentyabr oyida o'tkazilishi rajalashirilmoqda. Ushbu musobaqaga tayyorgarlik jarayoni amalga oshirilmoqda.

Mamlakatimizda yosh avlodning jismoniy va ma'naviy barkamolligini ta'minlash sog'lom turmush tarziga intilish va sportga mehr-muhabbatni rivojlantirish, joylarda bolalar sportining moddiy bazasini yaratish, aholi yashaydigan joylarda bolalar sportining moddiy bazasini yaratish, hamda sport uskunalar va jihozlari bilan ta'minlash ishlarini yanada faollashtirish maqsadida, 2002-yilda O'zbekiston Bolalar sportini rivojlantirish jamg'armasi tuzildi. O'zbekiston Respublikasi Prezidenti Jamg'arma homiylik kengashining raisi etib saylandi. Qoraqalpog'iston Respublikasi jo'qori kengesi raisi, viloyatlar va Toshkent shahar hokimlari mintaqaviy filiallar xomiylik kengashlarining raislari etib tayinlandilar[8].

Sport mashg'ulotlariga o'quvchilarni ommaviy ravishda, uzluksiz jalb qilishni tashkil etish maqsadida, "O'quvchi va talaba yoshlarni sportga jalb qilishga qaratilgan uzluksiz sport musobaqalari tizimini tashkil etish to'g'risida" 2003-yilda O'zbekiston Respublikasi Vazirlar Mahkamasining qarori qabul qilindi. Mazkur qaror asosida mamlakatda umumta'lim maktablari, akademik litsey va kasb-hunar kollejlari o'quvchilari hamda oliy ta'lim muassasalari talabalarining "Umid nihollari", "Barkamol avlod", "Universiada" musobaqalarining hududlarda respublika final bosqichlarini o'tkazish rejasini belgilandi. Jismoniy tarbiya va sport bilan muntazam shug'ullanish aholimiz, avvalo, yosh avlodimizning sog'lig'ini mustahkamlashda muhim o'rin tutishini inobatga olib, bu sohaga alohida e'tibor qaratilmoqda[6,9].

Istedodli bolalarni tanlash va professional sportchilarni tayyorlash bo'yicha uzluksiz tizim yaratildi. Umumta'lim maktablari va bolalar sport majmualaridagi mashg'ulotlarda qobiliyati ko'zga tashlangan o'g'il-qizlar bolalar va o'smirlar sport maktablari, sport kollejlari olinib, professional yondashuvlar asosida tarbiyalanmoqda. Buning natijasida mamlakatimiz sportchilari jahonning nufuzli musobaqalarida yuksak g'alabalarni qo'lga kiritib, xalqimiz salohiyatini butun dunyoga namoyon qilmoqda. Xususan, sportchilarimiz 2016-yili Braziliyada o'tgan Olimpiya o'yinlarida 13 ta, Paralimpiya o'yinlarida 31 ta medalga sazovor bo'lib, yurtimiz sporti tarixidagi eng yuqori natijalarga erishdilar.

**Tahlil va natijalar.** O'zbekiston Respublikasi Prezidentining 2017-yil 3 iyundagi "Jismoniy tarbiya va ommaviy sportni yanada rivojlantirish chora-tadbirlari to'g'risida" gi qarori sohadagi yana bir muhim hujjat bo'ldi. Ushbu qaror bilan O'zbekiston Respublikasida jismoniy tarbiya va ommaviy sportni yanada rivojlantirish dasturi qabul qilindi. Dasturda 2017-2021- yillarda jismoniy tarbiya va ommaviy sportni yanada rivojlantirish uchun 995,2 milliard so'mdan ziyod mablag' sarflanishi, sport maktablarining moddiy-texnik bazasini mustahkamlash maqsadida 167 ta sport inshooti, jumladan, 90 ta sport majmuasi va 77 ta suzish havzasini qurish, rekonstrukciya qilish, kapital tamirlash, jihozlash va qayta jihozlash nazarda tutilgan[2,3,10].

Respublika aholisini ommaviy sportga jalb etish uchun 2021 yil mobaynida 110 mingdan ortiq ommaviy sport tadbirlari tashkil etilib, aholining 26,7 foizi jalb qilingan bo'lsa, 2022 yil yakuniga qadar ushbu ko'rsatkichni 33 foizga yetkazish rejalashtirilgan. Shuningdek, mahalla aholisini doimiy ravishda ommaviy sportga jalb etish maqsadida yugurish, stritbol, mini-futbol, badminton, voleybol, basketbol, stol tennis hamda boshqa sport turlari bo'yicha ommaviy sport musobaqalari o'tkazilishi yo'lga qo'yildi. 2022 yilning birinchi choragida respublika bo'yicha 19 ming 756 ta ommaviy sport tadbirlari tashkil etilib, ushbu musobaqalarga 2,8 millionga yaqin ishtirokchi qamrab olingan[5,6].

Jumladan, vazirlik, idora va tashkilotlar o'rtasida jismoniy tarbiya va sportni rivojlantirish maqsadida joriy yilning fevral oyida sport targ'ibotchilari o'rtasida Toshkent viloyati Bo'stonliq tumanida sportning, kamondan otish, qarab

tep, badminton, mini-futbol, shaxmat, snoubord hamda tog' chang'isi sport turlari bo'yicha festival tashkil etildi.

Qayd etilganidek, so'nggi uch yilda 118 ta sport majmuasi, mahallalarda 7 mingta sport maydonchasi foydalanishga topshirildi. Bugungi kunda 3 ming 500 ta mini-futbol, 6 mingta basketbol, voleybol, 663 ta badminton maydoni, mingdan ortiq fitnes zallari mavjud. Har bir tuman va shahar markazlarida "Salomatlik yo'laklari" va velosiped yo'llari tashkil etildi. Taraqqiyot strategiyasida jismoniy tarbiya va sport bilan muntazam shug'ullanadigan aholi sonini keyingi besh yilda 33 foizga yetkazish maqsadi belgilangan.

Ta'kidlanganidek, O'zbekiston Respublikasi Prezidentining 2022-yil 18 fevraldagi farmon va qaroriga binoan, Sportni rivojlantirish vazirligi tashkil etildi. Uning eng muhim vazifalaridan biri bolalar va yoshlar o'rtasida sportni ommalashtirishdan iborat[6].

O'zbekiston Respublikasi Prezidenti Shavkat Mirziyoyev 2022-yil 1-aprel kuni yoshlar o'rtasida ommaviy sportni rivojlantirish chora-tadbirlari bo'yicha o'tkazilgan yig'ilishda Sportni rivojlantirish vazirligiga mahallalardagi yoshlar yetakchilari bilan birga yil davomida 6 million nafar o'g'il-qizni ommaviy sport tadbirlariga qamrab olish vazifasi qo'yildi. Bu vazifalarni amalga oshirish uchun mahalla, tuman, viloyat va respublika bosqichlaridan iborat ommaviy sport tadbirlari o'tkazildi. Ularni tashkil etish uchun "Yoshlar daftari" jamg'armasidan har bir viloyatga 100 million so'mgacha, g'olib va sovrindorlarni taqdirlash uchun 1 milliard so'mgacha mablag' ajratildi. Ushbu sport tadbirlarida eng yaxshi natija ko'rsatgan yoshlar tuman va shahar, viloyat hamda milliy terma jamoalar tarkibiga saralab olinadi.

Hozirgi kunda barcha sport mashg'ulotlari o'tkazish inshootlari umumiydir va barcha muhim madaniy tadbirlar birgalikda o'tkaziladi. Shu boisdan ham Sport inshootlarning joriy rejalashtirish ishlari inshootlarning funksional faoliyatini o'z zimmasiga oladi.

tashkiliy ishlar;  
o'quv sport ishlari;  
sport tadbirlar o'tkazish;  
moliya masalalarni yechish;  
jismoniy tarbiya va sportni ommaviylashtirish;  
ta'mirlash-qurilish ishlari olib borish;  
tibbiy xizmat ko'rsatish va texnika xavfsizligini tashkil etish;  
moddiy texnika bilan ta'minlashlar kiradi.

O'quv-tarbiya muassasalari tarkibida turli yoshdagi bolalar uchun o'yin maydonchalari, jismoniy tarbiya mashg'ulotlari va reabilitatsiyasi uchun jismoniy tarbiya-sport va o'quv maydonchalari nazarda tutilishi kerak. Tomosha zallari va sport-ko'ngilochar inshootlarida nogironlar uchun o'rinlar bevosita evakuatsiya chiqishiga olib boruvchi yo'laklarga yaqin joylashishi kerak; nogironlar o'rmini joylashtirishda evakuatsiya paytida boshqa tomoshabinlar evakuatsiya yo'llari bilan to'qnashmaslik imkonini nazarda tutish tavsiya etiladi. Tomosha, sport-ko'ngilochar zallaridagi nogironlar o'rnidan favqulodda vaziyatlar sodir bo'lganda evakuatsiya chiqishigacha masofa 25 m dan oshmasligi kerak, bunda yo'lakning kengligi 1,2 m dan kam bo'lmasligi kerak. Kursi-aravacha yo'lining kengligi 1,6 m dan kam bo'lmasligi kerak.

Sport zallari va boshqa sport inshootlarida yechinish xonalarda quyidagilar nazarda tutilishi kerak:

- kiyim-kechak, qo'ltiqta'yoq yoki protezlar uchun 1,3 m dan baland bo'lmagan javonli individual shkaflar;
- yechinish uchun kengligi 0,7 m dan kam bo'lmagan, balandligi 0,5 m, uzunligi 3 m bo'lgan o'rindiqlar;
- yechinib-kiyinish uchun kabinalar (o'lchamlari 1,8x1,8 m dan kam bo'lmagan);
- kursi-aravachalarni vaqtinchalik saqlash uchun joylar (1,5x1,5 m).

Kabinalar va ochiq yechinish joylari (o'rindiqlar)ga kengligi 1,6m dan kam bo'lmagan o'tish joylaridan qulay yetib borish ta'minlanishi kerak[7].

Ommaviy sport tadbirlarida yoshlarning ishtiroki bo'yicha mahallalar reytingini ishlab chiqish, "qoniqarsiz" deb topilgan joylarga taniqli murabbiy va sportchilarni birlashtirib, sportni rivojlantirish zarurligi ta'kidlandi. Bu chekka-chekka tumanlarda ham ommaviy sportni yanada rivojlantirishda muhim ahamiyat kasb etadi. Chunki, chekka hududlarda oqsab qolgan ommaviy sport tadbirlarini tashkil etishda taniqli murabbiy va sportchilar ishtirokini ta'minlasak, yoshlarning sportga qiziqishi ortadi.

O'zbekiston Davlat jismoniy tarbiya va sport universitetida ham yoshlarni ommaviy sportga keng jalb qilish, ommaviy sport tadbirlarini muntazam tashkil etish bo'yicha aniq ishlar yo'lga qo'yilgan bo'lib, bu borada hududdagi mahallalar, umumta'lim maktablari bilan hamkorlikda turli tadbirlar o'tkazilmoqda[3,4,5].

Xususan, so'nggi bir yil ichida "Sportni sev, sport bilan yasha!", "Sog'lom hayot uchun 5 ming qadam", "Kim vatanga sodiq bo'lsa, Mendurman o'sha!", "Sport sog'liq garovi", "Sport bilan og'usiz hayot sari", "Yoshlar kelajagimiz" shiorlari ostida 100 dan ortiq ommaviy sport va salomatlik targ'ibot tadbirlari o'tkazildi. Shuningdek, "Vatan taqdiri - mening taqdirimda" mavzusida mashhur sportchi va murabbiylar, Olimpiada, jahon va Osiyo g'oliblari va sovrindorlari bilan uchrashuvlar o'tkazib kelinmoqda, zero bunday uchrashuvlar yoshlar orasida sportni targ'ib qilish, aholini sog'lom turmush tarsi bilan hayot kechirishga undaydi. Universitet atrofidagi mahallarda istiqomat qiluvchi o'quvchi yoshlarni sportga jalb qilish maqsadida 22 ta sport turidan to'garaklar ochilgan. Talabalar va mahalla yoshlari o'rtasida sportning mini futbol, voleybol, basketbol, stol tennis, qo'l to'pi, suzish turlaridan "Rektor kubogi" musobaqalari tashkil etilmoqda.

**Xulosa va takliflar.** O'zbekistonda sport ta'limi va madaniyatini rivojlantirish uchun jismoniy tarbiya va sport bo'yicha mutaxassislarini ilmiy-metodik ta'minlash, qayta tayyorlash va malakasini oshirish tizimini takomillashtirish, o'quv dasturlarini zamonaviy talablardan kelib chiqib yangilash, sportchilarning tayyorgarlik jarayoniga innovatsion texnologiyalarni joriy etish lozim. Albatta, moddiy-texnik baza muhim. Lekin natijani iqtidorli sportchi ta'minlaydi. Bunday yoshlarni topish uchun esa kuchli seleksiya tizimi zarur.

Sportni rivojlantirish borasida nazarda tutilgan vazifalarning o'z vaqtida hayotga tadbiriq etilishi, fuqarolarga nafaqat o'z salomatliklarini mustahkamlashga, shu bilan birga, jamiyatda sog'lom turmush tarzi shakllanishiga yordam beradi.

Respublikamizda yosh avlodning ijodiy va intellektual salohiyatini oshirish va ro'yobga chiqarish, bolalar va yoshlar o'rtasida sog'lom turmush tarzini shakllantirish, ularni jismoniy tarbiya va sportga keng jalb etish muhim ahamiyat kasb etmoqda. Bugungi kunda sportchilarimiz turli musobaqalarda yuqori natijalarni qo'lga kiritib, O'zbekistonni dunyoga tanitmoqda. Ommaviy sport, ayniqsa, bolalar sportini ilmiy asosda rivojlantirish, uning tashkiliy asoslarini yaratishga alohida e'tibor qaratish maqsadga muvofiq. Jumladan, yurtimizda yosh sportchilarni jarohatlanish ehtimolini kamaytirish zamonaviy texnik uslublardan foydalanish sport amaliyotida keng qo'llanilib kelmoqda.

Ommaviy sport o'yinlar, mashg'ulotlar va yig'inlar, musobaqalar o'tkaziladigan maydonlar, sport inshootlarining favqulodda vaziyatlarga tayyorligi, sportchi va tomoshabinlarni evakuatsiya jarayonlariga tayyorlash, binolarga xavfdan ogohlantiruvchi vositalar va jihozlarning joylashtirilishiga alohida e'tibor qaratish lozim.

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## IJTIMOYIY ISH SOHASIDA KADRLAR TAYYORLASHNING DOLZARBLIGI HAMDA UNING MILLIY VA JAHON TAJRIBASIDAGI ZAMONAVIY USULLARI

Annotatsiya

Ushbu maqolada ijtimoiy ish sohasining bugungi jamiyatda tutgan o'rnini, ijtimoiy sohaning va bu sohada kadrlarni tayyorlashning qay darajada muhimligi, rivojlanayotgan ilm – fanda ijtimoiy soha mutaxassislarini tayyorlashning zamonaviy trendlari va usullari yoritib beriladi.

**Kalit so'zlar:** Ijtimoiy ishchilar Milliy Assosatsiyasi, kadrlar tayyorlashning zamonaviy tendensiyalari, raqamli va texnologik ishlanmalar, ko'p madaniyatlilik va xilma – xillik bo'yicha trening, tajribali ta'lim, madaniy kompensatsiya, eksperimental o'rganish.

Ijtimoiy ish sohasida kadrlar tayyorlash va ularni o'z kasbining mutaxassisi sifatida tarbiyalash bugungi kunning dolzarb masalalaridan hisoblanadi. Ijtimoiy ishchilar Milliy assotsiatsiyasi ma'lumotlariga ko'ra, ijtimoiy ish – bu shaxslarga, oilalarga, guruhlar va jamoalarga ularning farovonligini oshirishga, qashshoqlikni yengillashtirishga va odamlarga o'zlarining to'liq salohiyatiga erishishga yordam berishga bag'ishlangan kasb. Munosib yetishtirilgan ijtimoiy ishchi bu maqsadlarga erishishda muhim ahamiyatga ega.

Ijtimoiy ish xodimlarini tayyorlashning bir qancha sabablari mavjud. Birinchidan, jamiyat tengsizlik, ajratish va kamsitish kabi murakkab ijtimoiy muammolarga duch kelmoqda, ularni hal qilish uchun maxsus bilim va ko'nikmalar talab etiladi. Malakali mutaxassislar bu kabi muammolarni hal qila olishi va samarali yechimlarni taqdim etishi kerak. Ikkinchidan, ijtimoiy ish tez rivojlanayotgan sohadir va ta'lim olayotgan bo'lg'usi ijtimoiy kadrlar sifatli xizmatlarni taklif qilish uchun so'nggi tadqiqotlar, nazariya va eng yaxshi amaliyotlar bilan tanishtirilib turishlari kerak. Va nihoyat, ijtimoiy ish bo'yicha mutaxassislar turli xil ehtiyojlar, madaniyatlar va kelib chiqishi turli xil bo'lgan aholiga duch kelishadi va adolatli va munosib xizmatlarni taqdim etish uchun madaniy jihatdan vakolatli bo'lishlari kerak.

Yevropada Ijtimoiy ish ta'limi jurnalida chop etilgan tadqiqot shuni ko'rsatdiki, sifatli ta'lim tinglovchilarning bilimlari, ko'nikmalari va munosabatlarini yaxshilaydi, bu ularning xizmat ko'rsatishiga ijobiy ta'sir qiladi. Ijtimoiy ish maktablari assotsiatsiyasi tomonidan o'tkazilgan tadqiqot shuni ko'rsatdiki, ijtimoiy ishchilar o'rtasida yuqori darajadagi ta'lim mijozlar bilan munosabatlarda yaxshi natijalarga erishilishiga sabab bo'ladi.

So'nggi yillarda O'zbekiston ijtimoiy ish sohasida zamonaviy amaliyotlarni takomillashtirishga intilmoqda. Mamlakatimizda ijtimoiy ish xizmatlarini takomillashtirishga katta kuch sarflanmoqda va bu aniq natijalarni bera boshladi.

Islohotlarning asosiy maqsadlaridan biri guruhlarining xilma – xilligi va ularning ehtiyojlarini hisobga olgan holda aholi farovonligini ta'minlaydigan barqaror ijtimoiy ish tizimini yaratishdir. Tizimni sifatli tashkil etish va takomillashtirishda eng asosiy omillardan biri bu Ijtimoiy ishda ta'lim islohotlaridir.

O'zbekistonda ijtimoiy sohada malakali kadrlarni tayyorlashda qator islohotlar olib borilmoqda. O'zbekistondagi universitetlar, kollejl va kasb – hunar muassasalari ijtimoiy sohaga qiziqqan yoshlar uchun ijtimoiy ish bo'yicha treninglar tashkil etmoqda. Milliy o'quv dasturi ijtimoiy ishchilarni samarali ijtimoiy ish amaliyoti uchun zarur bo'lgan muhim bilim va vositalar bilan ta'minlab kelmoqda. O'zbekiston Milliy Universitetida, Farg'ona Davlat Universitetida va Samarqand davlat universitetida Ijtimoiy ish

kafedrasini tashkil etilgan bo'lib, joriy yildan Buxoro Davlat Universitetida ham Ijtimoiy ish kafedrasini o'z faoliyatini boshladi. Yuqorida tilga olingan ta'lim muassasalarida ijtimoiy ish kadrlari yuqori salohiyatda tarbiyalanmoqda.

Bugungi kunda zamonaviy dunyoda ijtimoiy ish sohasida kadrlar tayyorlashning bir qancha yangi trendlari mavjud. Jumladan:

1. Eksperimental o'rganishga urg'u: Ijtimoiy ish ta'limi bo'yicha Kengash ma'lumotlariga ko'ra, tajribaviy ta'lim ijtimoiy ishda kadrlar tayyorlashning muhim tarkibiy qismidir. Journal of Social work Education jurnalida chop etilgan tadqiqotda, tajribali o'quv faoliyatida ishtirok etgan ijtimoiy ish talabalari nazariy bilimlarni amaliyotga tatbiq qilish qobiliyatining yuqori darajasi va salohiyatiga ega ekanliklari haqida xabar berishdi.

2. Texnologiyani qamrab olish: Ijtimoiy ishda texnologiyalardan foydalanish tobora keng tarqalmoqda. Journal of Technology in Human Services jurnalida chop etilgan tadqiqotda, texnologiyani takomillashtirgan ijtimoiy ish talabalari o'z amaliyotida texnologiyadan foydalanish bo'yicha qabul qilingan vakolatlar haqida aytib o'tishgan.

3. Turli xillik va madaniy kompetentsiya bo'yicha trening: Madaniy kompetentsiya ijtimoiy ish amaliyotining hal qiluvchi tarkibiy qismi hisoblanadi. Madaniy kompetentsiya bo'yicha ta'lim olgan ijtimoiy ish talabalari o'zlarining madaniy betarafliklari haqida ko'proq ma'lumotga ega ekanliklarini aniqlandi.

4. Fanlararo Yondashuvlar: Fanlar bo'yicha hamkorlik murakkab ijtimoiy muammolarni hal qilish uchun juda muhim jarayon hisoblanadi.

5. Travmadan xabardor yondashuvlar: Travmadan xabardor bo'lgan yordam tushunchasi ijtimoiy ish sohasida katta e'tibor qozonmoqda. Journal of Social Service Research jurnalida chop etilgan tadqiqotda tadqiqotchilar travmadan xabardor bo'lgan yondashuvni ijtimoiy ish ta'limiga kiritish talabalarning travmani aniqlash tushunchasi va qobiliyatini yaxshilaganligini aniqladilar.

O'zbekistonda ham ijtimoiy ish sohasida kadrlar tayyorlashning zamonaviy tendensiyalariga ehtiyoj ortib bormoqda. Ijtimoiy ish ta'lim dasturida mamlakat duch keladigan dolzarb ijtimoiy muammolar talabalarini qondirish uchun rivojlanish muhim omil hisoblanadi.

Yurtimizda ijtimoiy ishda kadrlarni tayyorlashda jahon standartlariga mos ravishda amaly ko'nikmalarga e'tibor qaratish, raqamli texnologik ishlanmalar, ko'p madaniyatlilik va xilma – xillik bo'yicha treninglar va fanlararo yondashuv tendensiyalaridan keng va samarali foydalanib kelinmoqda.

Xulosa qilib aytganda, mamlakatimizda ijtimoiy ish sohasida kadrlar tayyorlashning zamonaviy trendlari jamiyat talabalarini qondirishda hal qiluvchi xususiyatlardan biri

hisoblanadi. Amaliy ko'nikmalar, xilma – xillik va multikulturalizm va fanlar o'rtasida bog'liqlik kabi tendensiyalarni o'rganishni takomillashtirish O'zbekistonda ijtimoiy sohada sifatli ta'limni amalga oshirishda muhim ahamiyat kasb etadi.

Shu bilan bir qatorda, ta'limning yangi usullarini ishlab chiqish maqsadga muvofiq. Zero, to'g'ri tayyorgarlik, sifatli ta'lim bilan yurtimizdagi ijtimoiy xodimlar jamiyat rivojiga ulkan hissa qo'shadilar.

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## O'ZBEKISTON RESPUBLIKASI OLIY TA'LIM TIZIMIDA AMALGA OSHIRILGAN ISLOHOTLAR (HARAKATLAR STRATEGIYASI MISOLIDA)

Annotatsiya

Mazkur maqolada Harakatlar strategiyasi asosida Oliy ta'lim, ilm-fan va innovatsion rivojlanish sohasida amalga oshirilgan islohotlar va undagi o'zgarishlar tahlil qilingan. Unda 2017-2021 yillarda sohaga oid qabul qilingan normativ-huquqiy hujjatlar, davlat dasturlarining ijrosi, ta'lim muassasalarining moliyaviy holati, moddiy-tehnika bazasi, ilmiy-tadqiqot muassasalari faoliyati bilan bog'liq o'zgarishlarning statistik tahlili yoritib berilgan.

**Kalit so'zlar:** Harakatlar strategiyasi, Oliy ta'lim, oliy ta'lim muassasalari, kadrlar tayyorlash, infratuzilma, innovatsiyalar, ilm-fan, ilmiy faoliyat, ilmiy-tadqiqot muassasalari.

**Kirish.** Globallashtirish davrida yurtimizda yoshlarga sifatli oliy ta'lim berish, taraqqiyot bilan hamqadam bo'lib kelayotgan mutaxassislarini tayyorlash borasida bugungi kunda islohotlar izchillik bilan amalga oshirilmoqda. Oliy ta'lim sohasidagi islohotlar, avvalo qamrovni oshirish, institut va universitetlarning moliyaviy holati va moddiy-tehnika bazasini yaxshilash, professor-o'qituvchilarni moddiy qo'llab-quvvatlashga qaratilmoqda. 2017-2021 yillarda oliy ta'lim tizimini takomillashtirish maqsadida 12 ta Prezident farmoni, 65 ta Prezident qarori, 169 ta Vazirlar Mahkamasi qarori, 66 ta idoraviy hujjatlar, 1 ta qonun, jami 313 ta normativ-huquqiy hujjatlar qabul qilindi.

Davlatimiz rahbari Sh.M.Mirziyoyevning 2017-yilda O'zbekiston Fanlar akademiyasi a'zolari hamda yetakchi olimlar bilan bo'lib o'tgan yig'ilishda "... hurmatli ziyolilarimiz-ilm-fan va texnika namoyondalari, birinchi navbatda, qadri va hurmatli akademiklarimiz, madaniyat, adabiyot va san'at, sport sohaslarining vakillari butun vujudini berib, fidokorona mehnat qilayotganlarini biz yahshi bilamiz va yuksak qadrlaymiz. Ana shu zahmatkash insonlarning ilmiy va ijodiy izlanishlarini har tomonlama qo'llab-quvvatlash, ular uchun zarur shart-sharoitlar yaratishni biz o'zimizning birlamchi vazifamiz sifatida ko'rishimiz darkor" [1].

Ilm-fan va ilmiy faoliyatni rivojlantirish va kelajakda uni muntazam isloh qilib borishning ustuvor yo'nalishlarini belgilash, zamonaviy bilim va yuksak ma'naviy-axloqiy fazilatlariga ega, mustaqil fikrlaydigan yuqori malakali kadrlar tayyorlash jarayonini sifat jihatidan yangi bosqichga ko'tarish, ilmiy-tadqiqot muassasalarini modernizatsiya qilish, zamonaviy innovatsion texnologiyalarni barcha sohalarga tadqiq qilishni rivojlantirish maqsadida "Ilm-fanni 2030-yilgacha rivojlantirish konsepsiyasi" qabul qilindi.

**Mavzuga oid adabiyotlar tahlili.** So'nggi yillardagi tadqiqotlarda, xususan, oliy ta'lim, ilm-fan va innovatsion rivojlanish sohasida R.Siddiqov, O'.Xoshimov, O'.Abdullayev, F.Atajanovning maqola va dissertatsiya ishlarida ko'rishimiz mumkin [2].

**Tadqiqot metodologiyasi.** Ushbu tadqiqotning nazariy va uslubiy asosi tarixiylik va qiyosiylik bo'lib, mazkur masalani yoritish bo'yicha nazariy yondashuv, statistik tahlil, qiyosiy tahlil, guruhlashtirish va boshqa usullardan foydalanildi. Bundan tashqari tadqiqot ishiga qo'yilgan maqsadga erishishda qabul qilingan qonunlar, qarorlar, farmonlarga asoslandi hamda soha olimlarining ta'lim to'g'risidagi fikr va mulohazalari bayon qilingan ilmiy-amaliy anjumanlar materiallaridan foydalanildi.

**Tahlil va natijalar.** 2017-yilda Oliy ta'lim tizimini tubdan takomillashtirish, xalqaro standartlar darajasiga mos mutaxassislar tayyorlash maqsadida, tizimni kompleks rivojlantirishga qaratilgan 5 yillik dastur qabul qilindi va unga ko'ra bir qator oliygohlarda qurilish va ta'mirlash ishlari amalga oshirildi hamda zamonaviy kompyuter, o'quv laboratoriyalar bilan jihozlandi. Masalan, Alisher Navoiy nomidagi O'zbek tili va adabiyoti universitetining binosi yangilanib, foydalanishga topshirildi. Joriy yilda 18 ta oliygohda qurilish va ta'mirlash ishlari amalga oshirildi va 70 tasi 120 mlrd so'mlik zamonaviy kompyuter, o'quv laboratoriyalar bilan jihozlandi. Oliy ta'lim muassasalariga qabul 15 foizga oshirilib, Chirchiq pedagogika instituti, Toshkent agrar universitetining Termiz filiali, Toshkent texnika universitetining 2 ta mintaqaviy filiali, O'zbekiston davlat san'at va madaniyat institutining Farg'ona filiali tashkil etildi. Bundan tashqari Rossiyaning Milliy texnologik tadqiqotlar universiteti "MISiS"ning Olmaliq filiali, Amerikaning Webster universiteti kabi nufuzli oliygohlarning filiallarini respublikada ochish kelishuviga erishildi [3].

2017-yilda respublika ilm-fan nufuzini yuksaltirish va rivojlantirish bo'yicha bir qator tadbirlar amalga oshirildi. Jumladan, ilmiy-tadqiqot muassasalarining innovatsion faoliyatini va infratuzilmasini kompleks rivojlantirish 5 yillik dasturi ishlab chiqilib, ularni ta'mirlash, zamonaviy laboratoriya jihozlari bilan ta'minlash uchun 450 milliard so'm ajratilishi rejalashtirildi. O'zbekiston Respublikasining Innovatsion rivojlanish vazirligi va Innovatsion rivojlanish va novatorlik g'oyalarini qo'llab-quvvatlash jamg'armasi tashkil etildi. Fanlar akademiyasi maqomi mustahkamlanib, uning Navoiy shahrida bo'limi ochildi va 9 ta ilmiy muassasalar qayta tiklandi. Xalqaro amaliyotga muvofiq oliy o'quv yurtidan keyingi ta'limning ikki pog'onali tayanch doktorantura va doktorantura tizimi joriy etildi. Yuqori malakali va bilimdon o'qituvchi-pedagoglar bazasini shakllantirish maqsadida O'zbekiston Respublikasi Prezidentining tegishli qarori bilan Mirzo Ulug'bek nomidagi ixtisoslashtirilgan davlat umumta'lim maktab-internati hamda Astronomiya va aeronavtika bog'i tashkil etildi [4].

2017-2018 o'quv yilida yurtimizda 5 ta yangi oliy ta'lim muassasasi hamda 12 ta nufuzli xorijiy oliy o'quv yurtining filiallari tashkil etildi. 2018/2019 o'quv yilidan boshlab bakalavriatga qabul kvotasi 2017/2018 o'quv yilidagiga nisbatan 20 foizga ko'payib, 80079 ta joyni tashkil qildi. Yetakchi xorijiy ta'lim markazlarida kadrlar tayyorlash va malakasini oshirish maqsadida "El-yurt umidi" jamg'armasi tashkil etildi. 81 ta oliy ta'lim muassasasining

professor-o'qituvchilari va 136 ta ilmiy-tadqiqot institutining ilmiy hodimlari tarkibining barcha bazaviy lavozim maoshlari miqdorlari sezilarli darajada oshirildi [5].

2019-yilning 1-yarmida xorijiy davlatlar yetakchi oliy ta'lim muassasalarining 9 ta filiali (AQSH Vebster universiteti, RF Moskva energetika instituti, Hindistonning Amity universiteti) tashkil etildi va ular 2019/2020 o'quv yilidan faoliyatini boshladi. Respublika hududlarida mahalliy oliy ta'lim muassasalarining 6 ta filiallari tashkil etildi va 28 ta ta'lim yo'nalishlarida 1025 nafar talaba qabul qilishi belgilanib, 900 dan ortiq yangi ish o'rinlari yaratildi. Oliy ta'lim muassasalari uchun 121533 ta qabul kvotasi belgilanib, 2018-yilga nisbatan 20 foizga oshirildi. Kadrlar buyurtmachilarining talab va takliflari asosida zamonaviy sohalar uchun bakalavriatda 40 ta yangi ta'lim yo'nalishlari, magistraturada 41 ta yangi mutaxassisliklar bo'yicha kadrlar tayyorlash belgilandi. Yoshlarning oliy ta'lim olish uchun imkoniyatini yanada kengaytirish maqsadida xarbiy qism qo'mondonligining tavsiyanomalariga ega bo'lgan yoshlar uchun bakalavriatning barcha ta'lim shakllari bo'yicha alohida 5 foizli qabul ko'rsatkichlari tasdiqlandi. Oliy ta'lim muassasalariga abituriyentlarni qabul qilishning umumiy soniga nisbatan qo'shimcha ravishda "Mehribonlik" uyi va "Bolalar shaharchasi" ning bitiruvchilari bo'lgan chin yetimlar uchun 1 foizli davlat granti (1036 nafar), nogironligi bo'lgan shahslar uchun alohida ajratiladigan qabul parametrlari bo'yicha jumladan, sirtqi va kechki ta'lim shakllarida ta'lim olish huquqi berildi. Oliy ma'lumotli kadrlarga bo'lgan ehtiyoj yuqori bo'lgan olis, chekka va tog'li hududlarda joylashgan umumta'lim maktablari uchun davlat granti asosidagi qabul kvotalari doirasida maqsadli qabul ko'rsatkichlari belgilandi. Respublika oliy ta'lim muassasalarining magistraturasida tabiiy va muhandis-texnika soha mutaxassisliklari qabul ko'rsatkichlari to'liq davlat granti bo'yicha belgilandi.

Bakalavr darajasini olgan shaxslarga magistraturada mos va turdosh yo'nalishlardan tashqari boshqa mutaxassisliklar bo'yicha ham o'qishni davom ettirish imkoniyati joriy etildi. Bundan tashqari bitiruvchilarga akademik darajadan tashqari tegishli ta'lim yo'nalishi (mutaxassislik) bo'yicha kvalifikatsiya berish amaliyoti yo'lga qo'yildi.

Respublika oliy ta'lim muassasalarida xorijiy davlatlarning yetakchi oliy ta'lim muassasalari bilan hamkorlikda 55 ta qo'shma ta'lim dasturi doirasida yangi yo'nalishlar va mutaxassisliklar bo'yicha kadrlar tayyorlashga kelishildi. Samarqand davlat universitetida "Xalqaro ta'lim dasturlari" markazi tashkil etildi hamda xorijiy xamkor oliy ta'lim muassasalari bilan hamkorlikda kadrlar tayyorlashga kelishildi [6].

Respublika oliy ta'lim muassasalarining rahbar hodimlari va professor-o'qituvchilar ish haqi miqdori: o'rtacha 2019-yil 1-yanvardan 20 foizga oshirildi, 2019-yil 1-iyuldan 25 foizga oshirildi. Ushbu ko'rsatkich 2018-yilning shu davriga nisbatan 222 foizga (2,2 barobarga) ko'paydi.

Oliy va o'rta maxsus ta'lim vazirligi tizimidagi 18 ta oliy ta'lim muassasalarining 28 ta obektida qurilish, rekonstruksiya va kapital ta'mirlash ishlari uchun 353,3 mlrd.so'm ajratilishi ko'zda tutilgan. Buning natijasida 2220 o'rinli 2 ta o'quv korpusi, 1000 o'rinli 3 ta talabalar turar joyi yangidan quriladi, qariyb 15 ming o'rinli 13 ta o'quv binolari, 2300 o'rinli 8 ta talabalar turar joylari zamonaviy tarzda ta'mirlanib, yangidan jilozlanadi. 2019-yil 1-iyul holatiga mazkur obektlar 209,3 mlrd.so'm (64,6 foiz) miqdorida moliyalashtirilib, 246,4 mlrd.so'm qurilish-ta'mirlash (71,3 foiz) ishlari amalga oshirildi hamda 9 ta obyekt foydalanishga topshirildi.

Ta'lim tizimida amalga oshirilgan islohotlar natijasida respublikada 2016-2019 yillarda oliy ta'lim muassasalari soni 132 taga yetkazildi (2016 yilda 77 ta), ulardan 99 tasi mahalliy hamda 33 tasi xorijiy oliy ta'lim muassasalari va ularning

filiallari hisoblanadi. Qabul kvotasi 66 mingdan 181 mingga oshirilib, oliy ta'lim muassasalarining moddiy-texnik bazasi mustahkamlandi. Xorijiy mamlakatlar bilan qo'shma ta'lim dasturlari doirasida 64 ta yangi kasb bo'yicha mutaxassislarni tayyorlash yo'lga qo'yildi. Professor-o'qituvchilarning maoshi o'rtacha 3,5 baravarga oshirildi.

Ushbu davrda ilm-fan va innovatsion rivojlanish sohasida ham bir qator o'zgarishlar amalga oshirildi. 2019-2021 yillarda O'zbekiston Respublikasini innovatsion rivojlantirish strategiyasi qabul qilindi. Ushbu strategiyani amalga oshirish bo'yicha "Yo'l xaritasi" hamda O'zbekiston Respublikasini 2030-yilgacha innovatsion rivojlantirish maqsadli ko'rsatkichlari tasdiqlandi. Davlatimiz rahbarining "2019-2021 yillarda O'zbekiston Respublikasini innovatsion rivojlantirish strategiyasini tasdiqlash to'g'risida"gi Farmoni bilan mamlakatning xalqaro maydondagi raqobatbardoshligi darajasini va innovatsion jihatdan taraqqiy etganini belgilovchi asosiy omil sifatida inson kapitalini rivojlantirish ushbu strategiyaning bosh maqsadi etib belgilandi [7].

2019-yilda O'zbekiston Respublikasi Prezidentining "El-yurt umidi" jamg'armasi mablag'lari hisobidan xorijiy oliy ta'lim muassasalari va ilmiy-tadqiqot markazlarida oliy ta'lim muassasalarining professor-o'qituvchilaridan 126 nafari stajirovka o'tash, 65 nafari doktoranturada, 17 nafari magistraturada o'qish imkoniyatiga ega bo'ldi. Jahon banki krediti hisobidan esa 2019-2021 yillarda Akademik innovatsiyalar fondi tashkil etilib, mazkur fondning 4 mln dollar mablag'i hisobidan jami 32 ta loyiha, 27 ta oliy ta'lim muassasasida 6 ta fan sohalar bo'yicha innovatsion ilmiy-o'quv komplekslarni yaratish bo'yicha loyihalar o'z faoliyatini boshladi.

O'zbekiston Respublikasining 2030 yilga kelib Global innovatsion indeks reytingi bo'yicha jahonning 50 ta ilg'or mamlakat qatoriga kirishiga qaratilgan 2019-2021 yillarda O'zbekiston Respublikasini innovatsion rivojlantirish strategiyasi qabul qilindi [8].

2020-yilda Mirzo Ulug'bek nomidagi O'zbekiston Milliy universiteti huzuridagi Yarimo'tkazgichlar fizikasi va mikroelektronika ilmiy-tadqiqot instituti faoliyatini kuchaytirish bo'yicha maqsadli kompleks dastur qabul qilindi. Ushbu yillarda O'zbekistonda amalga oshirilayotgan tizimli islohotlar ilm-fan va innovatsiyalar sohasidagi bir qator kamchiliklarni bartaraf eta boshladi. Natijada, Global innovatsiya indeksi (Global Innovation Index) hisoboti natijasiga ko'ra, respublika reytingi 131 mamlakat orasida 122-o'rin (2015), 93-o'rin (2020), 86-o'rin (2021) ni egalladi [9].

Davlatimiz rahbarining "2020/2021 o'quv yilida O'zbekiston Respublikasining oliy ta'lim muassasalariga o'qishga qabul qilishning davlat buyurtmasi parametrlari to'g'risida"gi qaroriga asosan: 103575 nafar kunduzgi ta'lim shakliga, 31350 nafar sirtqi ta'lim shakliga, 5025 nafar kechki ta'lim shakliga, 10425 nafar magistratura ta'lim bosqichiga belgilandi. Shu bilan birga, qarorda:

ta'lim yo'nalishlari va magistratura mutaxassisliklarini yiriklashtirish;

xotin-qizlarni oliy ta'lim bilan qamrab olish darajasini oshirish;

profil ixtisoslashuv sohalarini kengaytirish;

OTMlarga kirish imtihonlarini optimallashtirilib 2 ta fandan o'tkazish;

Test sinovi topshirilayotgan fanlar majmuasi hamda fanlar ketma-ketligi bir xil bo'lgan 5 tagacha bakalavriat ta'lim yo'nalishi bo'yicha tanlovda ishtirok etish masalalari nazarda tutildi [10].

2020-2021 o'quv yilidan boshlab esa o'qish muddati 3 yil bo'lgan pedagogik ta'lim sohasining ayrim bakalavriat ta'lim yo'nalishlari joriy etildi. 2021-yilda Respublikadagi 37 ta yetakchi davlat oliy ta'lim muassasalariga o'quv dasturlarni ishlab chiqish, o'qishga qabul qilish va moliyaviy masalalarni

mustaqil hal qilish huquqi berildi. OTMga kirish imtihonlarida eng yuqori ball to'plagan 200 nafar yoshlar uchun Prezident granti va "Qizlar uchun maxsus stipendiya"lar joriy etildi [11].

Prezident davlat stipendiyasi kvotalari soni tayanch doktorantura va magistratura uchun ikki barobarga oshirildi. "Ijtimoiy himoya yagona reestri"ga kirgan oilalar farzandlarining imkoniyatlarini yanada kengaytirish uchun imtiyozli ravishda ta'lim kreditlarini berish tartibi belgilandi.

**Xulosa va takliflar.** Xulosa qilib shuni ta'kidlash joizki, mamlakatimizda "Harakatlar strategiyasi" davrida ta'lim sohasida ko'plab islohotlar amalga oshirildi. Oliy ta'lim tizimini isloh qilishning ustuvor yo'nalishlarini belgilash, kadrlar tayyorlash jarayonini sifat jihatidan yangi bosqichga ko'tarish, oliy ta'limni modernizatsiya qilish, ilg'or ta'lim texnologiyalari asosida ijtimoiy soha va iqtisodiyot tarmoqlarini rivojlantirish maqsadida O'zbekiston Respublikasi Oliy ta'lim tizimini 2030 yilgacha rivojlantirish konsepsiyasi tasdiqlandi va u hozirgi kunda amalga oshirib kelinmoqda. Band bo'lgan aholiga oliy ma'lumot olish uchun qulayliklar yaratish maqsadida 71 ta oliy ta'lim muassasalarida sirtqi va 18 tasida kechki ta'lim shakllari yo'lga qo'yildi. Oliy o'quv yurtlarida tahsil olayotgan talabalar sonining 2,2 barobarga oshishiga erishildi (agar 2016 yilda 268,3 ming talaba tahsil olgan bo'lsa, 2020 yilda 590,1 ming talaba tahsil oldi).

Mamlakat hayotining barcha sohalarida bo'lgani kabi ilm-fan va innovatsion rivojlanish sohasida ham ijobiy o'zgarishlar kuzatildi. Ushbu sohani tubdan isloh qilish bo'yicha yurtimizda quyidagi tadbirlar amalga oshirildi: ilmiy-tadqiqot muassasalari faoliyatini takomillashtirish, ularning moddiy-texnik bazasini mustahkamlash va innovatsion faoliyatni rivojlantirish uchun qulay shart-sharoitlarni yaratishni nazarda tutuvchi 2017–2021 yillarda ilmiy-tadqiqot muassasalarining infratuzilmasini mustahkamlash va innovatsion faoliyatni rivojlantirishga qaratilgan kompleks chora-tadbirlar tasdiqlandi. Yurtimizda innovatsion va ilmiy-texnik rivojlantirish sohasida jamiyat va davlat hayotini har tomonlama rivojlantirishga, mamlakatning intellektual va texnologik salohiyatini oshirishga qaratilgan yagona davlat siyosatini amalga oshirish maqsadida Innovatsion rivojlanish vazirligi tashkil etilib, innovatsion faoliyat sohasidagi munosabatlarni tartibga solishning huquqiy asoslarini belgilab beruvchi "Innovatsion faoliyat to'g'risida"gi qonun qabul qilindi.

Mamlakatimizni rivojlantirishning asosiy omili jamiyatning siyosiy, iqtisodiy va ma'naviy hayoti, ijtimoiy sohani isloh qilish jarayonlarini amalga oshirish bilan bog'liq bo'lsa, fan va ta'lim esa mamlakatimiz iqtisodiy hamda ijtimoiy taraqqiyotining ajralmas manbai bo'lib, xalq uchun munosib hayot tarzini, jamiyatni tashkil etishning demokratik tartibini, yuksak madaniyat ko'rsatkichlarini kafolatlaydi.

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## ПРОБЛЕМА МОТИВАЦИИ УЧЕБНОЙ ДЕЯТЕЛЬНОСТИ В ТЕОРИИ МЕТОДИКИ ПРЕПОДАВАНИЯ АНГЛИЙСКИЙ ЯЗЫКА И ЛИТЕРАТУРЫ

Аннотация

Обучение словам на английском языке, основанное на методическом подходе, сопряжено с большими трудностями. По сути, определение данной статьи заключается в выборе фактического речевого материала и его анализе, продумывании и написании плана выступления, выборе оптимальных языковых средств и стилистических приемов для реализации задуманного содержания. Это технология, более специфичная для текстовых функций, которые представлены следующим набором ключевых функций.

**Ключевые слова:** Образование, гуманитарные науки, интерес к иностранным языкам, мотивация, соответствие, целостность, завершенность, информативность, целенаправленность, адресуемость, ситуативность, интернациональность и приемлемость.

Учебная деятельность занимает практически все годы становления личности, начиная с детского сада и кончая обучением в средних и высших профессиональных учебных заведениях. Получение образования является неременным требованием любой личности, поэтому проблема мотивации обучения является одной из центральных в педагогике и педагогической психологии. Отсюда и обилие работ в этом направлении (Л. И. Божович, Й. Лингарт, Н.Г. Морозова, М. В. Матюхина, В. Э. Мильман, А.К.Маркова, Л. С. Славина, Э. Стоунс) и др.

Практическая значимость разработок в области мотивации изучения иностранного языка состоит в поиске более эффективных приемов работы, новых методов и подходов в обучении им, а также в выявлении новых источников мотивации и формулировке объективных требований к ним.

Однако, несмотря на широкий круг исследований, не все источники повышения мотивации учащихся в обучении иностранному языку выявлены полностью. Основным ключевым подходом в данном исследовании является поиск путей и новых средств, с помощью которых можно повысить уровень мотивации студентов при обучении иностранному языку.

Все вышеизложенное обусловило актуальность данной темы, и послужило причиной ее выбора. В своей работе я хочу рассмотреть понятие мотивации, ее роль при обучении английскому языку и способы ее повышения на конкретных примерах.

Мотивация – это всегда результат взаимодействия человека и ситуации, влияющий на степень его стремления и активности. Мотивация всегда эмоционально насыщена. То, к чему человек стремится или избегает, всегда вызывает у него эмоциональное отношение, является значимым и тем самым обеспечивает энергетическую мобилизацию организма на действие.

При обучении, в том числе и иностранному языку, можно выделить несколько видов мотивации. Все вместе они составляют так называемую учебную мотивацию. Учебная мотивация определяется рядом специфических факторов:

- особенностями обучающегося (пол, самооценка, уровень интеллектуального развития)
- особенностями преподавателя и его отношения к педагогической деятельности
- организацией педагогического процесса
- спецификой учебного предмета (в данном случае иностранного языка)

На основании вышеперечисленных факторов учебную мотивацию можно разделить на внешнюю и внутреннюю. Внешняя мотивация не связана непосредственно с содержанием предмета, а обусловлена внешними обстоятельствами.

Присутствие мотивационного компонента в структуре учебной деятельности говорит о том, что необходимо рассматривать мотивы учения студентов в процессе обучения. Под мотивом учебной деятельности понимаются все факторы, обуславливающие проявление учебной активности: потребности, цели, установки, чувство долга, интересы и т. п. Г. Розенфельд, выделил следующие (факторы) мотивации учения:

1. Обучение ради обучения, без удовольствия от деятельности или без интереса к преподаваемому предмету.

2. Обучение без личных интересов и выгод.

3. Обучение для социальной идентификации.

4. Обучение ради успеха или из-за боязни неудач.

5. Обучение по принуждению или под давлением.

6. Обучение, основанное на понятиях и моральных обязательствах или на общепринятых нормах.

7. Обучение для достижения цели в обыденной жизни.

8. Обучение, основанное на социальных целях, требованиях и ценностях.

Студенты наиболее высоко оценивают такие мотивы, как «хочу иметь знания, чтобы быть полезным обществу», «хочу быть культурным и развитым», «нравится, узнавать новое», «хочу продолжить образование», «хочу подготовиться к избранной профессии», «хочу радостно преодолевать трудности». Престижные мотивы («привык быть в числе лучших», «хочу быть худшим», «приятно получать одобрение», «привык все делать хорошо») получали меньшие оценки, но самые низкие оценки давались мотиву «стараюсь избегать неприятностей». В то же время первая группа мотивов скорее была известной, чем реально действующей, побуждающей к учению. В качестве таковых в реальности оказались престижные мотивы.

О мотивационной готовности студентов свидетельствуют их отношение к обучению как к серьезной общественно-значимой деятельности эмоциональная расположенность выполнять требования взрослых, познавательный интерес к окружающей действительности, стремление овладеть новыми знаниями и умениями.

Особенностью мотивации большинства является беспрекословное выполнение требований преподавателя. Социальная мотивация учебной деятельности настолько сильна, что они даже не всегда стремятся понять, для чего нужно делать то, что им велит преподаватель: раз велел, значит, нужно даже скучную и бесполезную работу они выполняют тщательно, так как полученные задания кажутся им важными. Это, безусловно, имеет положительную сторону, так как преподавателю было бы трудно всякий раз объяснять студентам значение того или иного вида работы для их образования. Они любят и уважают преподавателя, прежде всего за то, что он преподаватель, что он учит; кроме того, они хотят, чтобы он был требователен и строг, так как это подчеркивает серьезность и значительность их деятельности.

Как правило, учебная деятельность побуждается не одним мотивом, а целой системой разнообразных мотивов.

Мотив - это направленность студентов на отдельные стороны учебной работы, связанная с внутренним отношением ученика к ней.

К видам мотивов можно отнести познавательные и социальные мотивы. Если у студента в ходе учения преобладает направленность на содержание учебного предмета, то можно говорить о наличии познавательных мотивов. Если у студента выражена направленность на другого человека в ходе учения, то говорят о социальных мотивах.

У студентов появляются новые социальные установки, новые социальные мотивы, связанные с чувством долга и ответственности, с необходимостью получения образования (быть грамотным). В период возрастает число студентов, мотивирующих свою учебную деятельность чувством долга, но уменьшается число студентов, которые учатся с интересом. Однако часто эти мотивы остаются только знаемыми, декларируемыми.

Социальные мотивы учения по-разному выражены у студентов с разной успеваемостью. Как отмечает И. Ю. Кулагина, мотивы неуспевающих студентов специфичны. При наличии сильного мотива получения хорошей отметки и одобрения круг их социальных мотивов учения сужен.

У студента, с хорошо успевающих и проявляющих интерес к знаниям, «знаемые» мотивы совпадают реальными. У студента, хорошо успевающих, но без ярко выраженного интереса к знаниям, имеется неполное совпадение тех и других мотивов. У них доминируют мотивы: «получения отметки», «похвала» и «требование».

Поскольку мотивация – явление многогранное, то содержание обучения должно включать в себя целый комплекс средств для ее поддержания. В системе обучения иностранному языку как иноязычной культуре в первую очередь важны средства поддержания мотивации к познавательной, развивающей и воспитательной деятельности, что в конечном итоге вызывает у изучающего иностранный язык коммуникативную мотивацию.

В общей структуре мотивации доминирующим является основной мотив, определяющий учебную деятельность и формирование отношения к ней. Это познавательный мотив, так как в его основе заложено постоянное стремление к познанию; а также имеет место связь с содержательной и организационной стороной самой учебной деятельности. В процессе учебной деятельности начинают действовать и возникающие частные мотивы, руководящие постановкой, принятием и решением отдельных задач для достижения конкретных

целей обучения иноязычному речевому общению. Познавательные мотивы в овладении иностранным языком дифференцируются следующим образом: интерес к иностранному языку как таковому способствует формированию мотивов к анализу языковых явлений, всевозможным по форме и содержанию занятиям с иностранным языком, к развитию лингвистического мышления; возможность использования иностранного языка как средства обмена информацией, получения знаний с его помощью, изучение культуры, истории, развития и действительности страны изучаемого языка, расширение кругозора формирует мотив отношения к иностранному языку как необходимому средству познавательной деятельности.

Мотив избегания неудачи присущ как хорошо успевающим, так и плохо успевающим студентам, но к окончанию последних он достигает значительной силы, так как мотив достижения успеха у них практически отсутствует.

Хорошо успевающих студентов привлекают разные, в том числе самые сложные учебные предметы, отстающие же проявляют интерес чаще всего к наиболее легким, с их точки зрения.

Неуспевающие студенты ориентируются на процесс выполнения отдельных, частных действий и на протяжении всех лет обучения сохраняют склонность к облегченной учебной работе, механическому копированию действий преподавателя. Интерес к содержанию предмета обычно связан с новизной материала, сменой конкретных видов работы, наглядной стороной обучения и игровыми элементами занятия.

У студентов с высокой успеваемостью ярко выражена мотивация достижения успеха - желание хорошо выполнить задание, сочетающееся с мотивом получения высокой отметки или одобрения взрослых. У слабо успевающих студентов мотив достижения выражен значительно хуже, а в ряде случаев вообще отсутствует.

Почти четверть неуспевающих отрицательно относятся к учению из-за того, что у них преобладает мотив избегания неудачи.

Очевидно, что мотиваторами учебной деятельности могут быть социально-психологические факторы: желание хорошо выглядеть в глазах одноклассников, обожание своего преподавателя, желание доставить ему удовольствие своим ответом на занятие и получить от него похвалу.

Отметка в качестве ведущего мотива обучения выступает у более половины студентов. У трети преобладает престижный мотив, а познавательный называется очень редко. Такая ситуация не очень благоприятна для процесса, так как ответственность и трудолюбие студентов слабо связаны с мотивом отметки по сравнению с познавательным интересом.

Подводя итог, можно сказать, что роль мотивации при обучении иностранному языку очень высока. Учитель должен разрабатывать свои методы, психологически продуманные приемы, знакомиться с опытом передовых учителей для активизации и поднятия мотивации учебно-познавательной деятельности. Важно также побудить учащихся к накоплению языкового материала. Для этого можно применять различные методы на уроке.

Таким образом, мы видим, что мотивы, связанные с учебной деятельностью очень сильно связаны с познавательной потребностью. Познавательная потребность связана неодинаково у разных студентов:

у некоторых ярко выражена, у других – менее выражена и связана с практической активностью.

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## ETNOMADANIYATNING IJTIMOYIY XUSUSIYATLARI

Annotatsiya

Mazkur maqolada etnomadaniyatning ijtimoiy xususiyatlari yoritiladi. Etnomadaniyatning bosh ijtimoiy xususiyatlaridan biri va mohiyati uning yangi madaniy boyliklar yaratishga, kishini ijodga, izlanishga, yon-atrofni yanada go'zal, zavqli, insoniy qilishga undashida ekanligi ta'kidlanadi. Shuningdek, globallashuv jarayoni, ommaviy madaniyat haqida fikr yuritiladi.

**Kalit so'zlar:** etnomadaniyat, madaniyat, til, ijtimoiy xususiyat, yoshlar, globallashuv, "ommaviy madaniyat", millat.

Bugun ko'p qutbli dunyo shakllanmoqda. Mamlakatlar tarixi, qadriyatlaridan kelib chiqqan holda o'z yo'llarini o'zlariga mustaqil belgilamoqdalar. Yangi taraqqiyot modellari, yangi texnologiyalar vujudga kelmoqda. Davlatlar, elat, millat, xalqlar, diniy konfessiyalar hamda madaniyatlar o'rtasida turli ziddiyatlar kuzatilmoqda. Shu bois, millatlar o'z madaniyatini turli mexanizmlar yordamida saqlab qolishga harakat qilmoqdalar.

Madaniyatning shakllanishi tabiiy-jug'rofiy makon, ijtimoiy muhit, ishlab chiqarish munosabatlari, hayot va turmush tarzi, an'analar, hatto biologik omillar ta'siri bilan bog'liqdir. Ushbu rang-barang, goho bir-biriga zid hodisalar o'ziga xos kishilar konglomeratini shakllantirganki, to yangi davrgacha bo'lgan ijtimoiy-tarixiy bosqichlarda hech bir kishi o'zini ushbu ittifoqdan tashqarida ham yashashi mumkinligini idrok etolmagan. Kommunitar hayot tarzi va fikrlash usuli madaniyatning o'zagiga, yadrosiga aylangan.

Milliy madaniyat bilan etnomadaniyat aynan fenomenlar emas, milliy madaniyat etnomadaniyatdan kengdir. "Etnomadaniyat (xalq madaniyati) milliy madaniyatning qadimiy qatlamidir. U, asosan, maishiy hayotni qamrab olgan bo'lib, "ajdodlar urf-odatlaridan" iboratdir. Uning belgilari oziq-ovqat, kiyinish, xalq og'zaki ijodi, xalq amaliy san'ati, xalq tabobati kabi xalq hayotiga bevosita taalluqli artefaktlarda, narsalar, an'analar, marosimlar, tomoshalar va xo'jalik tiplarida namoyon bo'ladi" [1]. Xullas, etnomadaniyat millatni shakllantirgan, etnoslar yaratgan moddiy va ma'naviy boyliklar yig'indisi sifatida milliy madaniyatning yadrosini tashkil qiladi. Uning bosh funksional xususiyati etnoslar yaratgan moddiy va ma'naviy boyliklarni asrash, kelgusi avlodlarga yetkazish, milliy o'zlikni anglashga xizmat qilish, yoshlarda milliy g'ururni, vatanparvarlik va xalqparvarlik tuyg'usini shakllantirishdir.

Faylasuf U.Mengliqulovning yozishicha, "postsovet makonning murakkab to'qnashuvlarida mintaqamizdagi etnomadaniy boyliklar, ularning ma'naviy taraqqiyotimizdagi o'rni va ularni asrab qolish eng dolzarb muammolardan biriga aylandi. Ularning ahamiyati, ayniqsa, barcha insoniyat uchun umuminsoniy qadriyatlarining ustuvorligi tan olingani sari ortib bora boshladi. Ular har bir jamiyatning ma'naviy-axloqiy rivojlanishining asosini tashkil etadi va jamoatchilik ongi va milliy o'z-o'zini anglashga ta'sir qiladi. Ularni tahlil qilish uchun etnomadaniyatning integratsion konsepsiyasini aniqroq qo'llash talab etiladi" [2]. Ildizi zaif, globallashuv va milliy taraqqiyot talablariga javob bera olmaydigan an'analar ijtimoiy-madaniy hayotdan tushib qolishi, shubhasiz. Mazkur holat esa etnomadaniy boyliklardan qay birini asrab qolish va rivojlantirish masalasini o'rganish zaruratini yuzaga keltirmoqda.

Bobil minorasi haqidagi rivoyatda hikoya qilinishicha, xudo kishilar bir-birini tushunmasin degan maqsadda ularning tillarini qo'shib, aralashtirib yuboradi. Aslida bu rivoyat

etnomadaniyatlarining kelib chiqishiga taalluqlidir. Tilning xilma-xilligi etnomadaniyatlarining asosiy belgilaridan biridir. Til nafaqat kommunikatsiya vositasi, unda etnolingvistik, etnopsixologik, hatto ekzistensial borliqni idrok etish, anglash va ifodalash kuchi mavjud. Ushbu kuchning gnoseologik tajribaga ta'sirini ilk bor etnologik nuqtai nazardan yoritishga intilgan nemis faylasufi V.F.Gumboldt bo'lgan. Aynan u til inson va xalqning, millatning "ma'naviy kuchi", o'ziga xos "dunyoni anglashi" deb ta'rif beradi [3]. Demak, tilda shaxsning, etnosning nafaqat olamni anglashi, gnoseologik tajribasi, shuningdek "meni" o'z ifodasini topadi. Bu o'rinda xalqimizning "Til bilgan - el biladi" maqoli esga tushadi. Xalqlar, millatlar bir-birlarining tilini qancha yaxshi bilsa, ularni birlashtiruvchi universal - madaniy omillar shuncha ko'payadi.

Etnomadaniyatni tashkil etadigan boshqa komponentlar: odat, tajriba, marosim va bayramlarning paydo bo'lishi haqida madaniyatshunos olim U.H.Qoraboyev shunday yozadi: "Odatlar insonning tabiiy ehtiyoji asosida vujudga kelgan... Ongli mehnat muayyan tadbirlardan foydalanishni taqozo etgan. Foydali va qulay tadbirlar takrorlanib, tajribalar vujudga kelgan. Chuqur ma'noli va shaklan madaniylashgan tajriba - tadbirlar odatga aylangan. Muhim odatlar asosida marosimlar paydo bo'lgan. Jamoa hayotida xursandchilik bilan o'tadigan voqealar zamirida bayramlar shakllangan" [4]. Odat etnomadaniyatdagi ilk estetik voqelikdan biridir. Odat (ritual) kishilarning etnos, sotsium talablariga muvofiq bir xildagi xatti-harakatlaridir. To'g'ri, ilk arxaik odatlar beayov, hatto g'ayriinsoniy bo'lgan. (Masalan, gulxan atrofiga aylanish, cho'g', pichoq bilan tanada belgi qoldirish, tiriklay ko'mish (ko'milish) yoki o'ldirish (o'ldirilish), qoya, tepalik ustidan o'zini yoki mayitni tashlab yuborish va h.k.) Hozir ham ayrim ibtidoiy odatlarning ko'rinishlari, qoldiqlari u yoki bu etnomadaniyatda uchrab turadi.

Etnomadaniy va etnologik tadqiqotlarda ijtimoiy-madaniy voqelikni elitar (ayrim guruh kishilarga yoki maxsus tayyorgarligi bor shaxslarga oid) va ommaviy (barchaga, ijtimoiy-madaniy jarayonlarning barcha ishtirokchilari va qatnashchilariga oid) pog'onalarga bo'lishadi. Elitar madaniyatni yetakchi, birlamchi ekani haqidagi qarashlar antik davrdan beri mavjud. Qadimgi yunon faylasufining davlatni faqat faylasuflar, ongi, tayyorgarligi, tafakkuri yuqori shaxslar boshqarishga qodir, degan fikri keyinchalik ijtimoiy-madaniy hayotga ham tadbiriq etildi. Ushbu fikrlarga ko'ra, alohida intellektual va ijodiy xislatlarga ega kishilargina ijtimoiy-madaniy boyliklar yaratishga qodir, qolgan aholi, xalq, omma ushbu elita - andozalarga ergashadi. Bunday yondashuv ilmiy adabiyotlarda ko'p marta tanqid qilingan. Chunki etnomadaniyat o'zining genezisi, vazifalari va namoyon bo'lish xususiyatlariga ko'ra xalqqa, millatga oid ommaviy voqelikdir, unda aniq subyektni, shaxsni ko'rsatish qiyin. Shu

bilan birga etnomadaniyatning ijtimoiy-dinamik xususiyati mavjudligini inkor qilib bo'lmaydi. Ammo bu xususiyat ichki rivojlanish, ichki komponentlarning o'zaro ta'sir etib o'zgarishi, boyishi natijasi bo'lganidagina evolyutsion taraqqiyotga xizmat qiladi. Demak, etnomadaniyatning ichki qonunlariga muvofiq dinamik o'zgarishi tinch rivojlanishni, ijtimoiy-tarixiy jarayonlarning tadrijiy-evolyutsion kechishini, xalqni, millatni yaratib yashashga bo'lgan ehtiyojini ta'minlaydi. Etnomadaniyatga qaratilgan tashqi tazyiq, tajovuz esa xalq, millat hayotidagi barqarorlikni, evolyutsion rivojlanishni buzadi, kishilar ongida g'ayrimilliy tasavvurlarni, g'oyalarni uyg'otadi.

Etnomadaniyatda tarixiy-madaniy meros mujassamdir. Tarixiy-madaniy meros nafaqat muzeylik (asrash, saqlash, yetkazish), shuningdek targ'ib etish, yoyish vazifasini ham bajaradi. Muзей vazifasi shakllangan an'analarni, yaratilgan moddiy va ma'naviy boyliklarni qanday bo'lsa, shu tarzda asrashni, saqlashni nazarda tutadi. U etnomadaniy boylikni o'z holicha saqlash, uni davr, o'zgarishlar va qarashlar ta'siridan himoya qilishga intiladi. Masalan, Respublika Davlat san'at muzeyida saqlanayotgan afrosiyob arxeologik topilmalarini, freskalarni o'zgartirish yoki modernizatsiyalash aslo mumkin emas. Ular xalqimiz o'tmishiga oid nodir topilmalar sifatida o'z holicha asralishi, saqlanishi darkor. Muзей vazifasida etnomadaniyatning turg'unlikka, barqarorlikka, an'anaviylikka moyilligi ko'zga tashlanadi. Bu salbiy hodisa emas, balki muzeylik etnomadaniyatning nafaqat genezisini, shuningdek ijtimoiy-tarixiy bosqichlarda uning o'zgarishlarini, transformatsiyaga uchrab rivojlanishini kuzatish imkonini beradi.

Etnomadaniyat xalqning, millatning ekzistensial borlig'i bo'lsa-da, u maxsus targ'ib etishni, uyushtirishni, moddiy va ma'naviy boylik sifatida ommalashtirishni taqozo etadi. Mazkur tadbirlar nafaqat informativ-kommunikatsion, xuddi shuningdek sotsial-psixologik, ya'ni kishilarni xalq, millat, etnos sifatida ruhiy-ma'naviy birlashtirish ahamiyatiga egadir. Aynan shuning uchun ham etnomadaniyatni ommalashtirish milliy tarbiyaviy va g'oyaviy ahamiyatga egadir.

Etnomadaniyatning bosh ijtimoiy xususiyatlaridan biri va mohiyati uning yangi madaniy boyliklar yaratishga, kishini ijodga, izlanishga, yon-atrofni yanada go'zal, zavqli, insoniy qilishga undashidir. Tub maqsadiga ko'ra etnomadaniyat xalq, millat yaratgan moddiy va ma'naviy boyliklarni yanada ko'paytirish, har bir kishini ijtimoiy-madaniy hayotning faol subyektiga, ijodkoriga aylantirishdir. Yangi artefaktlar yaratmagan etnomadaniyat turg'unlikka beriladi, u ijobiy o'zgarishlarga g'ov bo'ladi, I. Gerder iborasi bilan aytganda, "o'ziga o'zi mahliyo bo'lib, ijtimoiy-tarixiy jarayonlardan orqada qoladi" [5]. Shuning uchun etnomadaniyatning ijodga, yaratishga undashi uni yangi ijtimoiy borliq, yangi munosabatlar va boyliklar bilan uyg'un rivojlanishga moyilligidan dalolat beradi.

Inson tug'ilganidan etnomadaniy muhitga tushadi, etnomadaniy boyliklar ta'sirida o'sadi, ulg'ayadi, shakllanadi. Biroq, bu barcha ham etnomadaniy boyliklar yaratuvchi bo'lib yetishadi, yon-atrofni go'zal borliqqa aylantirish o'yi bilan yashaydi, degani emas. Aynan shu o'rinda estetik tarbiya, inson qalbida go'zallik, olijanoblik, ezgulik, odamshavandlik tuyg'ularini shakllantirish muhim rol o'ynaydi.

Etnomadaniyatning ijodiy faoliyat funksiyasi etnomadaniyatni xalq, millat ijodiy mehnat, izlanishlar va tajriba almashishlar jarayonida yaratadi, degan fundamental ahamiyatga ega yondashuvga tayanadi. Ijodiy faoliyat, umuman faoliyat - insonning mavjudlik usulidir. To'g'ri, barcha faoliyatlar ham madaniyatni yaratavermaydi, balki ma'lum bir maqsadga yo'naltirilgan, ongli, sun'iy tarzda yaratilgan narsa, hodisa (artefakt)lar madaniyatdir. O'zbek xalqi etnomadaniyatida bu funksiya mavjud ijtimoiy-madaniy boyliklarni o'zlashtirishdan tortib, to yangi bir ijod

namunasini yaratishgacha bo'lgan izlanishlarda namoyon bo'ladi. Masalan, o'zbek xalqi etnomadaniyatiga xos ilk naqsh asarlari eramizdan avvalgi I-ming yillarga oid arxeologik topilmalardayoq uchraydi. Biroq bu o'ta sodda chizmalarga har bir avlod o'z ulushini qo'shib, uni tarixiy-diniy tasavvurlar bilan boyitib, hozirgi murakkab san'at darajasiga ko'targan. Shu tariqa ijodiy faoliyat ta'sirida xalq amaliy san'ati oddiy ko'rinishdan yirik, murakkab janrga o'sib chiqqan.

Ba'zan ijodiy faoliyatda izlanishlar to'xtaganini kuzatamiz. Masalan, arablar istilosi va mo'g'ul-tatarlar bosqini avj olgan davrlarda turg'unlik, ba'zan esa orqaga qaytish hollari kuzatiladi. O'lkada tinchlik qaror topishi bilan xalqimiz madaniy boyliklarni yaratishda davom etadi.

Og'zaki ijod, qo'shiq san'ati kabi janrlarda esa hatto chet elliklar bosqini paytida ham xalqimiz ijodiy izlanishlardan to'xtamagan. Demak, o'zbek xalqi etnomadaniyatiga xos bosh xususiyat uning ijodiy faoliyat va izlanishlardan hech qachon to'xtamaganida, xalqimizni madaniy boyliklar yaratishga uzluksiz intilib kelganidadir.

Etnomadaniyatda xalq, millat ruhi, o'yi, kelajak haqidagi ezgu tilaklari, orzulari kabi pozitiv intilishlari mujassamdir. Shu nuqtai nazardan etnomadaniyat yoshlar qalbida, ruhida nafis tuyg'ularni tarbiyalashi, yon-atrofni go'zallashtirish, insoniyashtirish niyatini shakllantirishi mumkin.

Bugun dunyoda yuz berayotgan globallashuv jarayoni madaniy-ma'naviy qadriyatlarini tiklash va rivojlantirishga bo'lgan ehtiyojni yanada oshirmoqda. Globallashuv jarayoni obyektiv jarayon bo'lib, bir qator ijobiy jihatlarga ega. U davlatlar o'rtasidagi integratsiyani kuchayishi, xalqaro maydonga erkin chiqish, dunyo ilm-fani va madaniyat-san'at yutuqlaridan bahramand bo'lish, "borgan sari kuchayib borayotgan ochiqlik va jadallik natijasi sifatida butun yer yuzida hayot darajasining yuksalib borishiga va qashshoqlik darajasining ancha pasayishiga yordam beruvchi shart-sharoit deb qaraladi" [6]. Lekin, globallashuv jarayoni muayyan salbiy xususiyatlardan ham holi emas. Madaniy integratsiyaning kengayishi sababli umumplanetar hodisaga aylangan "ommaviy madaniyat" bugun mafkuraviy tazyiqning eng xavfli qurollaridan biri sanaladi. Uning ta'siridan O'zbekiston ham chekkada qolmadi. Ommaviy madaniyat kishini real voqelikdan chalg'itadi, uni hayollar, istaklar dunyosiga yetaklaydi, zo'rvonlikni, vahimani va yengil-yelpi narsalarni targ'ib qiladi.

"Ommaviy madaniyat"ning asosiy vositalari - radio, televideniye, matbuotsiz ijtimoiy-madaniy hayotni, umuman taraqqiyotni tasavvur qilib bo'lmaydi. Respublikamizda "ommaviy madaniyat" tazyiqlaridan saqlanishga qaratilgan keng ko'lamli islohotlar, ma'naviy sohada o'zgarishlar amalga oshirildi. Ijtimoiy taraqqiyotning hal qiluvchi omillaridan va asosiy ko'rsatkichlaridan biri - etnomadaniyatni asrash va rivojlantirish borasidagi sa'y-harakatlar shular jumlasidandir. O'zbek etnomadaniyati yangi O'zbekiston milliy demokratik taraqqiyotini ta'minlashga xizmat qiladi.

Etnik madaniyatni o'rganish bizga nafaqat tarixdan darak beradi, balki zamonaviy muammolarni yechishga ham yordam beradi. "Tarixning, tarixilikning qimmatini uning uzoq o'tmishga borib taqalishida emas, balki zamonaviy muammolarni hal etishga yordam berishidir. Agar biz zamonaviy muammolarning kelib chiqish tarixini o'rgansak va negizlarini topsak, ularni yechish yo'llarini ham topamiz" [7]. Demak, muammoga tarixiy nazar ijtimoiy-tarixiy jarayonlarni qayta tiklash uchun emas, balki zamonaviy muammolarning mohiyatini anglash va ularni samarali yechish uchun lozimdir.

Etnomadaniyatda innovatsiyaga intilish, ya'ni taraqqiy etgan davlatlar erishgan madaniy-ma'rifiy, ilmiy, huquqiy, siyosiy yutuqlardan bahramand bo'lishga qiziqish katta. Etnomadaniyat mutlaq shakllangan, o'zgarmas voqelik emas, u jamiyat hayotida kechayotgan ijtimoiy jarayonlar ta'sirida,



kishilarning ma'naviy, madaniy, ruhiy ehtiyojlari, qiziqish va talablari ta'sirida transformatsiyaga uchraydi.

O'zbek xalqi etnomadaniyatini barqaror an'analar va qadriyatlar tarzida avaylab, asrab kelayotgan ijtimoiy muhit bu oiladir. Aynan oilaviy-maishiy marosimlarda etnomadaniyatning ichki xususiyatlari, ko'rinishlari, funksional belgilari to'la namoyon bo'ladi. Tadqiqotlar shuni ko'rsatadiki, o'zbek xalqi oilaviy-maishiy marosimlarida muqim, turg'un etnik belgilar yetakchi o'rin tutadi. Hatto, ijtimoiy o'zgarishlar ham ulardagi "yadro"ni o'zgartirilmagan. "Yadro"ga kiruvchi diniy, oilaviy-maishiy marosimlar, urf-odatlar, rasm-rusumlar, bayramlar, mentalitet, turmush tarzi, xo'jalik-madaniy tiplar duch kelgan novatsiya va innovatsiyalarni qabul qilavermaydi, ularga muqimlik xos. Biroq, ustki qism – ta'lim, ilm-fan, ma'rifat, ijtimoiy faoliyat, kishilararo aloqalar, ommaviy axborot vositalari, moda kabilar bilan bog'liq madaniy hayot mudom izlanishda, modernizatsiya ta'sirida bo'ladi. Hech bir etnomadaniyat mazkur ta'sirdan chetda qololmaydi. O'zbek etnomadaniyatida bugun bir tomondan, o'zak qismning muqim saqlanayotgani, ikkinchi tomondan, ustki qismning zamonaviy hayot tarzini, ilm-fan yutuqlarini, sivilizatsion munosabatlarni o'zlashtirishga, novatsiya yaratishga, innovatsion izlanishlarda faollik ko'rsatishga intilayotgani

ko'zga tashlanadi. Bizning fikrimizcha, o'zak va ustki qismlarning antogonistik qutblarga aylanishiga yo'l qo'ymasdan, ular o'rtasida hozir shakllanayotgan uyg'unlikni, integratsiyani, yaxlitlikka intilishni saqlab qolish va mustahkamlash zarur.

O'zbek etnomadaniyati o'ziga xos ijtimoiy-tarixiy voqelik sifatida xalqimiz madaniyatini, madaniy hayotini rang-baranglashtirib, ichki jarayonlarini jonlantirib keladi. Variantlilik madaniyatning rivojlanish shartidir. Bundan tashqari, xotin-qizlarning oilaviy an'analar, urf-odatlar, tarixiy-madaniy merosga sadoqati tufayli o'zbek xalqi etnomadaniyati o'zligini asrab kelmoqda. Shuning uchun xotin-qizlarni xalqimiz tarixiy-madaniy merosini o'rganish va targ'ib qilishga yanada kengroq jalb qilish lozim.

Jamiyatning ma'naviy taraqqiyotida yoshlarning o'rni muhim. Ularni ajdodlarimiz tajribasiga sadoqatli, irodali inson qilib tarbiyalash milliy taraqqiyot oldidagi vazifalardan biri hisoblanadi. Bugun "globallashuv jarayonlarida yoshlar ma'naviyatiga tahdidlarning oldini olish – ularni bunday jaholatli holatlardan asrashning ham birdan-bir o'chog'i ta'lim-tarbiya tizimidir" [8]. Yoshlarimizni turli mafkuraviy tahdidlardan himoya qilishda ta'lim-tarbiya tizimida milliy qadriyatlarimizdan samarali foydalanish, ularda o'zligini anglash tuyg'usini shakllantirish lozim.

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## TURKISTON XALQ UNIVERSITETINING TASHKIL ETISH TARIXIDAN (XX ASR BOSHLARIDA JADID MA'RIFATPARVARLARINING HISSASI)

Annotsatsiya

Mazkur maqolada Turkistonda ochilgan birinchi musulmon universiteti ya'ni xozigi O'zbekiston Milliy universiteti tarixi yozilgan. Maqolada XX asr boshlaridajadid ma'rifatparvarlarining universitet tashkil qilishga qo'shgan hissalarini tahlil qilingan. Shuningdek, Turkiston xalq universitet tashkil etishda jadidlarning amaliy ishlari, musulmonlarning bu boradagi ehtiyojlari e'tiborga olinmaganligi to'g'risida bayon qilinadi.

**Kalit so'zlar:** Turkiston, davriy matbuot, gazeta, kitob, kutubxona, katalog, bibliograf, arxiv, arxiv fondi.

**Kirish.** Mamlakatimizda oliy ta'limni rivojlantirish sohasida bir qator ishlar amalga oshirilib kelinmoqda. Xususan, O'zbekiston Respublikasi Prezidentining 2019-yil 8-oktabr PF-5847-sonli "O'zbekiston Respublikasi Oliy ta'lim tizimini 2030-yilgacha rivojlantirish konsepsiyasini tasdiqlash to'g'risida"gi [3], 2023-yilda farmonlariga muvofiq O'zbekiston Respublikasi Oliy ta'lim, fan va innovatsiyalari vazirligi tashkil qilinib, ta'lim sifatiga alohida e'tibor qaratilmoqda. Mazkur konsepsiyasida O'zbekiston Milliy universitetini mamlakatimiz oliy ta'lim muassasalarining flagmaniga aylantirish vazifasi qo'yilgan.

**Mavzuga oid adabiyotlar tahlili.** O'zbekiston Milliy universitet tarixiga oid adabiyotlar talaygina. Shulardan S.Xolboyevning risola va maqolalari ajralib turadi. Unda universitet tarixi, jadid ma'rifatparvarlarining universitet tashkil qilishdagi faoliyati o'rganilgan. Darxaqiqat, universitet tarixi 105-yil avvalgi borib taqaladi. Uning tashkil etilishi XIX asr oxiridan boshlangan. Turkistonda Uyg'onish davrining uchinchi davri XIX asr oxiri – XX asr boshlarida boshlangan. Uyg'onish davrining dastlabki ikki davrining tarixiy davomi bo'lsa-da, lekin ulardan tubdan farq qiladigan Milliy tiklanish davriga aylandi. Bu tarixiy hodisa bevosita shu davrda amalga oshirilgan milliy islohot, ijtimoiy-siyosiy, madaniy-ma'rifiy, mafkuraviy harakat – jadidlar harakati natijasida yuzaga keldi. Millat ziyolilari o'zlikni anglash, takomillashtirish zarurligini tushundi. Millatning ongi, mentaliteti, tafakkuri, dunyoqarashi o'zgardi. Unda milliy istiqlol va taraqqiyotga intilish, Rossiya imperiyasi mustamlakachiligi va mahalliy zulmga qarshi kurash, erkinlik, tenglik va adolat uchun mardlik va kurash qobiliyati namoyon bo'ldi.

**Tadqiqot metodologiyasi.** Jadid ziyolilari millat va jamiyat taraqqiyotida tub burilish yasadilar, yangi jadid madaniyatini yaratdilar. Klassik adabiyot ijtimoiy-siyosiy mazmun kasb etib, yangilandi. Xalq teatri va matbuoti, turli madaniy-ma'rifiy, ijtimoiy-siyosiy birlashmalar, tashkilotlar, partiyalar paydo bo'ldi, ular ta'sirchan faoliyat olib bordi. Natijada jadidlar millatni qayta tarbiyalashga, uni asriy ommaviy uyqudan uyg'otishga erishdilar. Xalqda milliy uyg'onish alomatlarini borligini birinchi bo'lib jadidlar ham angladilar. Bunga Mirmulla va Mirmuhsin Shermuhammedovlarning maqolalari, Laziz Azizzodaning "Turkiston milliy tiklanishi tarixi" asarini misol qilib keltirish mumkin.

**Tahlil va natijalar.** Jadidlar milliy dunyoviy oliy ta'lim g'oyasini targ'ib qilish barobarida oliy o'quv yurtlarini

tashkil etish bo'yicha ham jiddiy tayyorgarlik va amaliy tashkiliy ishlar olib bordilar. Jadid maktablarida matematika, geografiya, tarix, ona tili, adabiyot, rus tili kabi dunyoviy bilim va fanlarni o'qitishdan boshlandi. Jadid maktablari ikki bosqichli o'rta ta'lim tizimidan iborat bo'lgan: to'rt yillik boshlang'ich maktab va yetti yillik o'rta maktab. Ta'lim pullik bo'lib, o'sha yillarda zamonaviy ta'lim marketingining poydevori qo'yildi. Kam ta'minlangan oilalar farzandlari esa tekin ta'lim oldilar. Bundan tashqari jadidlar Toshkentda "Qumak" (1909) va "Doril ojizin" (1923), Buxoroda "Tarbiyai atfol" (1910) nomli maxsus xayriya jamiyatlarini tuzdilar va yordam bilan ulardan Rossiya, Ozarbayjon, Tatariston, Turkiya, Germaniya va boshqa mamlakatlarga ta'lim olish uchun milliy kadrlarni yuborib, ularning dunyoviy umumiy ta'lim olishiga ko'maklashdilar.

Jadidlar barcha imkoniyatlardan foydalanib, Rossiya imperiyasi amaldorlari oldiga milliy oliy o'quv yurti tashkil etish masalasini qo'ydilar. Masalan, 1917-yil boshida harakat Turkistonning bosib olinishining 50 yilligini nishonlay boshlagan zahoti Ubaydullaxo'ja Asadullaxo'jaev "Sadoi Turkiston" gazetasida maqola bilan chiqib, Toshkentda musulmonlar uchun bir tashkilot ochish masalasini ko'targan edi. Bundan tashqari, 1916-yilgi xalq qo'zg'olonini ayovsiz bostirishga va qo'zg'olon qatnashchilariga nisbatan adolatsiz munosabatda bo'lishga qarshi kurashayotgan jadidchilar guruhining iltimosiga ko'ra, Ubaydullaxo'ja Asadullaxo'jayevev Rossiya Davlat Dumasi maxsus komissiyasi oldiga ham A.F.Kerenskiy boshchiligidagi Turkistonga kelgan musulmonlar uchun universitet ochish talabi qo'ydi. 1917-yil fevral oyida Rossiya imperiyasida ro'y bergan inqilobgacha jadidchilik harakati vakillari dunyoviy oliy maktab (universitet) tashkil etish g'oyasini ilgari surgan edilar. Bu o'sha davrda dunyoviy oliy ta'lim butun xalqning ehtiyojiga aylanganidan dalolat beradi.

Jadid ziyolilari millat va jamiyat taraqqiyotida tub burilish yasadilar, yangi jadid madaniyatini yaratdilar. Klassik adabiyot ijtimoiy-siyosiy mazmun kasb etib, yangilandi. Xalq teatri va matbuoti, turli madaniy-ma'rifiy, ijtimoiy-siyosiy birlashmalar, tashkilotlar, partiyalar paydo bo'ldi, ular ta'sirchan faoliyat olib bordi. Bularning barchasi natijasida jadidlar millatni qayta tarbiyalashga, uni asriy ommaviy uyqudan uyg'otishga erishdilar. Xalqda milliy uyg'onish alomatlarini borligini birinchi bo'lib jadidlar ham angladilar [6]. Bunga Mirmulla va Mirmuhsin Shermuhammedovlarning

maqolalari, Laziz Azizzodaning "Turkiston milliy tiklanishi tarixi" asarini misol qilib keltirish mumkin.

Jadidlar milliy dunyoviy oliy ta'lim g'oyasini targ'ib qilish barobarida oliy o'quv yurtlarini tashkil etish bo'yicha ham jiddiy tayyorgarlik va amaliy tashkiliy ishlar olib bordilar. Jadid maktablari matematika, geografiya, tarix, ona tili, adabiyot, rus tili kabi dunyoviy bilim va fanlarni o'qitishdan boshlandi. Jadid maktablari ikki bosqichli o'rta ta'lim tizimidan iborat bo'lgan: to'rt yillik boshlang'ich maktab va yetti yillik o'rta maktab. Ta'lim pullik bo'lib, o'sha yillarda zamonaviy ta'lim marketingining poydevori qo'yildi. Kam ta'minlangan oilalar farzandlari esa tekin ta'lim oldilar. Bundan tashqari jadidlar Toshkentda "Qumak" (1909) va "Doril o'jizin" (1923), Buxoroda "Tarbiyai atfol" (1910) nomli maxsus xayriya jamiyatlarini tuzdilar va yordam bilan ulardan Rossiya, Ozarbayjon, Tatariston, Turkiya, Germaniya va boshqa mamlakatlarga ta'lim olish uchun milliy kadrlarni yuborib, ularning dunyoviy umumiy ta'lim olishiga ko'maklashdilar.

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Rossiyada fevral sodir bo'lgandan keyin Turkistonda yaratilgan demokratik erkinlik sharoitida millatchi jadidlar rus demokratik ziyolilari bilan birgalikda universitet tashkil etishga intildilar. Ammo o'sha paytda Oktyabr to'ntarishi sodir bo'lib, yangi Sovet hukumati – Turkiston Xalq Komissarlari Soveti tuzildi. Bu hukumatning 1918-yil 16-martda Toshkentda Turkiston xalq universitetini tashkil etish to'g'risida ma'rifat xalq komissarligiga bergan farmoni – buyrug'ida faqat rus va rusiyabonlar uchun oliy ma'lumotga bo'lgan ehtiyojni qondirish zarurligi ko'rsatilgan edi. Aholi soni hisobga olinmadi. Universitet tashkil etishda jadidlarning amaliy ishlari, musulmonlarning bu boradagi ehtiyojlari e'tiborga olinmadi. Farmonning ushbu buyrug'i asosida rus ziyolilari darhol ishga kirishdilar. Bundan xabar topgan Munavvarqori Abdurashidxonov 9-aprel kuni o'z uyida

zamonaviy oliy ta'lim tarafdori bo'lgan jadidlarning faol guruhini yig'ib, ularga vaziyatni tushuntirib, universitet tashkil etish g'oyasini ilgari surdi. Uning rahbarligida yig'ilganlar 9 kishidan iborat "Musulmon xalq universiteti tashkiliy komissiyasi"ni tuzdilar. Bu demokratik ruhda tuzilgan komissiya edi. Shuning uchun komissiya asosan ikki yo'nalishda ish olib bordi, xususan: hukumat tomonidan tan olinishiga erishish, shuningdek, universitetni ochishni bevosita tashkil etish.

Musulmonlar uchun universitetning ochilishi rus millatiga mansub kishilar uchun ochiq bo'lgan Turkiston xalq universiteti rahbariyatini ham qo'llab-quvvatladi, ularga yordam berdi. Uning bosh professori O.V.Popov 6-may kuni Musulmon xalq universiteti tashkiliy komissiyasining sakkizinchi yig'ilishida ishtirok etar ekan, "kelajakda uni ikkinchi universitet emas, balki yagona universitet deb atash kerak", dedi. Shundan so'ng Musulmon xalq universiteti filiali sifatida Turkiston xalq universitetiga birlashtirilgan.

Munavvarqori Abdurashidxonov boshchiligidagi komissiya faoliyati natijasida 1918-yil 12-may shanba kuni – Musulmon xalq universitetining rasmiy ochilish marosimi bo'lib o'tdi. Oldinroq Vikula Morozovning do'koni joylashgan Eski shahardagi binoda tantanali marosimning hakamlar hay'ati – hukumat a'zolari, xalq komissarlari, musulmon va rus xalq universitetlari raislari (rektorlari) va boshqa shaxslar joylashgan edi.

Yig'ilishni Munavvarqori Abdurashidxonov ochib, qisqacha ma'ruza qildi. U o'z nutqida musulmonlar yarim asr mustamlaka bo'yinturug'i ostida qullikda yashab, ozodlik katta qurbonlar evaziga qo'lga kiritilganini ta'kidladi. Shu bilan birga, u "xalqning ilmga juda muhtojligi, qon to'kish orqali qo'lga kiritilgan ozodlikdan so'ng turkistonliklar ham ilm olish imkoniyatiga ega bo'ldilar", degan edi. Shundan so'ng u harbiy ruhda yig'ilganlardan ozodlik uchun qurbon bo'lganlar xotirasiga bir daqiqa sukut saqlashni so'radi. Bu vaqtda harbiy musiqiy marsh yangradi. So'ngra ozodlik yo'lida qurbon bo'lgan musulmonlar xotirasiga bag'ishlab Samikori Afandi Qur'oni karim, oyat va fatvolar o'qib, ularning xizmatlarini yodga oldi.

**Xulosa va takliflar.** Shunday qilib 1918-yilning 12-mayi butun xalq ehtiyojiga aylangan oliy dunyoviy ta'lim markazi yaratilgan, bugungi Milliy universitetning poydevori qo'yilgan muborak kun sifatida tarixga kirdi [6]. Bir asrdan oshiq vaqt davomida, aniqrog'i 105-yildan buyon ushbu sana universitetga asos solingan tantanali marosim sifatida nishonlab kelinmoqda.

Shunday qilib, XX asr boshlaridayoq Turkistonning ziyoli kishilari, jadid ma'rifatparvarlari Toshkentda yirik ilm-ziyo maskaniga asos solishga kirishishdi. Bir qator tashabbus va harakatlardan so'ng Turkiston Xalq universitetiga tamal tosh qo'yildi va bir asir davomida ilm, ma'rifat tarqatib kelmoqda.

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## OLYI TA'LIM MUASSASALARIDA MEHNAT SHAROITLARINI YAXSHILASH ORQALI TA'LIM SIFATINI OSHIRISH

Annotatsiya

Mazkur maqolada oliy ta'lim muassasalari professor-o'qituvchilarining mehnat sharoitlarini yaxshilash orqali ta'lim sifatini oshirish masalalari tahliliy bayon qilingan. Oliy ta'lim muassasalarida ta'lim sifatini oshirish uchun xavfsiz, qulay, adolatli mehnat sharoitlarini yaratish, professor-o'qituvchilar qo'nimsizligini oldini olish va ularni doimiy ish bilan ta'minlash, rag'batlantirish tizimini joriy etish katta ahamiyatga ega. Tadqiqotlar natijasi shuni ko'rsatdiki, ta'lim beruvchi xodimlarning mehnat sharoitlari qay darajada yaxshi bo'lsa, ularning ta'lim berish sifati ham shunchalik yuqori bo'ladi.

**Kalit so'zlar:** Ta'lim muassasalari, oliy ta'lim, ta'lim sifati, mehnat sharoitlari, xavfsizlik, professor-o'qituvchilar.

**Kirish.** O'zbekiston Respublikasi Prezidenti Shavkat Mirziyoyev 2022-yil 20 dekabrda Oliy Majlis va O'zbekiston xalqiga yo'llagan Murojaatnomasida ta'lim xizmatlari sifatini oshirish va jamiyatni rivojlantirish bo'yicha muhim vazifalarni belgilab berdi. 2023-yil "Insonga e'tibor va sifatli ta'lim yili", deb e'lon qilindi. Mamlakat salohiyati bilim va tafakkurda ekanligiga urg'u berilib, "Ta'lim sifatini oshirish — Yangi O'zbekiston taraqqiyotining yakkayu yagona to'g'ri yo'li" ekanligi ta'kidlandi[1]. Ta'lim sifati uchun bog'cha tarbiyachisi va maktab o'qituvchisidan tortib mamlakat ta'lim tizimining barcha bosqichlari mutassadilarining mas'uliyatini oshirish vazifasi qo'yildi.

Jahon tajribasi shuni ko'rsatadiki, har qanday mamlakatni rivojlantirish uchun avvalo, chuqur bilim va ko'nikmalarga ega, o'z kasbini to'liq egallagan, professional kadrlar bilan ta'minlab berish lozim. Ushbu kadrlarni o'qitish va kasbga tayyorlash kabi ishlar asosan oliy ta'lim muassasalari tomonidan amalga oshiriladi.

O'zbekiston Respublikasida oliy ta'lim bakalavriat ta'lim yo'nalishlari va magistratura mutaxassisliklari bo'yicha yuqori malakali kadrlar tayyorlanishini ta'minlaydi. Oliy ma'lumotli kadrlarni tayyorlash oliy ta'lim tashkilotlarida (universitetlar, akademiyalar, institutlar, oliy maktablar) amalga oshiriladi. Oliy ta'lim ikki bosqichga - bakalavriat va magistratura bosqichiga ega. Bakalavriat oliy ta'lim yo'nalishlaridan biri bo'yicha chuqurlashtirilgan bilim, malaka va ko'nikmalar beradigan, o'qish davomiyligi kamida uch yil bo'lgan tayanch oliy ta'limdir. Magistratura tegishli bakalavriat negizidagi aniq mutaxassislik bo'yicha o'qish davomiyligi kamida bir yil bo'lgan oliy ta'limdir.

Oliy ta'limdan keyingi ta'limni oliy ta'lim va ilmiy tashkilotlarda olish mumkin. Oliy ta'limdan keyingi ta'lim doktorlik dissertatsiyasini tayyorlash va himoya qilish maqsadida mutaxassislikni chuqur o'rganishni va ilmiy izlanishlar olib borishni nazarda tutadigan tayanch doktorantura, doktorantura va mustaqil izlanuvchanlik asosida ilmiy darajaga ega ilmiy va ilmiy-pedagogik kadrlar tayyorlashni ta'minlaydi.

Kadrlarni qayta tayyorlash tayanch mutaxassisliklar va kasblarga muvofiq bo'lgan yo'nalishlar bo'yicha faoliyatni amalga oshirish uchun qo'shimcha kasbiy bilim, malaka va ko'nikmalarning zarur hajmi egallanishini ta'minlaydi.

O'zbekiston Respublikasida bugungi kunda 210 ta oliy ta'lim muassasalari mavjud bo'lib, bulardan: universitetlar 36

ta, institutlar 48 ta akademiyalar 4 ta va konservatoriya 1 ta, xorijiy oliy ta'lim muassasalari va ularning filiallari 30 ta, nodavlat oliy ta'lim muassasalari 65 ta, filiallar esa 26 tani tashkil etadi. Davlat oliy ta'lim muassasalarining 63 tasi "Oliy ta'lim, fan va innovatsiyalar" vazirligiga, 12 tasi "Sog'liqni saqlash" vazirligiga, 10 tasi "Madaniyat va turizm" vazirligiga, 7 tasi "Raqamli texnologiyalar" vazirligiga, 6 tasi "Qishloq xo'jaligi" vazirligiga, 4 tasi "Yoshlar siyosati va sport" vazirligiga, 1 tasi "Adliya" vazirligiga, 1 tasi "Tashqi ishlar" vazirligiga, 1 tasi "Maktabgacha va maktab ta'limi" vazirligiga, 1 tasi "Transport" vazirligiga, 1 tasi "Tog'-kon sanoati va geologiya" vazirligiga tegishlidir. "Qishloq xo'jaligi vazirligi huzuridagi veteranariya va chorvachilikni rivojlantirish qo'mitasi"ga 3 ta, "Maktabgacha va maktab ta'limi vazirligi huzuridagi ixtisoslashtirilgan ta'lim muassasalari agentligi"ga 1 ta, "Din ishlari bo'yicha qo'mita"ga 1 ta, "Iqtisodiyot va moliya vazirligi huzuridagi Soliq qo'mitasi"ga 1 ta oliygoh qarashli[2].

Hozirgi kunda ushbu oliy ta'lim muassasalarida faoliyat ko'rsatib kelayotgan pedagog xodimlar soni 33 000 dan ortiqni tashkil etmoqda. So'nggi yillarda xalqaro standartlarga va ijtimoiy-iqtisodiy rivojlanish tamoyillariga mos keladigan oliy ta'lim tizimini yaratish va ta'biq etish bo'yicha juda ko'p islohotlar amalga oshirilmoqda. O'zbekistonda 2023-yil "Insonga e'tibor va sifatli ta'lim" yili deb e'lon qilindi.

Yuqori malakali kadrlar tayyorlash oliy ta'lim muassasalarida talabalarga beriladigan ta'lim jarayonidan boshlanadi. Ta'lim — ta'lim oluvchilarga chuqur nazariy bilim, malakalar va amaliy ko'nikmalar berishga, shuningdek ularning umumta'lim va kasbiy bilim, malaka hamda ko'nikmalarini shakllantirishga, qobiliyatini rivojlantirishga qaratilgan tizimli jarayon[3].

Sifatli ta'lim jarayoni esa professor-o'qituvchilarga bog'liq. Pedagog xodimlar o'qitish jarayonlarida zamonaviy, innovatsion o'qitish usul va vositalarini qo'llashlari lozim. Professor-o'qituvchilarning faoliyati ya'ni, o'quvchitalabalarga ta'lim berish jarayoni ularning emotsional holatlari: fikr va hissiyotlari bilan chambarchas bog'liq. Professor-o'qituvchilarda emotsional holatning ijobiy bo'lishi ichki muhit va ularning mehnat sharoitlariga ham bog'liq bo'ladi. Mehnat sharoitlari - mehnatni amalga oshirish chog'idagi ijtimoiy va ishlab chiqarish omillari yig'indisi[4]. Bu majmuaga mehnat va dam olish tartibi, ish joyi va butun

binoni, korxonada maydonini yoritish, ishlab chiqarish binosi va asbob-uskunalarini texnika estetikasi talablariga muvofiq bo'yash, qulay joylashtirish, harorat rejimi, bino va ish joyidagi havoning tozaligi, ishlab chiqarish shovqini va tebranishlardan muhofaza qilish, ishlab chiqarishda ishchilarga talab darajasida maishiy va tibbiy xizmat ko'rsatish, zararli ishlab chiqarish omillari mavjud bo'lganda mexanizatsiyalashni tashkil etish, og'ir jismoniy ishlarga barham berish singari masalalar kiradi. Shunday qilib, mehnat sharoitlari deganda, ish bajarish, xizmat ko'rsatish jarayonida xodimning sog'lig'i va ish qobiliyatiga ta'sir ko'rsatuvchi ishlab chiqarish muhiti omillarining jami tushiniladi.

Mehnat sharoitlarini yaxshilash bo'yicha mehnatni tashkil qilish tadbirlari rejalashtirilayotganda quyidagi sharoitlar va talablar yetarlicha hisobga olinishi zarur:

- mehnatning umumiy sharoitlari;
- mehnatning texnika sharoitlari;
- mehnat xavfsizligi sharoitlari;
- sanitariya- gigiena sharoitlari;
- estetik sharoitlar.

Mavzuga oid adabiyotlar tahlili (Literature review).

Adabiyotlarda sifat atamasiga turlicha ta'riflar beriladi. Sifat ikki ma'noga ega: ehtiyojlarni qondirish uchun mahsulot yoki xizmat va kamchiliklardan holi mahsulot yoki xizmat. Surakarta Davlat islom instituti (Indoneziya) professori Teguh Budiharso va Turkiyalik mustaqil tadqiqodchi Bulent Tarman takidlashicha oliy ta'limdagi sifat tushunchasida ta'lim samaradorligi, mukammallik, o'quv jarayonining xalqaro standartlarga javob berishi kabilar tushuniladi. "Sifatni ta'minlash oliy ta'lim muassasasi tomonidan o'z ta'lim va boshqa faoliyatlarini boshqarish va sifatini oshirish uchun qo'llaniladigan tartiblar, jarayonlar va tizimlarni anglatadi". Sifat kafolati talabalarga belgilangan standartlarga erishish imkonini beradi. Ta'lim sifatini ta'minlash uchun professor-o'qituvchilarga qulay ish muhitini yaratib berish zarur[5].

Tutkiyalik olimlar Deniz Koyuncu (Istanbul Milliy mudofaa universiteti) va Gokhan Demirhan (Usak universiteti) 17 ta universitetda ishlaydigan 320 dan ortiq professor-o'qituvchilar o'rtasida o'tkazilgan so'rovnoma natijalariga ko'ra ularning yashash va ishlash sharoitlari bevosita ta'lim sifatiga ta'sir ko'rsatishini korelyatsion tahlil natijalariga asosan ko'rsatib berganlar[6].

Ingliz manbalarida olimlar Ogechi Ohadomere, Ikedinachi K. Ogamba esa professor-o'qituvchilar mehnat faoliyatiga salbiy ta'sir omillari sifatida ruhiy zo'riqish va jamoa a'zolari o'rtasidagi o'zaro munosabatlarda kelishmovchiliklarni ular tomonidan talabalarga beriladigan ta'lim sifatiga ta'sirini o'rganganlar[7].

A.Avliyakov va Z.Saydolimovalarning takidlashicha oliy ta'lim muassasasi quyidagi konsepsiyani qabul qilishi va undan foydalanishi zarur bo'ladi: sifat - bu iste'molchilar (talaba, o'qituvchi, korxonada, jamiyat) talablarini qondirish darajasi, oliy ta'lim muassasasining samarali ishlash va uyg'un kundalik faoliyatni yuritishga tayyorligi darajasidir. Ushbu fikr ta'lim sifatini tushunchasini quyidagilarni o'z ichiga oluvchi piramida ko'rinishida o'rganish va tadqiq qilish imkonini beradi: ta'lim tizimi sifatini; ta'limni boshqarish sifatini; ta'lim jarayonlari sifatini; ta'lim natijalari sifatini[8].

Rus tilidagi manbalarda esa ta'lim sifatini oshirish muammolari o'rganilganda professor-o'qituvchilar jismoniy va ruhiy sog'lig'ini saqlash zarurligi, o'quv yuklamasi soatlarini, pedagogik faoliyat bilan bog'liq bo'lmagan ishlar xajmini kamaytirish va rag'batlantirish tizimini joriy qilish tavsiya etilmoqda [9-10].

Tadqiqot metodologiyasi (Research Methodology). Tadqiqot jarayonida ta'lim sifatini va professor-o'qituvchilarga yaratilgan mehnat sharoitlari o'rtasidagi bog'liqlik masalasi tekshirildi. Tadqiqot ishida statistik, mantiqiy va taqqoslama tahlil, analiz va sintez, tizimli tahlil usullaridan foydalanildi.

Tahlil natijalariga ko'ra ta'lim sifatiga ta'sir etuvchi omillardan ta'lim muassasalarida professor-o'qituvchilar va talabalarga yaratilgan sharoit, dars jarayonida qo'llaniladigan ta'lim texnologiyalari, oylik ish haqi ekanligi eng ko'p qayd etilganligi aniqlandi. Yaratilgan mehnat sharoitining qoniqsiz holatda bo'lishi pedagog kadrlar o'nimsizligiga sabab bo'ladi. O'qituvchilarning tez-tez almashishi ta'lim sifatiga ta'sirini o'tkazmay qolmaydi. O'tkazilgan statistik tahlillar natijasiga ko'ra professor-o'qituvchilar qo'nimsizligiga ta'sir etuvchi asosiy omillar: ish haqining kamligi, yashash joyidan uzoqligi, mehnat sharoitining talab darajasida tashkil etilmaganligi, mikroiklim sharoitining (havo harorati, bosimi, tozaligi, harakatchanligi), o'quv auditoriyalarida yorug'lik miqdori, foydalaniladigan interaktiv doska, proyektordan chiqadigan nurlanish darajasi, laboratoriya xonalaridagi turli jihoz va uskunalaridan foydalanish jarayonida yuzaga keladigan xavfli va zararli omillarning "Sanitar norma va qoidalar"da belgilanganidan yuqori yoki past darajada bo'lishi, shaxsiy gigiyena qoidalarining buzilishi, shovqin va titrash darajasi, bino holatining qoniqsizligi, jamoadagi do'stona munosabatlarining yo'qligi, lavozim majburiyatlariga kirmaydigan ishlarni bajarish, rahbarlar va bo'ysinuvchilar o'rtasidagi munosabatlarda adolatsizlik va boshqa omillar ekanligi aniqlandi.

Tahlil natijalariga ko'ra professor-o'qituvchilarning mehnat sharoitlari va ularga to'laniladigan oylik maoshlari yuqori bo'lsa oliy ta'lim muassasalarida ta'lim sifatida yuqori natijalarga erishiladi. Shuningdek, oliy ta'lim muassasalarida professor-o'qituvchilariga oylik maoshlaridan tashqari, qo'shimcha rag'batlantirishlar ularning ilmiy va pedagogik faoliyatlarini amalga oshirishlari uchun qo'shimcha motivatsiya beradi. Ta'lim berish va ta'lim olish muhiti asosan, o'qish va o'qitish jarayonini tashkil etishda qulay, yorug', eng asosiysi, ta'lim olish uchun sokin va tinch muhit bo'lishi zarur. Agarda pedagog xodimlar o'zlarini qay darajada erkin va xavfsiz sezsa, ushbu vaqtda ularning ta'lim berish samaradorligi ham shuncha marta ortib, yaxshilanib boradi. Ta'lim berish samaradorligi yuqori oliy ta'lim muassasalaridan esa yetuk mutaxassis kadrlar yetishib chiqadi.

**Tahlil va natijalar.** Ta'lim tashkilotida o'quv jarayoni ishtirokchilarining xavfsizligini ta'minlash ta'lim faoliyati jarayonida professor-o'qituvchilar va talabalar hayoti va sog'lig'ini saqlashga qaratilgan. Ta'lim jarayoni xavfsizligini ta'minlovchi asosiy yo'nalishlar nafaqat individual xavfsizlik, balki ta'lim jarayonining barcha ishtirokchilarining jamoaviy xavfsizligidir. Ushbu yo'nalishlar doirasidagi faoliyatni amalga oshirish uchun jismoniy va ruhiy shikastlanishga olib keladigan vaziyatlarga tushib qolishning oldini olish, xavfsiz xulq-atvor ko'nikmalarini shakllantirish, o'quv jarayonini amalga oshirish uchun qulay shart-sharoit yaratish kerak. Ta'lim muassasalarida o'quv jarayoni ishtirokchilarining xavfsizligini ta'minlashning asosiy shartlari quyidagilardan iborat:

- professor-o'qituvchilar va talabalar uchun sog'lom va xavfsiz sharoitlar yaratishni tartibga soluvchi qonunchilik va normativ-huquqiy hujjatlar talablarini bajarilishini ta'minlash;

- o'quv jarayonida, shuningdek, amaliy va laboratoriya mashg'ulotlari, o'quv amaliyoti, turli ma'naviy-ma'rifiy tadbirlarda (bayramlar, sayohatlar, musobaqa va sport tadbirlarida qatnashish, muzeylarga tashrif buyurish, ko'rgazmalar, konferensiyalar va boshqalar) professor-o'qituvchilar va talabalar bilan sodir bo'lishi mumkin bo'lgan baxtsiz hodisalarning oldini olish.

Ta'lim muassasalarida mehnatni muhofaza qilish va o'quv jarayoni xavfsizligini ta'minlash nafaqat ta'lim muassasalarining zamonaviy texnik asbob-uskunalar bilan jihozlanishiga, balki bu jihozlardan foydalanayotgan xodimlarning kasbiy mahoratiga, xavfsizlik uchun mas'ul

shaxslarning bilim va malakasiga, professor-o'qituvchilar, o'quvchi-talabalar orasidagi psixologik muhitga bog'liq [1].

Oliy ta'lim muassasalarida professor-o'qituvchilar talabalarga ta'lim berish jarayonlarini tashkil etishda yana bir qancha muammolarga duch kelishlari mumkin. Jumladan, o'quv-laboratoriya xonalari, o'quv jihozlari, qo'shimcha materiallarning yetishmasligi va hokazo. Ushbu muammolarning mavjudligi ergonomika talablarining buzilishiga ham olib keladi, hamda o'quv jarayonining sifatiga ham o'z ta'sirini ko'rsatmay qolmaydi. Agarda yuqorida berilgan muammolarning oldi olinmasa oliy ta'lim muassasalari bitiruvchilari ish beruvchilar talabini qondira olmasligi natijasida bitiruvchilarning ish bilan ta'minlanganlik ko'rsatkichlari pasaya boshlaydi. Oliy ta'lim muassasalari bitiruvchilarning ish bilan ta'minlanganlik va samaradorlik ko'rsatkichlari kamayib ketishi, o'sha oliyoghdagi samaradorligi past yo'nalish yoki fakultetning yopilishiga olib kelishi mumkin. Natijada esa ushbu fakultetda faoliyat olib borayotgan professor-o'qituvchilar va xodimlar ishsiz qolishlari mumkin. Buning natijasida esa mamlakatda ishsizlik darajasi ortadi.

Statistik ma'lumotlarga ko'ra O'zbekistonda 2022-yil natijalariga ko'ra ishsizlik darajasi 9,6 % ni tashkil etmoqda. Ta'lim muassasalaridagi xavfli va zararli omillar ta'sirining oldini olinmasligi, adolatli mehnat sharoitining yaratilmasligi tajribali professor-o'qituvchilarning ushbu o'quv dargohini tark etishlariga sabab bo'ladi. Mehnat sharoitlari yaxshi, ilmiy va pedagogik faoliyatdagi yutuqlar, qo'shimcha faoliyat uchun rag'batlantiruvchi va kompensatsiya to'lovlari yo'lga qo'yilgan oliy ta'lim muassasalaridan professor-o'qituvchilarning ketishlari deyarli kuzatilmaydi. Professor-o'qituvchining uzoq muddat davomida bir joyda ishlashi uning tajriba orttirishiga va albatta, ta'lim sifatining oshishiga o'z xissasini qo'shmasdan qolmaydi. Shu sababli oliy ta'lim muassasalaridagi tajribali pedagog xodimlarni ishda ushlab qolish zarur. Bu orqali yetuk, o'z sohasi bo'yicha chuqur bilim va ko'nikmalarga ega yosh kadrlarni tayyorlash amalga oshiriladi.

Oliy ta'lim muassasalarida ta'lim sifatini nazorat qilish boshqaruv tizimining ajralmas qismi hisoblanib, uning asosiy vazifasi ta'lim sifatini davlat ta'lim standartlari talablariga muvofiqligini ta'minlash va o'quv jarayonlarining samaradorligini oshirish maqsadida nazoratni tashkil etish bo'yicha maqsadli va kelishilgan chora-tadbirlarni amalga oshirishdan iborat.

Sifatli ta'lim sifat kafolatini o'z ichiga olgan boshqaruv jarayonida namoyon bo'ladi. Ta'lim sifati professor-o'qituvchilar mehnat sharoitlarining yaxshilanishiga bog'liq. Chunki mehnat sharoiti xodimning ish qobiliyatiga

shuningdek, mehnat unumdorligi bevosita ta'sir qiladi. Oliy ta'lim muassasasida tomonidan yaratilgan ish muhiti bu borada juda muhimdir. Yaxshi ish sharoiti xodimlarni ishga kelishiga va o'zlari ushbu ishda uzoq muddat faoliyat yuritishlari uchun ilhomlantiradi. Bu shuni anglatadiki, yaxshi mehnat sharoiti o'ziga ishchilarni jalb qiladi. Xodimlarning ishga nisbatan layoqati orta boshlaydi. Aks holda, xodimlarda ishga nisbatan layoqatsizlik uyg'onadi va bu esa xodimlarni ushbu muassasada saqlab qolish imkonini yanada kamaytiradi. Xuddi shu ma'noda pedagog kadrlar qo'nimsizligi ta'lim sifatiga yuqori darajada salbiy ta'sir ko'rsatadi.

**Xulosa va takliflar.** Oliy ta'lim muassasalarining ish sharoitlarining mamlakatdagi ta'lim sifatiga ta'sirini o'rganish ushbu tadqiqotning asosiy maqsadi edi. O'rganish natijalari oliy ta'lim muassasalarida yaratilgan mehnat sharoitlarining professor-o'qituvchilar ushbu ta'lim muassasasida ishlash vaqtining davomiyligiga va buning natijasida ta'lim sifatiga bevosita va bilvosita ta'siri mavjudligi tasdiqlaydi.

Ushbu tadqiqot professor-o'qituvchilar uchun qulay mehnat sharoitlaridan foydalanish orqali ta'lim sifatini oshirish bilan bog'liq bo'lganligi sababli, u jiddiy nazariy, amaliy va siyosiy ahamiyatga ega. Ayrim tadqiqotchilar tanlangan o'zgaruvchilar ta'lim sifatiga qanday ta'sir qilishini tushunish uchun aloqador adabiyotlarni ko'rib chiqishdan foydalanishlari mumkin.

Ta'lim muassasalari rahbarlariga ushbu tadqiqot natijalaridan kelib chiqqan holda professor-o'qituvchilarni ishga qabul qilishda, ularning bandlik darajasini belgilashda va o'z o'quv dargohlarida uzoq muddat ishlab qolishlarini ta'minlash uchun mehnat sharoitlarini yaxshilashga yordam beradigan siyosatni ishlab chiqish tavsiya etiladi.

Ta'lim sifatini oshirish uchun professor-o'qituvchilarning bilim darajasi, xushmuomalalik darajasi va o'qitishda qo'llaniladigan innovatsiyalar, pedagogik texnologiyalarni bilish va ularni amalda qo'llay olish darajasi kabi ko'plab omillar mavjud bo'lib, ular oliy ta'lim muassasalarining o'z oldiga qo'ygan vazifalarini talab darajasida bajara olish va maqsadlariga erishishlariga yordam beradi.

Oliy ta'limning asosiy maqsadi zamon talablariga javob bera oladigan malakali, raqobatbardosh, yuksak bilimli, oliy ta'lim mutaxassisi talablariga o'zi tanlagan yo'nalishi yuzasidan talabga javob bera oladigan respublikaning ilm-fan, madaniyat, iqtisod, ijtimoiy sohalarini rivojlantirishda o'z hissasini qo'shadigan mustaqil fikrlay oladigan, yuksak ma'naviyatga ega bo'lgan yuqori salohiyatli mutaxassislarni tayyorlashdir. Sifatli ta'limgina bu maqsadga erishishni kafolatlaydi.

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## REGIONAL CHARACTERISTICS OF THE EMPLOYMENT OF THE POPULATION OF SURKHANDARO REGION

Abstract

The formation of the demographic composition of the population of a certain territory is a historical process that occurs as a result of the natural conditions of the area over a long period of time. This article briefly describes the labor resources of the population of Surkhandarya region and its employment in manufacturing industries.

**Key words:** Population, employment, labor resources, labor force, economically active population, working age population, economically inactive population.

**Introduction.** In Uzbekistan, in recent years, great attention has been paid to the issues of raising the standard of living of the population, providing them with decent jobs, and training qualified personnel. At the same time, significant progress is currently being made as a result of effective economic reforms and a number of positive developments in areas related to intellectual potential. Economic reforms are being carried out in the Republic of Uzbekistan for the effective use of labor resources and their use in the regions.

According to the data of the balance of labor resources, the total labor resources of the republic in 2020 will be 21.0 million people, of which 99.4 percent will be working people, and the rest will be working teenagers and pensioners [7].

In addition, it should be noted that 75.3 percent of labor resources or 15.9 million people belong to the category of economically active population, of which 15.2 million people belong to the category of employed population. It can be seen that the employment rate of the economically active population is 95.5 percent. The remaining 5.4 million people in the structure of labor resources are economically inactive population, which make up 24.7 percent of the total labor resources. As we mentioned above, by the end of 2020, the employment rate of the population was 94.7 percent in relation to the economically active population and 71.3 percent in relation to labor resources.

**Methods.** Special attention was paid to improving the standard of living of the population, in particular to providing employment to the population and increasing its employment. A. Smith, J.M.Keynes, B.Breev[1], V.Bulanov, B.Genkin, A.Kokina and other scientists abroad in studying and finding solutions to the problems of population and population employment and theoretical foundations in this direction carried out work on, some people in Uzbekistan also dealt with the issues of population employment in this field. In particular, Q.X.Abdurahmonov, Kh.Abulqosimov, M.R.Boriyeva, D.Mirsaidov, A.Khasanov, Sh.Kholmo'minov, O.Ata-Mirzayev and others conducted their scientific research work. In these studies, the theoretical and methodological aspects of the study of population size, dynamics, national and age-sex composition, reproduction and employment of the population have been developed.

**Results and Discussion.** Among the labor resources, according to the employment of the employed population, employment in production and non-production sectors is considered. Due to the fact that in recent years, a lot of attention has been paid to the development of small business and private entrepreneurship, now the percentage of the

population employed in production is increasing in small business and private entrepreneurship. A lot of work plans have been developed in Uzbekistan to increase the employment of the population and their implementation is being carried out on a large scale [3]. In recent years, a number of changes have occurred in the employment of the population of the republic. This, in turn, will increase the employment of the population in the regions, improve the standard of living of the population, increase the number of small businesses among the population, support private entrepreneurship and family entrepreneurship, and provide them with moral and financial support. led to a number of changes in the composition of industries.

Surkhandarya industry is dominated by light and food industries. At the same time, in recent years, the building materials industry, mining, light, food, oil refining industries are rapidly developing in the region due to the availability of raw materials and labor resources. As a result of industrial development, the share of industry in the region's gross domestic product will increase to a high level, and it will also have a great impact on the increase of the share of the population employed in this sector.

The number of people engaged in entrepreneurial activity and employed in this field is growing rapidly due to the fact that in recent years a wide path has been opened to the field of entrepreneurship and the attention given to it in increasing the employment of the residents of Surkhandarya region [2]. As a result of this, significant indicators of employment of the population in the production sectors are recorded in the region. In particular, in the following years, based on the natural geographical conditions of each district of the region, as a result of the use of existing resources, industrial sectors such as mining, light industry, construction material production, food, heavy industry are developing among the population. Development of various branches of farming and animal husbandry in agriculture and intensive development of it are being carried out. As a result, a large part of the population, in particular, the labor resources, is currently employed in production, and certain areas of production are developing at the district level, depending on the geographical features of the place, and employment of the population is provided by industry in the regions. Production sectors have different appearance by district. The reason is that the natural conditions and labor resources of the region are different, which leads to the development of the structure of the network in the region based on its geographical conditions.



Agriculture occupies a special place in the employment of residents of Surkhondaryo region. A large part of the population has been employed in this network for many years. Even now, the number of people employed in agriculture is higher than in other sectors. The main branches of agriculture: cotton growing, grain growing, horticulture, cocoon growing, lemon growing. Dryland farming (mainly wheat and barley) is practiced in the foothills. In Uzbekistan, the most thin fiber cotton is produced in the Surkhondaryo region. Horticulture and viticulture are developed in the mountainous districts of the province. Cattle, sheep (Karakol and Hisar sheep), goats, poultry, and rabbits are kept in animal husbandry. "Surkhan Suri" blackbuck skin, which is highly valued at world fur and leather auctions, is grown.

In 2010, the number of people employed in agriculture in the region was more than 397.7 thousand people, by 2015, this figure was 420.3 thousand people, and in 2020, it was 479.2 thousand people. Although these figures show that the number of people employed in agriculture is growing from year to year, but in relation to the total labor resources, the number of people employed in agriculture is decreasing in the following years. There are sufficient opportunities for the development of agriculture in Surkhondaryo region for its effective use.

The development of the agricultural sector, the intensive development of new land for agricultural purposes, not only creates an opportunity for the region to grow more agricultural products, but also plays an important role in increasing the employment of the population of the region in agriculture. The main part of regional agriculture is carried out in the Surkhan-Sherabad basin, in well-supplied areas [4]. However, with the effective use of current scientific and technical achievements in agriculture, the possibilities of agricultural development in new regions are wide. First of all, it is necessary to use the natural, economic and demographic opportunities of the region to further develop the agricultural sectors of the region and to increase the employment of the population in this sector. In this regard, several factors affect the development of regional agriculture. In particular:

Geographical location of the region;

Provision of sufficient natural conditions, land and water resources;

Proximity to the foreign market (the region borders 3 foreign countries);

Ease of demographic situation and sufficient labor force

Taking into account the above factors, the development of the region's agriculture has the opportunity to bring the existing ones to a better stage in a new intensive way. The area of land used for agriculture is 284.3 thousand hectares, of which 271.6 thousand hectares are irrigated, including 90.8 thousand hectares of cotton, 129.7 thousand hectares of grain crops, 14.1 thousand hectares of vegetables, 6.8 thousand hectares of land are planted with rice, 8.5 thousand hectares with potatoes, and 21.2 thousand hectares with fodder crops.

As a result of recent opportunities for small business and entrepreneurship in Surkhondaryo region and the establishment of large industrial zones, the population employed in industry in the region has grown significantly. In 2010, the number of people employed in the industry in the region was close to 75,000, and in 2015, this figure was more than 104.0 thousand. By 2020, there are more than 132.5 thousand people. The population of the industry is growing year by year in the region. In recent years, the establishment of a cement production enterprise in Sherabad and Zharkurgan districts, the opening of the Khanjiza polymetallic ore mine in the Sariosiyo district, the opening of the Khojaikon salt mine, and the opening of cotton ginning textile factories in many districts of the region, as well as the development of the

industrial sector in the region, are busy in this sector. leads to population growth. In the region, the industry is one of the young industries. 15-20 years ago, there was only light and food industry in Surkhondaryo region. Currently, new industries are entering and developing in the region. Currently, the mining industry is developing very quickly in Sherabad district as a result of the discovery of new mines and their operation. As one example, the Sherabad cement plant, which was opened in recent years, built a cement plant to turn this area into a finished product due to the abundance of raw material reserves. As a result, as a result of the construction of one cement plant in the region, employment of more than 5 thousand people was ensured and it became an important factor in ensuring the employment of personnel who graduated from the mining industry in the region.

Among other large industrial enterprises in Surkhondaryo region, Denov textile spinning factory, Denov wine-vodka factory, Zhargorgonneft cement plant and oil processing department located in Zhargorgon district, Sherabad ceramic art products, mining of polymetallic ores and stone sorting in Sariosia building materials factories, Shargun coal mine, flour combine in Shorchi district, silk and sewing factories in Termiz city, Khojaikon salt mines and other large industrial enterprises are working.

The establishment of enterprises with the participation of foreign investments in Surkhondaryo region started much later than in other regions of the republic. This was caused by the unfavorable geopolitical position of the region (aggravation of the political situation in Tajikistan in the early 1990 s and Afghanistan in the late 1990 s). In the region, joint ventures began to be established in the late 1990 s and early 2000 s. However, despite this, the region ranks last in Uzbekistan in terms of the establishment of joint ventures. For example, at the beginning of the 21st century, the number of joint ventures in the region was 36, and the number of joint ventures in the region was 1.5 % of the republic. And the republic provided only 0.6 percent of gross industrial products. Currently, as of 2020, there are 142 joint ventures, 283 foreign enterprises and More than 25,376 registered small and private enterprises are working. The largest number of foreign and joint ventures in the Surkhondaryo region belong to the countries of the Islamic Emirate of Afghanistan (267), the Russian Federation (41), Tajikistan (21), and Turkey (11).

After agriculture and industry, trade and general catering (9.7 %), construction (8.6 %), transport (3.2 %), housing and communal services are in the following places in terms of employment of the population of Surkhondaryo region. economy (1.6 %) Employment of the population has been increasing in recent years, especially in trade and construction. Currently, more than 130.0 thousand people work in trade and general catering. Since the demand for trade and general catering is increasing day by day and it is a profitable sector, the level of employment in this sector is increasing in recent years.

The changes taking place in the field of construction in our republic do not bypass the region. In the field of construction, the complexes that are being built in a new way and as a result of their large-scale construction work is one of the reasons why the majority of the labor force in the region is employed in this field. Currently, more than 115.3 thousand people are employed in construction in the region.

**Conclusion.** Based on the current natural, socio-economic situation of the region as a whole, there are many opportunities to develop production areas in the region, to bring it to a new modern state, and to increase the employment of the population in it. Due to the fact that there are very few production enterprises in the region for many years and the majority of the main population is employed only in agriculture, there are many opportunities to increase the production potential of the region. In this regard, it has enough

opportunities to adequately use its natural resources, raw materials, and labor force.

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## КОМПЬЮТЕРНОЕ МОДЕЛИРОВАНИЕ НЕСТАЦИОНАРНОГО ПРОЦЕССА ТЕПЛОПЕРЕНОСА ПРИ КОНТАКТНОМ ВЗАИМОДЕЙСТВИИ С ОКРУЖАЮЩЕЙ СРЕДОЙ

Аннотация

В статье, на основе решение двумерной задачи теплопроводности методом конечных элементов, исследуется нестационарный процесс теплопереноса при контактном взаимодействии между нагретой до высоких температур конструкции с окружающей средой. Приведены изотермы распределения температуры в неоднородной пластине с включениями. Изучается влияние концентраторов на формирование неоднородного поля температуры. Установлено, что с возрастанием времени тепловой поток обтекает включения, так как коэффициент теплопроводности включения значительно меньше теплофизических параметров основного материала. Задачи исследования состояли в определении поля температур в прилегающем к нагреваемой поверхности слое материала и количественной оценке разности температур поверхности при адекватных условиях теплообмена.

**Ключевые слова:** Теплопроводность, нестационарный процесс, неоднородность, теплообмен, неявная разностная схема, МКЭ.

**Введение.** Важным направлением современных научно-технических исследований является построение адекватных вычислительных моделей работы различных инженерных конструкций, которые находятся в условиях температурных воздействий. Сложность геометрии исследуемых объектов и учет реальных видов нагрузок, как правило, предполагают привлечение численных методов и вычислительных машин для оценки их процесса теплообмена. Поэтому, важной проблемой является создание математически обоснованных методов, алгоритмов и соответствующего программного обеспечения с целью создания средств автоматизации проектирования современных приборов и аппаратов. За последние десятилетия сфера интенсивного исследования и применения явлений теплообмена чрезвычайно расширилась.

**Обзор литературы.** Теоретическое исследование процессов теплообмена в значительной степени базируется на их численном моделировании и приобретает все более значительную роль в связи с тем, что для современной науки и техники необходим достоверный прогноз таких процессов. В работе [1] приводятся методы исследования проблем теплопередачи современными численными методами. Рассматриваются численные методы приближенного решения стационарных и нестационарных многомерных задач теплопроводности. В работе [2] приведены основные сведения по методам, алгоритмам и программам решения на ЭВМ основных задач теплопроводности. Приведены примеры решения линейных, нелинейных, одномерных и двумерных нестационарных задач. В работе [3] представлено описание общего подхода к решению задач теплопроводности методом конечных элементов, приведены пошаговые инструкции для создания расчётных моделей. В работе [4] излагаются методы расчета температурных полей бетонных гидротехнических сооружений в строительный и

эксплуатационный периоды. В статье [5] предлагается метод решения систем параболических дифференциальных уравнений теплопроводности на модели теплового контакта двух тел с разными теплофизическими характеристиками при наличии смешанные граничные условия в плоскости их контакта. В работе [6] рассмотрены решения задач теплопроводности с внутренними источниками тепла, освещены вопросы конвективного теплообмена и гидродинамики при движении в трубах однофазных теплоносителей с постоянными и переменными физическими свойствами. В статье [7] рассматривается однородная краевая задача для уравнения теплопроводности в нецилиндрической системе области, а именно в перевернутой пирамиде с вершиной в начале координат, две грани которой лежат в координатных плоскостях. Решение задачи ищется в виде суммы обобщенных тепловых потенциалы. Работа [8] посвящена изложению основ метода конечных элементов - одного из наиболее эффективных современных методов численного решения инженерных, физических и математических задач с применением вычислительной техники. Рассмотрены основные принципы метода конечных элементов и их приложении к задачам теории теплопроводности и, теории потенциала. Работа [9] представляет собой руководство по методу конечных элементов, позволяющему получать численные решения инженерных, физических и математических задач. В работе [10] разработан алгоритм расчета двумерных задач теплопроводности методом конечных элементов и приводится решение двумерной задачи теплопроводности методом конечных элементов в MATCAD. В статье [11] рассматривается процесс теплообмена в механических системах. На основе метода конечных элементов исследуется решение двумерной задачи теплопроводности при наличии точечных источников тепла. На основе разработанного программного обеспечения приводится

численное решение конкретной задачи и изучено влияние неоднородности на распределения поля температуры. В статье [12] на основе решения двумерной задачи теплопроводности, методом конечных элементов, исследуется процесс теплопереноса в пластине из неоднородного материала. На основе разработанного алгоритма решения программного обеспечения приводится численное решение двумерной задачи теплопроводности, содержащей изолированный квадратный вырез в центре и изучено распределения поля температуры.

В данной статье на основе решения двумерной задачи теплопроводности методом конечных элементов,

**Метод решения.** Рассматривается двумерная нестационарная задача о распределении тепла при контактом взаимодействии бесконечной стальной балки с неоднородной окружающей средой. Для определения температурного поля решается задача теплопроводности на основе уравнения [8]:

$$\lambda \frac{\partial T}{\partial t} = K_{xx} \frac{\partial^2 T}{\partial x^2} + K_{yy} \frac{\partial^2 T}{\partial y^2}, \quad (1)$$

где

$\lambda = c \rho$  - удельная объемная теплоемкость;

$c$  - удельная теплоемкость материала;

$\rho$  - плотность;

$K_{xx}, K_{yy}$  - коэффициенты теплопроводности в соответствующих направлениях.

В этом случае решение задачи сводится к минимизации функционала [8]:

$$\chi = \int_V \left[ K_{xx} \left( \frac{\partial T}{\partial x} \right)^2 + K_{yy} \left( \frac{\partial T}{\partial y} \right)^2 + 2\lambda \frac{\partial T}{\partial t} T \right] dV + \int_{S_1} \frac{h}{2} (T - T_\infty)^2 dS,$$

где  $S_1$  - площадь поверхности, где происходит конвективный обмен тепла.

Температура в конечном элементе задается как произведение двух независимых функций [9]:

$$T^{(e)} = N(x, y)T(t)$$

или в матричном виде:

$$T^{(e)} = \begin{bmatrix} N_i(x, y) & N_j(x, y) & N_k(x, y) \end{bmatrix} \begin{Bmatrix} T_i(t) \\ T_j(t) \\ T_k(t) \end{Bmatrix} \quad (2)$$

Условие экстремума функционала приводит к системе дифференциальных уравнений для  $e$ -го конечного элемента:

$$\left[ c^e \right] \frac{\partial \{T\}}{\partial t} + \left[ k^e \right] \{T\} + \{f^e\} = 0 \quad (3)$$

Здесь

$$\left[ c^e \right] = \int_{V^e} \lambda [N][N]^T dV, \quad (4)$$

$$\left[ k^e \right] = \int_{V^e} [B^e][D^e][B^e]^T dV + \int_{S_1} h[N][N]^T dS, \quad (5)$$

$$\{f^e\} = - \int_{S_1} h T_\infty [N]^T dS, \quad (6)$$

где

$V^e$  - объем конечного элемента,  $[N^e]$  - матрица функции формы,  $[B^e]$  - матрица производных от функции формы,  $[D^e]$  - матрица свойств материала, содержащая коэффициенты теплопроводности.

С целью исследования нестационарного процесса распределения тепла в конструкции для сетки конечных элементов записывается система обыкновенных дифференциальных уравнений:

$$\left[ C \right] \frac{\partial \{T\}}{\partial t} + \left[ K \right] \{T\} + \{F\} = 0, \quad (7)$$

исследуется нестационарный процесс теплопереноса при контактом взаимодействии между нагретой до высоких температур конструкцией с окружающей средой, а также установление определяющих факторов, оказывающих влияние на реальные значения контактных температур. Изучается влияние концентраторов на формирование неоднородного поля температуры. Задачи исследования состояли в определении поля температур в прилегающем к нагреваемой поверхности слое материала и количественной оценке разности температур поверхности при адекватных условиях теплообмена.

где

$$[C] = \sum_e [c^e]; \quad [K] = \sum_e [k^e]; \quad [F] = \sum_e [f^e]$$

Заменяя производную по времени в уравнении (7) ее конечно-разностным аналогом, получим неявную разностную схему для решения уравнения теплопроводности методом конечных элементов [8,9]:

$$\left( \frac{[C]}{\Delta t} + [K] \right) \{T\}^{n+1} = \frac{[C]}{\Delta t} \{T\}^n - \{F\}^{n+1} \quad (8)$$

Таким образом, если известен вектор температуры  $\{T\}^n$  в момент времени  $t^n$ , то температура конструкции в момент времени  $t^{n+1} = t^n + \Delta t$ , формируется в результате решения системы линейных алгебраических уравнений (8).

Изучение процесса распространения тепла при контактном взаимодействии бесконечной стальной балки, нагретой до температуры 1500°C, с поверхностью грунта, имеющей температуру 20 °C (рис. 1.а).

На определенном расстоянии от поверхности грунта имеется ограниченной области в форме прямоугольника, заполненной нефтью, водой или воздухом. С течением времени балка остывает за счет теплообмена с окружающей средой

( $T_\infty = 20^\circ\text{C}$ ) и поверхностью грунта. С учетом симметрии рассматривается  $\frac{1}{2}$  часть конструкции (рис. 1.б).

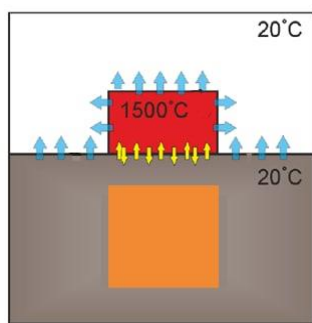


Рис.1.а – Иллюстрация физической постановки задачи

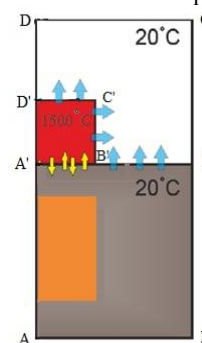


Рис. 1.б –  $\frac{1}{2}$  области с учетом плоскости симметрии

**Анализ и результаты.** Для подтверждения правильности полученных решений при сплошном грунте, на рис. 2, приведены графики сравнения с результатами, полученными на основе системы ANSYS Fluent [13]. Совпадение результатов показывает правильность разработанного алгоритма и программного комплекса.

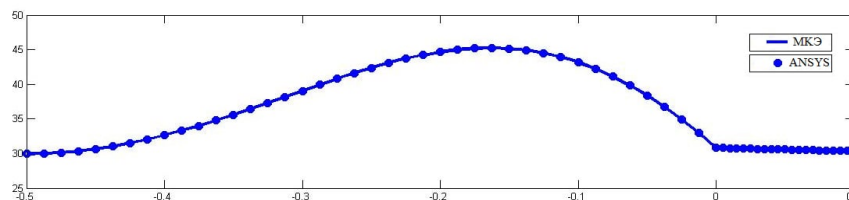


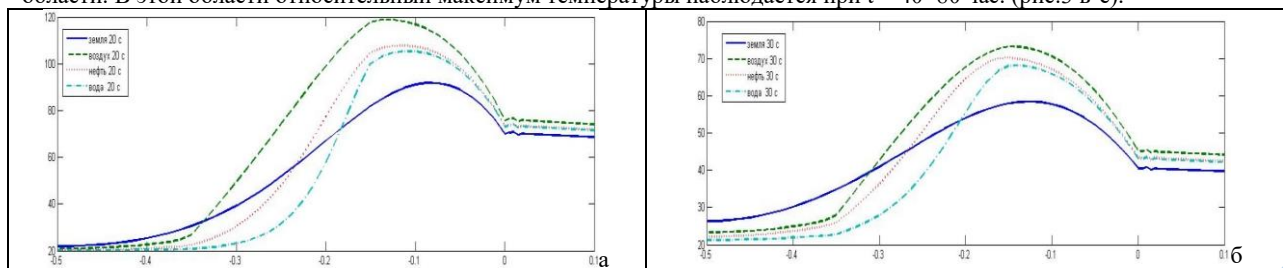
Рис.2 Сравнения результатов расчета.

Далее рассматривается процесс переноса тепла, когда под основанием стальной балки на расстоянии 0.15 м располагается ограниченная область в форме квадрата размерами 0.2 м, которая занята: воздухом, нефтью или водой.

Для изучения процесса распространения тепла на рис.3 приводятся графики распределения значений температуры по вертикальной оси симметрии для различных временных характеристик, при которых наблюдается влияние неоднородностей ( $t = 20 \div 80$  часов).

Анализ кривых распределения значений температуры указывает на то, что наличие неоднородностей в конструкции существенно влияет температурное поле. Так как теплопроводность воздуха значительно меньше теплопроводности грунта, то в окрестности верхней поверхности ограниченной области, заполненной воздухом, наблюдается концентрация повышенных значений температуры (рис. 3).

Такая же тенденция наблюдается при заполнении ее нефтью и водой. С течением времени тепло охлаждается и распространяется в глубь конструкции, где максимальное значение температуры наблюдается внутри ограниченной области. В этой области относительный максимум температуры наблюдается при  $t = 40 \div 80$  час. (рис.3 в-е).



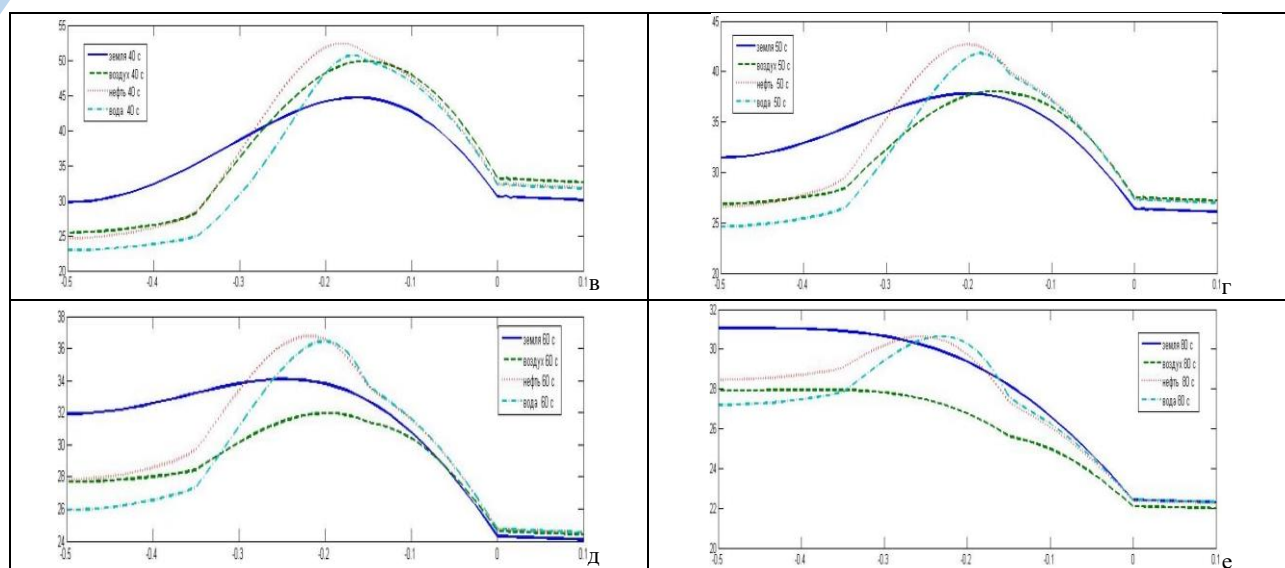


Рис.3 Графики распределения значений температуры

Необходимо отметить, что этом же интервале времени в окрестности нижней поверхности ограниченной области, значения температуры меньше, чем при сплошном грунте.

**Заключение.** В результате численных исследований установлено, что теплофизические процессы, протекающих при взаимодействии одиночной разогретой до высоких температур частицы с поверхностью материалов, важное значение приобретает исследование динамики температурного поля неоднородной среды.

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## ОСНОВНЫЕ НАПРАВЛЕНИЯ ОРГАНИЗАЦИИ СИЛОВОЙ ПОДГОТОВКИ В ГРЕБЛЕ НА БАЙДАРКАХ И КАНОЭ

Аннотация

В статье дана характеристика различных составляющих силовой подготовки гребцов на байдарках и каноэ. Представлена совокупность различных сторон силовой подготовленности проявляемых в специальной деятельности гребцов. Описаны факторы, обуславливающие проявление силовых качеств. Указаны задачи силовой подготовки гребцов, определяющие направленность и содержание тренировочного процесса. Представлены методические принципы, которыми необходимо руководствоваться при организации силовой подготовки гребцов.

**Ключевые слова:** Гребля, байдарка, каноэ, сила, силовая подготовка, тренажеры.

Актуальность работы. Достижение высоких и стабильных результатов в гребном спорте невозможно без высокого уровня развития силовых способностей спортсменов. От них в значительной степени зависит результат в этом виде спорта. Этот фактор во многом определяет возможности спортсменов преодолевать значительные внешние сопротивления, являющиеся специфической средой деятельности в гребле. Фундамент будущих спортивных успехов закладывается на ранних этапах специализации и обеспечивается качеством подготовки резерва.

Наметившаяся в последнее время ослабление позиций отечественных гребцов на байдарках на мировой арене во многом обусловлено недостатками подготовки юных спортсменов. Причины отставания наших лидеров следует искать в системе спортивной тренировки юных гребцов на байдарках, в частности в такой ее составляющей, как силовая подготовка [1].

Современная научно-методическая литература по гребному спорту не содержит обоснованных рекомендаций, позволяющих решить проблему силовой подготовки резерва. Состояние отечественной и зарубежной теории и практики по этому вопросу характеризуется разнообразием подходов и отсутствием конкретных рекомендаций по методике силовой подготовки спортсменов юношеского возраста.

Существующие исследования, в основном, посвящены вопросам совершенствования данной стороны подготовленности у взрослых квалифицированных гребцов. У юношей же эта проблема рассматривается либо с позиций поиска адекватных средств общей физической подготовки по развитию значимых для гребцов мышечных групп, либо с целью определения степени эффективности использования различных тренажеров для развития силы на суше и гидротормозов и отягощений на воде [3].

Гребля на байдарках и каноэ относится к видам спорта на выносливость, в то же время необходимость специальной силовой подготовки при занятиях этим видом спорта не вызывает сомнения. Силовые способности гребцов на байдарках и каноэ реализуются через мышечные усилия путем создания сил, действующих внутри системы гребец - весло - лодка (сиденье, подножку, весло). Специальная деятельность гребцов предполагает четко выраженную структуру силовых способностей, имеющую свои особенности [5]:

- динамическая и статическая силы мышц, которые реализуются в максимальных тяговых усилиях на весле и обеспечивающих поддержание рабочей позы гребца;
- скоростно-силовые способности, обуславливающие максимальный темп гребли, интенсивность нарастания усилий на весле во время гребка, максимальную мощность гребка;
- силовая выносливость (статическая и динамическая), проявляющаяся в величине и характере приложения усилий к веслу, способствующая сохранению рациональной рабочей позы гребца.

В значительной мере уровень проявления силовых показателей гребца определяется конкретными факторами. Так, морфофункциональные предпосылки силовых способностей гребца зависят от состава мышц, антропометрических характеристик тела, энергетических возможностей и топографией мышечных групп. Вместе с тем, основой достижения оптимальной силовой подготовленности является целенаправленная организация тренировочного процесса. Основной целью силовой подготовки является создание необходимой базы для развития специальных силовых способностей гребца. Приоритетной задачей базовой силовой подготовки является достижение максимально высоких показателей мышечной силы и высокого уровня силовой выносливости [2].

Решение этих задач предполагает увеличение соответствующих величин показателей специальных силовых возможностей при выполнении работы в лодке. Следует отметить, что силовой потенциал гребцов, в условиях специфической деятельности, реализуется не более чем на 60% от максимальных возможностей. Вместе с тем, отмечается высокая взаимосвязь между базовым уровнем силовой подготовленности и эффективностью работы в условиях соревнований [5].

В процессе специальной силовой подготовки гребцов на байдарках и каноэ решаются следующие задачи [4]:

- увеличение максимальной мышечной силы гребцов;
- повышение уровня силовой выносливости;
- совершенствование скоростно-силовых возможностей спортсменов.

Решение этих задач должно осуществляться в двух направлениях – повышения базовых силовых способностей средствами общей физической подготовки и целенаправленной силовой подготовки в специфических условиях. Опыт подготовки высококвалифицированных

гребцов на байдарках и каноэ свидетельствует о положительном эффекте использования средств атлетической гимнастики, тренажеров, упражнений с отягощениями, сопротивлениями, собственным весом с целью развития максимальной силы и силовой выносливости. Развитие максимальных силовых возможностей гребцов предполагает использование максимальных весов, сопротивлений, отягощений. При выполнении этих упражнений обязательным условием является достаточное восстановление между подходами и сериями, что обеспечивает высокий тренирующий эффект и избирательность воздействия нагрузки.

Использование тренажеров в качестве средства развития силовой выносливости получило широкое распространение в силовой подготовке гребцов. Однако у

Статистически значимая разница в средней силе между левым и правым гребками подтверждает результаты предыдущих исследований.

специалистов гребного спорта нет единого мнения по поводу задач, решаемых тренажерной подготовкой. Некоторые из них [1,2] рекомендуют использование тренажерных устройств, как для развития специальной выносливости, так и для совершенствования технического мастерства. Другие [3] утверждают, что гребля на тренажерах может негативно воздействовать на структуру движения спортсменов. Это чревато искажением техники и специфических двигательных ощущений. В таких случаях тренажерную подготовку необходимо рассматривать как средство развития общей силовой выносливости гребцов. Обязательным условием использования тренажерной подготовки в этих случаях является выполнение достаточно длительной работы при повышенной концентрации лактата (более 8 мм/л).

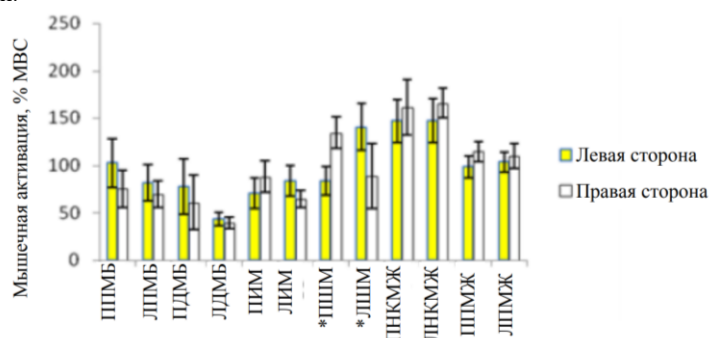


Рисунок 1. Сравнение пиковой мышечной активации во время левого и правого гребка

МВС – максимальное волевое сокращение мышцы;

ППМБ – правая прямая мышца бедра;

ЛПМБ – левая прямая мышца бедра;

ПДМБ – правая двуглавая мышца бедра;

ЛДМБ – левая двуглавая мышца бедра;

ПИМ – правая икроножная мышца;

ЛИМ – левая икроножная мышца;

ПШМС – правая широчайшая мышца спины;

ЛШМС – левая широчайшая мышца спины;

ПНКМЖ – правая наружная косая мышца живота;

ЛНКМЖ – левая наружная косая мышца живота;

ППМЖ – правая прямая мышца живота;

ЛПМЖ – левая прямая мышца живота.

Таким образом, в данной исследуемой выборке была выявлена явная зависимость величины развиваемой силы тяги от левого гребка; это позволяет поднять вопрос о возможном преобладании леворукости в данной группе, хотя эти данные не регистрировались в рамках настоящего исследования. Однако в качестве тягового механизма это могло бы только повлиять на боковое движение байдарки, если бы положение лопасти весла не способствовало приложению силы в нужном направлении. Кроме того, четко выраженная активация прямой мышцы живота и прямой мышцы бедра, удерживающая нижнюю часть туловища и ипсилатеральную (расположенную на той же стороне) ногу в напряженном состоянии, может способствовать направлению силы в продольном направлении к низу байдарки в намеренном направлении движения. При этом вариация между обеими сторонами, хотя и достигает уровня статистической значимости, не обязательно будет вызывать значительное снижение результативности гребли, однако, данный дисбаланс может послужить причиной предрасположенности к травматизму у спортсменов.

При всей важности базовой силовой подготовки гребцов на суше, основным фактором воздействия на подготовленность гребцов остается специальная силовая

тренировка на воде. Здесь также следует дифференцировать средства и методы подготовки, используемые для развития тех или иных силовых способностей. В целях повышения специальных скоростно-силовых качеств используется гребля в лодке с применением гидротормоза, отягощений, гребля на мелководье, выполнение стартовых ускорений с места, гребля против ветра. Одним из главных условий развития специальных скоростно-силовых способностей гребцов является выполнение коротких (до 20 секунд) ускорений максимальной интенсивности. Время восстановления для последующей работы должно быть достаточным и осуществляться в виде аэробной низкоинтенсивной работы.

Повышение уровня специальной силовой выносливости осуществляется в условиях аэробно-силовых тренировок с использованием ранее упомянутых средств. При этом вес отягощения в лодках и размеры тормозных приспособлений подбираются таким образом, чтобы они не оказывали заметного влияния на технику движения гребцов. Продолжительность выполняемой работы не должна быть менее 30-40 минут, а ее интенсивность обеспечивать концентрацию лактата на уровне 8 и более мм/л.



Организация тренировочного процесса, направленного на развитие специальных силовых способностей гребцов, требует соблюдения следующих условий:

- концентрированное распределение средств и методов силовой направленности в микро- и мезоциклах;
- периодичность и сменность преимущественной направленности нагрузки на различных этапах годового цикла;

- обеспечение необходимых условий и требований к организации тренировочного процесса, оснащению оборудованием и средствами контроля и восстановления;

- учет календаря и близости соревнований на протяжении сезона.

Практика подготовки высококвалифицированных спортсменов свидетельствует, что организация учебно-тренировочного процесса с учетом предлагаемых рекомендаций, способствует сокращению времени и энергозатрат спортсменов и повышает эффективность занятий по развитию силовых способностей гребцов.

Выводы.

1. Изучение и анализ проблемы силовой подготовки в гребле на байдарках свидетельствует, что в современной литературе не получили должного освещения вопросы развития силовых способностей гребцов этапа углубленной спортивной специализации. Современные рекомендации по тренировке юных гребцов ориентированы на использование тех же средств и методов развития силовых способностей, что и у взрослых.

2. Изучение внутри функциональной организации компонентов силовой подготовленности у гребцов на байдарках этапа углубленной спортивной специализации свидетельствует о достаточно значимой взаимозависимости показателей, характеризующих уровни общих и специальных силовых возможностей.

3. Проведенный педагогический эксперимент с гребцами 14-16 лет этапа углубленной спортивной специализации позволил разработать и обосновать методику развития силовых способностей.

4. Установлено, что внедрение в тренировочный процесс предложенных вариантов методики развития силовых способностей гребцов на байдарках этапа углубленной спортивной специализации способствует – повышению уровня показателей максимальной силы спортсменов до 15,2 %, силовой выносливости до 13,7 %, статической силы до 14,3 %.

Практические рекомендации:

1. С целью качественной организации процесса силовой подготовки гребцов на байдарках этапа углубленной спортивной специализации следует планировать и реализовывать его на протяжении всего годового цикла подготовки. При планировании объемов

и интенсивности нагрузок силовой направленности следует иметь в виду, что наибольший естественный прирост силовых показателей отмечается в данный период развития организма подростка. Это означает, что освоение адекватной возрасту физической нагрузки возможно сопровождаться заметным увеличением силовых качеств спортсмена.

2. Учитывая данные положения следует: формировать группы занимающихся с учетом их биологического возраста; при планировании процесса силовой подготовки необходимо в первую очередь работать над развитием силовой выносливости общего и специального характера, затем над развитием максимальной силы в ее специфических и неспецифических проявлениях, даже над развитием статической выносливости и взрывной силы.

3. При проведении занятий с использованием средств общей физической подготовки следует, по возможности, широко использовать тренажеры. При этом предпочтение отдается тренажерам типа «Лидер», пружинно-рычажному и тренажеру типа «скользящая тележка».

Тренажерная подготовка не должна служить средством совершенствования технического мастерства юных байдарочников. Основное ее предназначение заключается в повышении уровня силовых способностей группы мышц, обеспечивающих рабочее движение гребца.

4. Средства общего физического развития силовой подготовки должны использоваться как для повышения собственно силового уровня, так и для развития функциональных возможностей детского организма.

5. При организации и проведении тренировочного процесса по развитию специальных силовых способностей байдарочников следует планировать тренировки силовой направленности на протяжении всего периода занятий в специфических условиях (на воде).

6. Объем и интенсивность специальной силовой подготовки должны определяться календарем соревнований, учитывая то, что исключение подобных занятий даже на неделю приводит к значительному снижению специальных силовых показателей юного организма.

7. Эффективность специальной силовой подготовки данной возрастной категории повышается при сочетании специальной работы силового характера с выполнением упражнений на развитие силовых качеств на суше.

8. Упражнения специального силового воздействия рекомендуется применять 3-4 раза в недельном цикле подготовки. Упражнения целенаправленного силового воздействия рекомендуется использовать не чаще 1-го раза в неделю.

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## THE ANALYSIS OF PHYSICAL DEVELOPMENT AND PHYSICAL FITNESS OF FEMALE STUDENTS, PREDISPOSED TO VARIOUS DISEASES

Abstract

Rapidly developing modern society is interested in a healthy competitive younger generation. However, the health of young people is constantly deteriorating. This article was presented an analysis of the physical development and preparedness of students living in environmentally unfavorable environmental conditions and having a predisposition to various diseases.

**Key words:** Health, ecology, young learners, physical development, physical fitness, morphofunctional indicators, predisposition to diseases.

**Introduction.** Rapidly developing modern society is interested in a healthy competitive younger generation. However, the health of young people is constantly deteriorating. This article was presented an analysis of the physical development and preparedness of students living in environmentally unfavorable environmental conditions and having a predisposition to various diseases.

**Results and discussion.** Preserving and strengthening the health of the population is one of the main strategic development tasks of any country. In Uzbekistan, it is regulated and provided by as such regulatory documents the Law of the Republic of Uzbekistan "On Education" (dated September 23, 2020, No. LRU-637), the Decree of the President of the Republic of Uzbekistan "On measures to further improve and popularize physical culture and sports in the Republic of Uzbekistan" (dated January 24, 2020, No. DP-5924), as well as "On measures to widely introduce a healthy lifestyle and further develop mass sports" (dated October 30 .2020, No. DP-6099). Aimed at ensuring the formation of a stable immune system against diseases in every citizen through regular physical education and mass sports and the formation of healthy lifestyle skills, rejection of bad habits, adherence to the principles of proper nutrition, systematic and effective organization of work on recovery and rehabilitation, mass events for physical activity, creation of appropriate infrastructure and other necessary conditions, etc. [1,2,3].

One of the problems of health promotion and physical development, in particular, of youth students are the unfavorable environmental situation both throughout the world and in our country. The scale of the ecological crisis and its tendencies rightly cause public and civil concern, as it affects the physical condition and health of the population [4,5,6].

Of particular importance is the problem for young learners whose health is sensitive to any environmental changes in the region. At the same time, it is not always possible to prevent the negative impact of adverse factors on the growing organism.

An unfavorable state of the environment entails a high level of morbidity of various systems of the human body. The risk of morbidity is especially high in regions with a dysfunctional environmental situation: in the Tashkent region, in the cities of the Fergana Valley, in the regions of the Aral Sea region, in particular, in the Khorezm region, etc. [R. Kazakova, 1997; S.T. Iskandarova, 1998; B.A. Revich, 2001].

An unfavorable ecological situation, which has a negative impact on the environment, causes the destruction

and destruction of ecological systems, which ultimately affects the deterioration of the health of the population and, in particular, student youth, which significantly reduces the level of physical and general development [7,8].

In this regard, the search for ways to improve the health of schoolchildren living in areas with an unfavorable environmental situation, to prevent and reduce the risk of environmentally induced pathological reactions becomes especially urgent [9, 10]. To this end, it is necessary to adjust the concept of preserving, strengthening and developing the health of young people. If until recently it was believed that the development of the disease can be prevented only by eliminating the negative factor of influence on the body, now it is more expedient to talk about such measures of influence, when using which the body itself optimizes the work of its organs and systems, leveling the effect of the external environment and remaining healthy [11].

The purpose of the research: to determine the annual dynamics of physical development and physical fitness of female students living in ecologically unfavorable environmental conditions and having a predisposition to various diseases.

The results of research and their discussion. At the Urgench State University (Uzbekistan, Khorezm region), through a questionnaire survey and pedagogical observations, the opinion of students and workers of physical culture and sports on issues of interest to us was revealed. More than 825 respondents took part in it, including 285 physical culture and sports workers and 540 students studying in higher educational institutions.

An analysis of the respondents' answers about the state of the environment in the Khorezm region in comparison with other regions of the republic showed the following: 85.3% of the respondents declared a worse state of the environment than in other regions of the republic; 13.5% answered that the state of the environment in the Khorezm region is "the same as in other regions of the republic"; 1.2% of respondents found it difficult to answer this question. The answer - "better than in other regions of the republic" - was not noted by the respondents. According to the teachers, the current physical education programs for higher educational institutions do not take into account the state of the environment and its impact on the health of students (78.3%).

The conducted sociological research among students and physical culture workers allows us to draw the following conclusions:

- students and physical education teachers are aware of the impact of the environment on health;

- in the opinion of the teachers, the current physical education programs do not take into account the state of the environment, and the methodological literature, which provides for the specifics of conducting physical education classes with students in ecologically unfavorable regions, is not enough;

- in educational and independent classes in physical education, modern non-traditional types of health-improving physical culture are practically not used;

- in the university, in physical education classes, a differentiated approach is not carried out, taking into account the predisposition of students to various diseases, which could increase the health-improving capabilities of educational and independent physical education classes [13].

At the beginning of the 2017-2018 academic year, more than 700 female students were examined using the method of computerized electro puncture diagnostics.

An analysis of domestic and foreign studies related to the determination of various properties of biologically active (reflexogenic) zones on the skin surface, using the method of computerized electropuncture diagnostics, indicates the possibility of obtaining diagnostic information from these zones. So, by changing the electrical parameters of biologically active zones, including the eclectic conductivity (the strength of the passing current), one can judge the localization of the pathological process, as well as its dynamics during the development of the disease or during treatment. In addition, it has been shown that these changes in these biologically active zones can appear earlier than clear clinical signs of the disease, i.e. identification of early stages of the disease is possible [12].

With the help of this technique, the confirmation of the results of the analysis of the medical records of the examined female students was obtained.

Analysis of the research results revealed 3 main groups predisposed to functional changes in the health status of female students: group 1 - cardiovascular system (CVS); Group 2 - the respiratory system (RS); Group 3 - musculoskeletal system (MS).

The dynamics of morphological and functional indicators of the 1st group of female students in the 2017-2018 academic year is presented in Table 1.

Analysis of the dynamics of the main morphological and functional indicators of girl students in three groups revealed the following: the average value in terms of length and body weight among girls at the beginning of the school year was, respectively: in group 1,  $154.3 \pm 4.2$  cm and  $54.8 \pm 5.3$  kg, and at the end -  $155.2 \pm 4.6$  cm and  $56.1 \pm 5.8$  kg ( $P < 0.05$ ); in the 2nd group -  $154.1 \pm 4.3$  cm and  $54.5 \pm 4.6$  kg, and at the end -  $154.9 \pm 4.9$  cm ( $P > 0.05$ ) and  $55.4 \pm 4, 9$  kg ( $P < 0.01$ ); in group 3 -  $154.2 \pm 4.5$  cm and  $53.3 \pm 4.3$  kg, and at the end -  $154.9 \pm 4.9$  cm ( $P > 0.05$ ) and  $54.2 \pm 4, 7$  kg ( $P < 0.05$ ).

The average values of the functional indicators of the vital capacity of the lungs (VCL), the Ruffier-Dixon index (RDI), the Barbell and Gench tests in girls of three groups at the beginning of the school year were, respectively: in the 1st group -  $2.4 \pm 0.6$  l,  $11, 1 \pm 0.7$ ,  $28.3 \pm 2.4$  s and  $18.8 \pm 3.4$  s, and at the end -  $2.3 \pm 0.6$  L ( $P < 0.05$ ),  $11.3 \pm 0, 8$  ( $P > 0.05$ ),

$27.8 \pm 2.2$  s ( $P < 0.05$ ) and  $18.1 \pm 3.2$  s ( $P < 0.01$ ); in the 2nd -  $2.2 \pm 0.5$  l,  $10.9 \pm 0.6$ ,  $18.8 \pm 2.2$  s and  $13.7 \pm 2.9$  s, and at the end -  $2.0 \pm 0, 4$  L ( $P > 0.05$ ),  $11.1 \pm 0.7$  ( $P > 0.05$ ),  $18.1 \pm 2.0$  s ( $P < 0.05$ ) and  $13.1 \pm 2.6$  s ( $P > 0.05$ ); in group 3 -  $2.8 \pm 0.5$  l,  $11.1 \pm 1.1$ ,  $31.3 \pm 2.1$  s and  $20.7 \pm 2.3$  s, and at the end -  $2.7 \pm 0, 7$  L ( $P > 0.01$ ),  $10.9 \pm 1.2$  ( $P > 0.05$ ),  $29.2 \pm 2.7$  s ( $P < 0.01$ ) and  $18.8 \pm 3.1$  s ( $P < 0.05$ ).

To determine the level of physical fitness (PF) and public health, special tests "Alpomish" and "Barchinoy" were used, developed by the Ministry of Physical Culture and Sports of the Republic of Uzbekistan, the Ministry of Public Education, the Ministry of Higher and Secondary Specialized Education, the Ministry of Health, the Ministry of Agriculture and Water Resources, Ministry of Internal Affairs, Ministry of Defense, Council of the Federation of Trade Unions of Uzbekistan for girls and boys 18-23 years old.

The girls were tested according to the following program: running 100 m, running 2000 m, long jump from a standing position, bending forward from a standing position to determine flexibility, lifting the torso from a supine position, running-walking for 6 minutes, throwing a grenade ...

The dynamics of PF among female students of three groups during the academic year revealed the following tendency:

Running at 100 meters. The average result among girls at the beginning of the school year was  $19.7 \pm 0.8$  m / s in the 1st group,  $19.6 \pm 1.2$  m / s in the 2nd group, and in the 3rd -  $19.5 \pm 1.1$  m / s, and at the end, respectively -  $19.3 \pm 1.0$  m / s,  $19.3 \pm 1.0$  m / s and  $19.1 \pm 0.8$  m / s ( $P > 0.05$ ).

Cross at 2000 m. The average result among girls at the beginning of the school year was  $15.51 \pm 0.8$  min / sec in the 1st group,  $15.23 \pm 0.7$  min / sec in the 2nd group, and in the 3rd -  $15.31 \pm 0.6$  min / sec, and at the end, respectively -  $15.21 \pm 0.6$  min / sec,  $15.09 \pm 0.8$  min / sec and  $15.12 \pm 0.4$  min / sec. The differences are statistically insignificant ( $P > 0.05$ ).

Long jump from a place. The average result among girls in the first dimension was  $149.2 \pm 4.8$  cm in the 1st group,  $152.7 \pm 5.3$  cm in the 2nd, and  $150.8 \pm 4.3$  cm in the 3rd, and at the end, respectively -  $151.8 \pm 3.6$  cm ( $P < 0.05$ ),  $154.1 \pm 4.0$  cm ( $P > 0.05$ ) and  $155.3 \pm 2.2$  cm ( $P < 0, 05$ ).

Raising the torso from a prone position. The average result among girls in the first dimension was  $19.0 \pm 4.0$  times in 1st group,  $15.0 \pm 5.0$  times in 2nd group and  $18.0 \pm 3.0$  times in 3rd group, and at the end, respectively -  $20.0 \pm 4.6$  times,  $16.0 \pm 4.2$  times and  $21.0 \pm 4.7$  times. The differences are statistically insignificant ( $P > 0.05$ ).

Jogging and walking 6 min. The average result for girls in the first dimension was  $945.3 \pm 41.5$  m in 1st group,  $854.3 \pm 51.3$  m in 2nd group, and  $871.5 \pm 32.3$  m in 3rd group, and at the end, respectively -  $950.4 \pm 38.4$  m,  $868.5 \pm 43.8$  m and  $891.4 \pm 22.1$  m. The differences are statistically insignificant ( $P > 0.05$ ).

Throwing a grenade. The average result among girls in the first dimension was  $17.4 \pm 1.1$  m in 1st group,  $16.2 \pm 2.2$  m in 2nd group, and  $17.0 \pm 1.3$  m in 3rd group, and at the end, respectively -  $17.8 \pm 0.9$  m ( $P < 0.05$ ),  $17.8 \pm 1.4$  m ( $P < 0.05$ ) and  $17.8 \pm 1.8$  m ( $P > 0, 05$ ).

The analysis of the dynamics of the PF of the girl students of the 1st group (predisposition to diseases in the cardiovascular system) is presented in Table 1.

Table 1.

Dynamics of physical fitness of the 1st group (CVS)  
Students of USU

Indicators		September 2017		June 2018		Differences		t calc
		X	$\pm\delta$	X	$\pm\delta$	$\Delta x$	$\Delta\pm\delta$	
Run 100m	m/s	19,7	0,8	19,3	1,0	0,4	0,24	1,67

Cross 2000m	min/s	15,51	0,8	15,21	0,6	0,3	0,16	1,87
Jump in long. from place	sm	149,2	4,8	151,8	3,6	2,6	1,20	2,17
Raise the torso from the floor. lying down	number/time	19,0	4,0	20,0	4,6	1,0	0,55	1,82
athletic walking 6 min	M	945,3	41,5	950,4	38,4	5,1	3,10	1,65
Throwing grenades 500g	m	17,4	1,1	17,8	0,9	0,4	0,19	2,11

Note: at t calc. = 2.08 P <0.05

According to the results of testing according to six standards of the "Barchinoy" complex, these requirements were fulfilled: in the 1st group - 10%, in the 2nd - 15% and in the 3rd - 12% of female students.

**Conclusion.** Thus, the results of the sociological research give reason to consider that the existing pedagogical approaches to the organization of physical education of students in the ecologically unfavorable region of the Khorezm region are not effective enough.

At the same time, the pedagogical experiment showed that with traditional methods of physical education in universities among female students with a high risk of predisposition to various diseases, at the beginning and at the end of the academic year, most of the indicators of physical fitness and health status in the dynamics of significant differences did not have ( $P > 0.05$ ). However, significant differences in dynamics at the beginning and at the end of the academic year had: indicators of the tests "long jump from the spot" and "throwing a grenade" in the group of female

students with a risk of predisposition to cardiovascular diseases; indicators of the test "throwing a grenade" - only among female students with a risk of predisposition to diseases of the respiratory system; indicators of the test "long jump from a spot" - only among female students with a risk of predisposition to diseases of the musculoskeletal system ( $P < 0.05$ ).

One of the priority tasks of the new stage of the reform of the higher education system is the preservation and strengthening of the health of female students, the formation of the values of health and a healthy lifestyle in their worldview.

In this situation, we consider it necessary to develop a comprehensive health-improving program for the physical training of female students who have a predisposition to various diseases, which will increase the level of physical development, improve the functional and physical fitness of female students, provide targeted correction of deviations in the state of health and its strengthening.

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## ФАКТОРЫ, ВЛИЯЮЩИЕ НА СОЦИАЛЬНУЮ АКТИВНОСТЬ МОЛОДЕЖИ

### Аннотация

В статье анализируются особенности влияния каждого фактора на социальную активность молодежи и приводятся практические рекомендации для организаций и государственных структур по созданию благоприятной среды для развития социальной активности молодежи. Кроме того, авторы подчеркивают важность учета контекстуальных факторов при разработке стратегий и программ по повышению социальной активности молодежи.

**Ключевые слова:** социальная активность, молодежь, факторы, контекст, развитие.

**Введение.** Социальная активность молодежи зависит от многих факторов, включая культурные, экономические, политические и социальные. Одним из основных факторов является социальное окружение, в котором выросла молодежь. Семья, школа, район, сообщество и другие факторы социализации могут повлиять на то, как молодежь воспринимает свою роль в обществе и насколько активно она участвует в общественной жизни.

Культурные факторы также играют важную роль в формировании социальной активности молодежи. Религия, традиции, ценности и другие аспекты культуры могут оказать влияние на то, как молодежь видит свое место в обществе и какие социальные проблемы ей важны.

Экономические факторы, такие как уровень занятости, доходы и экономическая стабильность, также могут повлиять на социальную активность молодежи. Молодежь, сталкивающаяся с высокой безработицей и экономической нестабильностью, может испытывать трудности в участии в общественной жизни и реализации своих потребностей и желаний.

Политические факторы также могут оказывать влияние на социальную активность молодежи [1]. Доступность политических процессов, гражданские свободы, уровень политической коррупции и другие аспекты политической жизни могут стимулировать или ограничивать участие молодежи в общественной жизни.

Наконец, социальные факторы, такие как наличие друзей, поддержки со стороны семьи и сообщества, и социальная поддержка, также могут повлиять на социальную активность молодежи. Чувство принадлежности к сообществу и поддержка со стороны других людей могут стимулировать молодежь к участию в общественной жизни и реализации своих потребностей и желаний.

**Литературный обзор.** В статье был проведен анализ результатов ряда исследований, используя методологическую основу биопсихосоциального подхода Дж.Энджела, теории отношений В.Н.Мясищева и социально-когнитивной теории А.Бандуры а также концепции социального капитала и социальной сети, развиваемые М.Грановеттером [6, 7].

Концепция социальной активности молодежи получила большое распространение в научных кругах. Социальная активность молодежи означает способность и готовность молодежи к участию в общественной жизни и

решению социальных проблем. Эта способность определяется многими факторами, такими как пол, возраст, социальный статус, образование, национальность, культурные и религиозные особенности и другие.

Одним из основных факторов, влияющих на социальную активность молодежи, является ее образование. Люди с высоким уровнем образования часто более активны в социальной жизни, так как образование обеспечивает им необходимые знания, умения и навыки, необходимые для эффективного участия в общественной жизни и решении социальных проблем. Степень социальной активности молодежи может зависеть от уровня ее образования, в том числе и качества образования [6].

Кроме того, влияние на социальную активность молодежи оказывает и ее социальный статус. Люди с более высоким социальным статусом, как правило, имеют больше возможностей для участия в общественной жизни и решении социальных проблем, а также больше доступа к ресурсам и информации [7]. Социальный статус молодежи может быть определен различными факторами, такими как профессия родителей, уровень дохода, образование, происхождение и другие.

Кроме того, на социальную активность молодежи может влиять ее возраст. Молодые люди часто более активны в социальной жизни, чем старшие, так как у них больше энергии, меньше обязательств и больше возможностей для участия в различных общественных мероприятиях [3]. Однако социальная активность молодежи может снижаться с возрастом, поскольку люди становятся более занятыми своей работой, семейной жизнью и другими обязательствами.

Продолжим разговор о факторах, влияющих на социальную активность молодежи. Еще одним важным фактором является экономическая ситуация в стране и регионе, где проживает молодежь [4]. Например, высокий уровень безработицы и низкая зарплата могут привести к отсутствию мотивации у молодых людей участвовать в общественной жизни и проявлять социальную активность. С другой стороны, стабильная экономическая ситуация и высокий уровень доходов могут способствовать развитию молодежной активности.

Важным фактором является также политическая обстановка в стране и в мире. В период политических кризисов и социальных потрясений молодежь может проявлять повышенную активность и интерес к политическим процессам [3]. Однако, если обстановка в

стране стабильна, молодежь может потерять интерес к политике и общественной жизни в целом.

Наконец, культурно-исторический контекст также оказывает влияние на социальную активность молодежи. В каждой культуре и эпохе существуют свои особенности и традиции, которые могут способствовать или, наоборот, препятствовать развитию молодежной активности.

Таким образом, социальная активность молодежи зависит от многих факторов, и понимание этих факторов позволяет разрабатывать эффективные стратегии и программы для поддержки и стимулирования молодежной активности. В следующих главах мы рассмотрим более подробно некоторые из этих факторов и их влияние на социальную активность молодежи.

**Анализ и результаты.** Высокая самооэффективность может быть связана с более высокой социальной активностью в различных аспектах жизни. В одном исследовании было обнаружено, что участники с высокой самооэффективностью имеют большую склонность к здоровому образу жизни и соблюдению правильного питания ( $U=18094,0$ ,  $p<0,05$ ). Также высокоэффективные участники исследования больше придерживаются общечеловеческих духовных ценностей и стараются сохранять оптимальное настроение ( $U=18228,0$ ,  $p<0,05$ ). Кроме того, им свойственна большая маскулинность, т.е. вера в то, что человек должен быть физически сильным и контролировать свои эмоции ( $U=16857,0$ ,  $p<0,05$ ). Эти результаты могут объясняться тем, что самооэффективность личности связана с верой в себя и свои действия, что в свою очередь может стимулировать социальную активность.

Дополнительные факторы, которые влияют на социальную активность молодежи, включают:

Экономические условия: доступность образования, уровень безработицы и доходов, экономическая нестабильность и т.д.

Политическая обстановка: уровень демократии и гражданского участия, уровень свободы слова и т.д.

Социальные и культурные условия: доступность культурных мероприятий, уровень толерантности в обществе, возможности для социальной мобильности и т.д.

Семейное окружение: уровень поддержки со стороны семьи, наличие родителей-образцов, семейная стабильность и т.д.

Каждый из этих факторов может оказывать как положительное, так и отрицательное влияние на социальную активность молодежи. Например, доступность образования может стимулировать молодежь к активности и социальной мобильности, тогда как высокий уровень безработицы может уменьшить мотивацию молодежи к участию в общественной жизни.

Изучение факторов, влияющих на социальную активность молодежи, является важной задачей для создания эффективных программ и стратегий для поддержки и стимулирования активности молодежи в общественной жизни.

Было показано, что участники исследования, которые проявляют более высокую социальную активность, реже занимаются курением и употреблением наркотических веществ ( $rs=0,123$ ,  $p<0,05$ ), чаще соблюдают контроль над своими эмоциями и поддерживают хорошее настроение ( $rs=0,164$ ,  $p<0,01$ ), избегают рискованного поведения ( $rs=0,203$ ,  $p<0,01$ ) и часто получают положительные эмоции при общении с друзьями и родственниками ( $rs=0,102$ ,  $p<0,05$ ). Эти результаты могут быть объяснены тем, что социально активные люди часто находятся в социально поддерживающей среде, которая способствует развитию их самооэффективности и локуса контроля здоровья.

Дополнительно можно отметить такие факторы, которые также влияют на социальную активность молодежи:

Экономические условия и уровень благосостояния в обществе. Если молодые люди живут в условиях экономической нестабильности и не имеют возможности реализовывать свои потребности и желания, то они могут быть менее заинтересованы в участии в общественной жизни.

Политический и культурный контекст. Формы и степень социальной активности молодежи могут зависеть от культурных традиций, уровня демократии в стране, политической ситуации и других факторов.

Образование и уровень осведомленности. Молодые люди, которые имеют хорошее образование и широкий кругозор, склонны проявлять большую социальную активность, так как имеют больший доступ к информации и лучше понимают свою роль в обществе.

Личностные особенности молодых людей. Интроверты, экстраверты, люди с разными характеристиками темперамента и эмоциональной устойчивости могут проявлять разную степень социальной активности.

Организационная структура и наличие возможностей для участия в общественной жизни. Наличие организаций и объединений, где молодые люди могут проявлять свою активность и получать соответствующую поддержку, может стимулировать участие в общественной жизни.

Семейное воспитание и социализация. Семья, школа, друзья и другие социальные институты могут оказывать существенное влияние на формирование у молодых людей интереса к участию в общественной жизни и развитию социальной активности.

Изучение вопросов, связанных с социальной активностью молодежи, может проводиться через различные методы и подходы. Одним из основных методов является социологический анализ, который позволяет изучать социальные процессы и явления, в том числе и активность молодежи. Для этого используются различные методы и техники сбора и анализа данных, такие как опросы, интервью, наблюдения и анализ статистических данных.

Кроме того, для изучения факторов, влияющих на социальную активность молодежи, используются и другие научные дисциплины, такие как психология, экономика, политология и т.д. В каждой из этих дисциплин есть свои методы и подходы к изучению социальной активности молодежи.

Важно также отметить, что социальная активность молодежи может иметь различные формы и проявления в зависимости от социокультурного контекста. Например, в одних культурах молодежь может проявлять свою активность в политических движениях и протестах, а в других – в культурных и развлекательных мероприятиях. Поэтому при изучении факторов, влияющих на социальную активность молодежи, необходимо учитывать и контекст, в котором эта активность проявляется.

Этнические факторы также могут оказывать влияние на социальную активность молодежи. Например, в разных культурах молодежь может иметь разные социальные ожидания и роли, а также разные возможности для участия в общественной жизни. Это может отразиться на их уровне социальной активности и вовлеченности в политические и общественные процессы. Также могут играть роль различия в социально-экономическом положении разных этнических групп молодежи, что может повлиять на доступность ресурсов и возможностей для социальной активности.

Возможности для социальной активности молодежи могут быть определены множеством факторов, включая социально-экономическое положение, образование, культурные и религиозные факторы, политическую обстановку, доступность ресурсов и технологий, место жительства и т.д.

Например, социально-экономическое положение может оказывать значительное влияние на возможности для социальной активности молодежи.

Молодые люди из более богатых и образованных семей, как правило, имеют больше возможностей для участия в социальных, культурных и политических мероприятиях. Уровень дохода и образования родителей может существенно влиять на социальную активность молодежи. Кроме того, возможности для социальной активности могут зависеть от географического местоположения, наличия доступной инфраструктуры, наличия социальных сетей и связей, а также от политических, экономических и культурных факторов в обществе.

Важным фактором, влияющим на социальную активность молодежи, является образование и доступ к образовательным ресурсам. Молодые люди с высшим образованием, как правило, более активно участвуют в общественной жизни, так как имеют больше возможностей для профессионального роста и доступа к информации. Кроме того, образование может повышать уровень осознанности и ответственности молодежи перед обществом и влиять на ее участие в различных социальных и политических движениях.

Социальная активность молодежи также может быть связана с наличием у нее определенных ценностей и убеждений. Молодые люди, которые ценят общественную активность и принимают участие в различных мероприятиях, как правило, имеют более высокий уровень мотивации и интереса к общественной жизни. Кроме того, наличие у молодежи ясных целей и планов на будущее может стимулировать ее к активному участию в общественной жизни.

**Выводы и рекомендации.** Наконец, социальная активность молодежи может зависеть от ее возможности влиять на процессы в обществе. Молодежь, которая имеет возможность выражать свои мнения, идеи и требования, обычно более активно участвует в социальных и политических движениях. Это может быть связано с наличием свободных СМИ, свободы слова, возможностью

участия в выборах и т.д. Изучение факторов, влияющих на социальную активность молодежи, имеет большое значение для понимания и улучшения положения молодых людей в обществе. В странах с развитой демократией и гражданским обществом молодые люди имеют возможность более активного участия в социальной жизни. В таких странах проводятся различные мероприятия для поддержки и стимулирования социальной активности молодежи, создаются организации и объединения, позволяющие молодым людям проявлять свои способности и инициативу.

Однако в странах с недостаточно развитой демократией и гражданским обществом, где государственная власть сильнее контролирует все сферы жизни, молодые люди могут сталкиваться с ограничениями в возможностях для социальной активности. Также существуют культурные, религиозные и социальные традиции, которые могут ограничивать возможности молодежи для участия в общественной жизни.

В целом, возможности для социальной активности молодежи определяются многими факторами, такими как экономическое положение, образование, культурные и религиозные традиции, политическая система и гражданское общество. Однако несмотря на различия в этих факторах, важно обеспечить равные возможности для социальной активности всех молодых людей, независимо от их социального происхождения, положения и уровня образования.

Уровень образования также играет важную роль в формировании социальной активности молодежи. Образованные молодые люди часто имеют более широкий кругозор, более высокие культурные стандарты и лучше развитые коммуникативные навыки, что может способствовать их участию в различных социальных и культурных мероприятиях. Кроме того, высокий уровень образования может обеспечить лучшие возможности для трудоустройства и достижения карьерных успехов, что может повысить уровень социальной активности молодежи в профессиональной сфере. Однако, необходимо учитывать, что доступ к образованию может быть ограничен различными социальными и экономическими факторами, что может ограничить возможности социальной активности для молодежи из более маргинальных групп.

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## INGLIZ VA O'ZBEK TILLARIDAGI BIOLOGIK TERMINOLOGIYASINING QIYOSIY TADQIQI

Annotatsiya

Mazkur maqola tilshunoslik doirasida o'zbek va ingliz terminlarining tadqiqiga bag'ishlangan bo'lib, maqolada tibbiy terminlar xususida olimlarning fikrlari hamda ularning nazariy tadqiqotlari ifodalangan.

**Kalit so'zlar:** Diagnostika, termin, leksikografiya, affiks, lingvokul'turologiya, morfologiya, semantika.

XX asrga kelib zamonaviy ilmiy-texnikaviy revolyutsiya natijasida fundamental fanlarning tezlik bilan rivojlanishi uzviy bog'lik xolda jiddiy ilmiy tadqiqotlar amalga oshirilmoqda va turli xil yangi yo'nalishlar yaratilmoqda. Bu yangiliklar, shubxasiz, shu sohaning terminologiyasida ham o'z aksini topmoqda. Shu sababli, zamonaviy tilshunoslikning barcha sohalarida bo'lganligi kabi terminshunoslik sohasida ham nazariy va amaliy masalalarni tobora chuqurroq tadqiq etish zamon talabiga aylanmoqda.

Hammamizga ma'lumki, tibbiyot – bemorlarni davolash, kasalliklarni oldini olish, hamda inson jamiyatida sog'lom ishlash qobiliyatini saqlagan holda uzoq umr ko'rishga erishadigan amaliy faoliyat hisoblanadi. Ayniqsa, fan nuqtai nazaridan tibbiyot – inson salomatligini saqlash, mustahkamlash bo'yicha ilmiy bilimlar tizimini tashkil qiladi. Hozirgi kunda inson jamiyati va u bilan birga texnika taraqqiyoti, insonlarning salomatligiga, dunyoqarashiga katta ta'sir o'tkazmoqda. Bularning hammasi kasalliklarning kelib chiqishi, ularning davolanishi va oldini olish kabi tushunchalarni o'zgartira boshladi. Tibbiyot bir nechta fanlar bilan bog'liqdir, masalan anatomiya, fiziologiya, mikrobiologiya, filosofiya, kimyo, fizika, ekonomika, matematika kabi fanlar rivojlanishida muhim rol o'ynaydi. Tadqiqotchilarning tibbiyot fani tilshunoslik fani bilan bog'liqligi xususida bir nechta ilmiy ishlar, maqolalari mavjud bo'lib, o'z tadqiqot ishlarida tibbiyot hamda tilshunoslikning o'zaro bir-biriga chambarchas bog'liqligi to'g'risida fikr yuritishgan.

Biologiya terminlar sistemalar ichida eng qadimiyligi bilan ajralib turadi. Ko'rinadiki, biologik terminlarning asosiy sostavi xar qanday tilda umum iste'molda keng uchraydigan va faol qo'llaniladigan leksik birliklardir. Gemoglobin-Hemoglobin, Qon guruxi -Blood Groups, nafas olish-Breath, Emlash-Vaccination, DNK- DNA, Virus-Verus, Imunitet-Immunity.

Yuqoridagi kabi leksik birliklar terminologik tizimga ko'chgach, bir ma'nolilik, aniqlik tamoyillari asosida semantik strukturasi torayish yuz beradi. Yana shuni ta'kidlash joizki, bu kabi terminlar an'anaviy tarzda qadimdan ishlatilib kelinayotgan kishi tanasi a'zolarini yaxlit holda ifodalaydi. Biologik terminologiya sostavida bulardan tashqari zamonaviy terminlar ham borki, ular tibbiyot fanining taraqqiyot etishi natijasida odam tanasi a'zolarining yana qator qismlardan iborat ekanligi aniqlangach, ularni nomlash ehtiyoji natijasida paydo bo'lgan. Ushbu ikki guruh terminlar ko'proq baynalminal xarakterga ega. Mazkur leksik birliklarning terminologik tizimga ko'chishi orqali bir ma'nolilik va aniqlik tamoyillari asosida ularning semantik strukturasi torayish kuzatiladi. Bu esa ushbu sohaviy terminlarning semantik xususiyatlarini alohida e'tibor bilan o'rganishni taqozo etadi. Tilning lug'aviy boyligini tashkil etuvchi biologik terminlarning semantik xususiyatlarini o'rganishni, ayniqsa, maydon nazariyasi yordamida amalga

oshirish maqsadga muvofiq hisoblanadi. Shuning bilan birgalikda, tahlil uchun tanlangan leksik qatlamni to'laroq jalb etish, terminshunoslikda ularning taraqqiy etish qonuniyatlari, o'zni va ahamiyatini belgilaydi.

Shu bilan birga, bizga ma'lum bo'lishicha, taxlil qilinayotgan terminlar guruxi zamonaviy tilshunoslikda qiyosiy-tipologik nuqtai nazaridan chuqur o'rganilmagan soxalar sirasiga kiradi, chunki biz taxlil qilgan ilmiy adabiyotlar ichida bu yo'nalishdagi tadqiqotlar uchramadi.

Yuqoridagilarga asosan shuni aytish mumkinki, biologik terminlar uzoq tarixga ega bo'lishiga qaramay ushbu soxada hali o'z echimini topish lozim bo'lgan muammolar bisyor. Shunday ekan, terminologik tadqiqotlarni yanada kuchaytirish, terminologiyaning nazariy muammolariga alohida e'tibor qaratish maqsadga muvofiq. Qolaversa bugungi globallashuv va integratsiya davrida anatomik terminologiya muammolarini o'rganish, ushbu sohada ilmiy nazariy masalalarni tahlil etish, bu sohada o'z echimini kutayotgan muammolarni belgilash, ayniqsa, muammoni qiyosiy tipologik aspektda o'rganish har qachongidan ham muhimroq ahamiyat kasb etmoqda.

Turli tizimli tillar bo'lgan o'zbek va ingliz tillari biologik terminologiyasida aynan mana shu guruhda umumiy jihatlar kuzatiladi.

Qiyoslanayotgan tillarda biologik terminlarning shakllanish tarixi, bosqichlari va bu jarayonda har qaysi tildagi o'ziga xos qonuniyatlarni belgilash bugungi kunda alohida ahamiyatga ega.

Ingliz biologik terminologiyasi tarixi va taraqqiyoti esa, tabiiyki o'sha til umumleksikasining tilning taraqqiyoti bilan bog'liq.

Albatta, bu til lug'at tarkibida ham umumiste'mol so'zlar biologik terminologiyasining eng qadimgi va eng asosiy qatlamini tashkil etadi. Ingliz tili biologik terminologiyasi ham o'z ichki manbalari asosida, shuningdek, boshqa tillardan terminlar o'zlashtirish asosida boyib borgan.

Ilmiy adabiyotlar tahlili natijasiga ko'ra biologik terminlar maxsus terminologik tizim sifatida chuqur o'rganilmaganligini guvohi bo'ldik. Mavzu bo'yicha biz tomondan o'rganilgan asarlarning bir guruxi inson tanasi nomlarining xususiyatlarini o'rganishga bag'ishlangan ilmiy tadqiqotlardan tashkil topsa, masalan, oltoy tillar misolida V.D.Kolesnikovaning monografiyasi (Leningrad, 1972.) o'zbek tili misolida D.X. Bozorovanning (Toshkent, 1967), Qozoq tili misolida K.Jidebaevning (Alma-Ata, 1977) nomzodlik dissertatsiyalari, azarbayjon tili misolida A.Axundovning risolasi (Baku,1976) kabi manbalarni misol tarzida keltirsak, Ingliz tili misolida esa E.I. Chupilinaning (Leningrad 1967) nomzodlik dissertatsiyasi (ingliz tibbiyot terminologiyasidan joy olgan umumiste'mol so'zlar maxsus tadqiq qilingan), E. Endresning "History of Scientific English" (N'yu York, 1947) tadqiqoti (biologiya va tibbiyotga oid terminlarning etimologik xususiyatlari bilan birga lug'aviy



tarkibi ham tadqiq etilgan), xamda V.S.Gusyatskayaning (M.,1973) e'lon qilgan ilmiy maqolasi kabi manbalarni keltirish mumkin.

Shu bilan birga, bizga ma'lum bo'lishicha, tadqiq etilayotgan terminlar guruhi zamonaviy tilshunoslikda qiyosiy-tipologik nuqtai nazaridan chuqur o'rganilmagan sohalar sirasiga kiradi. Shu yo'sinda, biz tomonimizdan tahlil qilingan ilmiy manbalar orasida bu ko'lamlarga kiritilgan tadqiqotlarning uchramasligi, ularni alohida yondashuv asosida o'rganishni taqozo etadi.

O'zbek tilshunosligida aynan biologik terminologiya masalalari bo'yicha dastlabki tadqiqotlar 1930-yillardan boshlangan, deyishimiz mumkin. Shu davrdan boshlab biologik terminlarning ilk tarjima lug'atlari chop etilgan.

Ta'kidlash joizki, bu davrda hukm surgan sho'ro tuzumi mazkur lug'atlarning tiliga ham katta ta'sir ko'rsatgan. Olimlar rus tilidagi terminlar tarjima lug'atini tuzish bilan birga, biologik terminlarni o'zbek tiliga o'girishda rus tilini qolip sifatida olganlar. Vaholanki, shu paytga qadar tibbiy leksikada arab, fors, tojik tillaridan kelib chiqqan terminlar keng qo'llanilar edi. Rus biologik terminlari ta'sirida o'zbek tibbiy terminologiyasi ruscha baynalmilal birliklar bilan boyigan.

Yuqoridagilarga asosanib shuni aytish lozimki, biologik terminlar uzoq tarixiy davrni qamrab olishiga qaramay, ushbu sohada hali o'z echimini topmagan masalalar bisyor, bu esa, terminologik tadqiqotlarni yanada kuchaytirish, terminologiyaning nazariy muammolariga alohida e'tibor qaratish maqsadga muvofiq ekanligidan dalolat beradi. Qolaversa, bugungi globallashuv va integratsiya davrida biologik terminologiya muammolarini o'rganish, ushbu sohada ilmiy nazariy masalalarni tahlil etish, bu sohada o'z echimini kutayotgan muammolarni belgilash, ayniqsa, muammoni qiyosiy tipologik aspektda o'rganish har qachongidan ham muhimroq ahamiyat kasb etmoqda.

Shunday ekan, ingliz va o'zbek tillarida biologik terminlar va uning shakllanish tarixi, yasalish usullari, sohaga oid birliklarning terminologik xossalari, semantik va leksik xususiyatlarini o'rganish kabi masalalar chog'ishtirma aspektda maxsus tadqiq etishni taqozo etadi.

Bularning barchasini hisobga olgan holda, mazkur maqolada tilning lug'aviy boyligi, jumladan biologik terminlarning semantik xususiyatlarini o'rganishni maydon nazariyasi yordamida amalga oshirish maqsadga muvofiq deb hisoblaymiz. Shu sababli, tahlil uchun tanlangan leksik qatlamni to'laroq jalb etish bilan birga, terminshunoslikda ularning taraqqiyot qonunlari, ahamiyati va o'rni belgilash lozim topildi.

O'zbek adabiy tili leksikasi qonuniyatlari negizida shakllangan terminologik leksika tarixini qadimgi turkiy til, eski turkiy til, eski o'zbek adabiy tili hamda sho'rolar davri o'zbek tili terminologiyasi va istiqloq davri o'zbek tili terminologiyasi tarzida davrlashtirish salkam o'n to'rt asrlk vaqt mobaynida terminologik leksika tizimida ekstralingvistik va intralingvistik omillar negizida sodir bo'lgan jarayonlarni

anglab etish imkonini beradi. Hozirgi kunda nutqimizda ishlatadigan tibbiy terminlar ham o'zlashma so'zlar qatoriga kiradi. Masalan, bularga bir inechta misol keltirish mumkin.: yig'iq "kasallik, illat", ag'ri "og'riq", soka "bemor, kasal", isitma, oturmak "yo'tal" va h.k.

Bizda biologiya qadimdan rivojlangan soha bo'lib, Ibn Sinoning tabobatda qilgan ishlari uning nomini bir necha asrlarga shu fan sohasi bilan chambarchas bog'ladi. Olimning tabobat taraqqiyotidagi buyuk xizmati shundaki, u o'zigacha o'tgan turli xalq namoyandalari tomonidan asrlar davomida tib ilmi sohasida to'plangan ma'lumotlarni saralab, muayyan bir tartibga soldi va ularni o'z tajribalari bilan boyitgan holda maslum nazariya va qonun-qoida asosida umumlashtirdi. Mana shunday asarlar, tibbiyotga oid jarayonlar orqali nutqimizda yangi terminlar paydo bo'lmoqda, bu esa ona tilimizning boyishiga yordam beradi.

Olim ko'p ilmiy asarlar yozgan. Ulardan bizgacha 242 tasi yetib kelgan.

Ana shu asarlarning 23 tasi tibbiyot ilmiga bag'ishlangan. Ibn Sino turli yuqumli kasalliklarning kelib chiqishi va tarqalishi ifloslangan suvni va havoning roli katta ekanligini uqitirib, suvni qaynatib keyin iste'mol qilishni tavsiya etdi. U tashqi muhidda turli omillar havo va suv orqali kasallik arqatuvchi, ko'zga ko'rinmaydigan "mayda hayvonlar" ya'ni mikroblar haqidagi fikrni aytgan.

Abu Ali Ibn Sino L. Pasterdan 800 yil ilgari yuqumli kasalliklarni oldini olishda tashqi muhidda muhofaza qilish, shahsiy va umumiy gigena qoidalariga amal qilish zarur haqidagi fikrlarni fandan 1000 yil ilgari aytgan edi. Abu Ali Ibn Sinonig "Kitob – al – qonun fit tib" ("Tib qonunlari") kitobni beshta katta kitobdan iborat bo'lib, bir necha marta yevropa, Rus va O'zbek tillarida nashr etilgan .

Birinchi kitobda odam tanasi, organlarining tuzilishi va funksialar, turli kasalliklarning kelib chiqishi sabablari, davolash usullari bayon etidi. Ikkinchi kitobda o'simlik, ma'dan va funksiyalari, turli kasalliklarning kelib chiqish sabablari hayvonlardan olinadigan dorilar va har bir dorining qaysi kasallika davo ekanligi ko'rsatiladi. Uchinchi kitob insonning har bir organida bo'ladigan kasalliklar, ularni aniqlash va davolash usullariga bag'ishlangan. To'rtinch kitobda jarrohlik ya'ni suyaklarning chiqish, sinishini davolash haqida so'z yuritiladi. Beshinchi kitobida esa murakkab dorilar, ularni tayyorlash to'g'risida ma'lumotlar keltirilgan.

Mazkur maqola ta'lim tizimida qator fanlar bilan bir qatorda biologiya faniga oid sohaviy terminlarning ingliz va o'zbek tillarida semantik xususiyatlarini o'rganishga bag'ishlangan.

Tilning lug'aviy boyligini, jumladan biologik terminlarni semantik xususiyatlarini o'rganishda maydon nazariyasi yordamida amalga oshirish maqsadga muvofiq deb topildi. Asosiy sabab tahlil uchun tanlangan leksik qatlamni to'laroq jalb etish bilan birga, terminshunoslik fanida ularning taraqqiyot qonunlarini hamda o'rni va ahamiyatini belgilashdir.

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## A STUDY OF ZHANG CHENGZHI'S THE BLACK HORSE FROM THE PERSPECTIVE OF ECOFEMINISM

### Abstract

Ecofeminism is a social movement that combines environmentalism with feminism. Ecofeminists hold that women are inherently similar to the nature in their biology and their gender roles (family nurturer). More importantly, the exploitation of both nature and women is the production of the patriarchal society. Thus, the ecofeminists advocate an alternative world view which attach more importance to the female perspective which is more sensitive, equal and inclusive. The Black Horse is one of the masterpieces of Chinese writer Zhang Chengzhi. Based on his own experience on the prairie of Inner Mongolia, he wrote a love tragedy between two young people, which astonishingly resembled to the plots of an old folk song named Gangen Hara (meaning "a black horse"). The two characters represents two different world view. Bayan Bulag, who chose to live in a big city, believed that "civilization" existed only in the industrial society in which people strictly follows the social hierarchy; while Somia, who was born and raised on the Mongolian prairie, believed all lives are equal and took on the burdens of the whole family and never complained fate. When Bayan Bulag returned to the prairie after nine years, he suddenly became aware of the narrowness of his own belief and his heart was filled with guilt. The Somia healed him again, with leniency and calmness. This paper attempts to analyze the main characters of The Black Horse, and points out the great value of female spiritual power for our fast-changing modern society.

**Key words:** Ecofeminism, The Black Horse, Zhang Chengzhi, patriarchal society.

**Introduction.** Born in Beijing in 1948, Zhang Chengzhi is one of the most influential Chinese writer who has written a series of "root-seeking" novels, such as The Black Horse, The Rivers in the North, The Golden Grassland and so on. His early works were in a large degree inspired by his experience in East Ujumchin prairie, Inner Mongolia, China. He was sent to the East Ujumchin Banner[1] in 1968 during The Up to the Mountains and Down to the Countryside Movement[2]. As a city boy, he was exposed to an entirely different environment and culture, and he was fascinated by it. He lived with a loving Mongolian family and learned their language and way of life. The "eej" (Mongolian for "mother") of this family had a deep influence on him and became a prototype in many of his novels. There he learned Mongolian culture and the nomadic lifestyle, and more importantly, he could observe this culture as an outsider and therefore reflect on modern industrial civilization.

The Black Horse tells a love story between a young man named Bayan Bulag and a young woman named Somia. The story was set in the vast grassland of Inner Mongolia. Bayan Bulag was adopted by a Mongolian family. The grandma treated him like her own kid and gave him a beautiful black horse. He also became good friend with his "cousin" Somia. As they grew up, they fell in love with each other and decided to get married. Before they got married, Bayan Bulag had to participate in a training in veterinarian, during which a tragedy happened. When Bayan Bulag came back, he found something funny. Somia was not as intimate with him as before and his grandma seemed to hide something from him. Later he knew that Somia was raped by the local hooligan Xira and had been pregnant for five months. He was outrageous, not only because of what Xira did, but also because of the fact that Somia wanted to keep the baby and grandma was even kind of happy about the coming baby. This is beyond his comprehension. In great anger and despair, he left the prairie and went to a big city. Nine years later, he came back to the prairie with guilt and repentance, but only found that his grandma had passed away and Somia had moved to another place and married to a coachman. Then he went to

Somia's home, met her husband and her daughter Tsetseg. Her husband was a bit of rude, and Tsetseg was a poor thin kid who did all the cooking and cleaning when her mother was away. At last, he met his former lover Somia. She was not the beautiful girl anymore, instead she became a strong woman who did all the heavy work to make a living. But she didn't complain anything, instead, she accepted the arrangement of life and moved on. At the time of parting, Somia asked Bayan Bulag to send his future child to the prairie once he had one and she would like to take care of the child.

An Ecofeminist Analysis of The Black Horse In 1974, French writer Francois d'Eaubonne first put forward the term "ecological féminisme" (ecological feminism) in her book *Le Féminisme ou la Mort*. Ecofeminists believe that both the nature and women are oppressed the same mechanism, that is , the patriarchal mechanism. "All the prejudices, wrongdoings and evils are originated from a severe loss of female instinct and a vicious expansion of male will." [2] Ecofeminists believe femininity has a closer link to nature than masculinity[4] , for the former always suggests a harmonious and inclusive way of life while the latter are more self-centered and aggressive. "More than a theory about feminism and environmentalism, or women and nature, as the name may imply, ecofeminism approaches the problems of environmental degradation and social injustice from the premise that how we treat nature and how we treat each other are inseparably linked." [3] The significance of this ecofeminism is that it offers us an alternative way to address the many issues we face in today's world, like pollution, climate change, inequality and so on.

The Black Horse shows the readers the fascinating and mysterious world of nomadic life. The characters in this novel are very representative, and the conflicts in this novel are not only between man and woman, but also between two sets of value --- the modern industrial value, which priorities man's needs and ignores the laws of nature, and the nomadic value, which stresses more on the preciousness of life rather than the patriarchal "moral standards".

Somia – Nature’s Daughter In The Black Horse, the heroin Somia, is quite representative. She grew up on the prairie with her grandmother and the adopted son Bayan Bulag, with whom she later fell in love with. Somia was innocent and beautiful, like all the other creatures on the vast prairie. Unfortunately, she was raped by the local villain Xira, and got pregnant. When Bayan Bulag found this, she didn’t explain anything, instead, she decided to keep the baby, which irritated Bayan Bulag. The author described her attitude to Bayan Bulag with the following lines:

...At that time, I would look at her and sometimes our eyes met. She always looked at me thoughtfully. However her eyes and expressions were very strange, and sad even. She stared at me carefully, with hesitation and a hostile vigilance. She had never looked at me like that before. It was a look of a woman. (P49, Chapter 4, The Black Horse)

Out of a maternal instinct, all Somia could think about is to protect her baby, so she considered Bayan Bulag, her lover, as a potential threat to the baby.

Somia was changing her clothes, and she hadn’t buttoned up the robe yet. My eyes were fixed on her --- I saw a swollen belly wrapped in her opened gown.

I was stunned and couldn’t move a step, staring at her belly which must contain at least a 5-6 months’ baby. All of a sudden, I came to understand the obscenities of Xira, and the weird and hostile look of Somia.

I blazed with impotent rage, and felt a terrible stream of cramps and dizziness. I lunched myself to her and grabbed her collar, shaking her crazily and asking her to speak. But she became even more silent. I roared and shook her even harder: “Tell me why! Why! Tell me what happened between you and that villain Xira!”

“Let go of me!” Somia screamed suddenly, “Baby! My baby! You... let go! Let go...” She cried and screamed, struggling to get rid of me. Unexpectedly, she lowered her head and bit me on the hand!

I gasped with great pain and let go of her. Somia was dazed for a moment and burst into tears, burying her face in her hands. Then she shoved past me and rushed out with her hair awry. (P52, Chapter 4, The Black Horse)

This is the reaction of Somia when Bayan Bulag found out the truth. She chose to protect the baby instead of comforting her heart-broken lover. In other words, she prioritized the baby instead of her lover. This shows a rather different set of value on the Mongolia prairie --- life is the most precious thing, and even an illegitimate child will be cherished equally. From the very beginning, Somia and her grandma had never thought of abandoning the baby, though the baby might be a burden or even disgrace to her.

Then Somia married to a coachman after Bayan Bulag left. She took on heavy labor to make money and raise three boys besides Tsetseg, her first-born. She became a completely different person.

... Her body became stouter and angular, and her voice became hoarse. She spoke like a middle-aged married woman with an easy and hasty tone. She was wearing a ragged blue robe, stained by coal and grease on the corner of the it. She lifted a big heavy piece of coal, which clang to her chest. I noticed that her fingers were red and rough. (P87, Chapter 7, The Black Horse) Obviously, Somia was no longer the carefree beautiful girl. Instead, she became a mother, a caregiver and a labourer. Her husband was rude and didn’t show much care or respect to her. However, she never complained, because she had made peace with life and she decided to give all she had to her children. So she worked tirelessly and took care of her family.

Somia led a very busy life, and there were always endless housework waiting for her. But she kept a peaceful and calm demeanor. She gave her love and warmth to her family and the school children. At the point of departure, she

even asked Bayan Bulag to send his future child to her and let her help him to raise the child. For Somia, motherhood is extremely important for her, and the love for children is her strongest spiritual prop. Somia’s femininity benefited all the people around her, not only her families, but also the students she took care of and the cows she feeds. Always keeping a loving and peaceful demeanor no matter what happened, Somia is the daughter of the Nature.

The Grandmother – The Representative of Mother Earth There is another important female figure in The Black Horse – the grandma of Somia and Bayan Bulag. She loved every animal and human in the world equally, and she considered them all as her children. She had saved the newborn horse, and milked sheep with her own milk, and she accepted the young students from the cities as her own children (implied by the novel). So it was nature that when Somia was pregnant, she was happy for her merely because there was a new life coming. This deep love and respect for life is the very core of the traditional nomadic culture. For the “malchin” (Mongolian for “herder”), life means everything. Every family member has his/her indispensable role in the production activities, and every livestock is their close friend and the symbol of wealth. The grandma is just like the Mother Earth, who loves all lives equally, and forgives all mistakes.

When Bayan Bulag was outrageous and decided to fight a duel with Xira, she even persuaded him: “It’s quite reassuring to know that Somia is fertile.” This is beyond Bayan Bulag’s comprehension. It was in that moment, Bayan Bulag felt there was a huge gap between nomadic culture and the culture where he came from.

... maybe the habits I gained at school over the past few years has gradually cultivated another quality of me, or maybe it's because I'm not a native shepherd after all. I found the difference between myself and the natives here. I can't tolerate the habits of the prairie and its natural laws that grandma is used to, even though I love it so deeply. I hold Ganggen Hara's neck in the dark, enduring the terrible anger boiling in my heart. No matter how hard I tried to stop myself, no matter how I drowned the tempting prospect with the rolling river of the past, a new desire has been born in pain. This desire is calling me and driving me to pursue a purer, more civilized, more respectful and more fruitful life. (P54, Chapter Four, The Black Horse) The leaving of Bayan Bulag means he has abandoned the nomadic values and embraced the modern values. When Bayan Bulag returned to the prairie nine years later, he only found that the grandma had passed away and the community where Somia lived in had settled down --- an era has ended. And what made Bayan Bulag sadder is that he may never find another great woman like his grandmother again.

Bayan Bulag – A Unconscious Male Chauvinist Bayan Bulag, the hero of The Black Horse, is not a very obvious male chauvinist. He loved and respected Somia sincerely. We could reasonably assume that the two lovers would lead a happy life if Somia were not raped by Xira. Much as he had loved Somia, Bayan Bulag could not accept the fact that Somia chose to keep the baby, which he considered to be a betrayal. From his perspective, Somia should abandon the baby and show her loyalty to him. In this event, he failed to think on Somia’s shoes. Being raped is not her fault, and she also felt ashamed of this, but she didn’t project her shame and anger on her baby. For her, the baby is pure and innocent. It’s just a life, and it is entitled to live, no matter who its father is. However, out of anger and disappointment, Bayan Bulag left home and went to a big city to pursue further study, instead of marrying Somia, as he had promised before. This is the conflict that led the two young people to different paths.

What Bayan Bulag had not realized was that the culprit was Xira, not Somia. Being raped was not in Somia’s control, and she should not be blamed for it, instead, she

should be comforted. But on the contrary, Bayan Bulag waited two days for her apology, as if he was the one who got hurt the most. The deep reason for this was the patriarchal culture he was used to, that is, a woman should keep her virginity for her husband, otherwise, she would be considered “impure”, and even she was raped, she should fight to death to guard her virginity. In other words, in patriarchal culture, it is better for a woman to die than to be raped.

It is a pity that Bayan Bulag is unconsciously affected by this culture. After nine years, when he came back, he finally became aware of his own ignorance and arrogance. He even imagined that Somia was as fragile as before, but when they met, what he saw was a strong woman. This had moved him and inspired him to be a maturer and more broad-minded person.

Dawacang – A Typical Patriarchal Husband  
Dawacang is Somia’s husband. In some degree, he is not a terrible person. He helped Somia when her grandma died and he accepted her Tsetseg, her first-born. Dawacang is the representative of a patriarchal husband for he sees himself as the protector and master, and not views his wife as an equal person. We could draw to this conclusion from the following reasons.

First of all, he denies her competence in work. When Miss Lin, the teacher at school told him that Somia had become a formal staff of the school, he just mocked her and said she was not a teacher’s material. He looked down upon her despite the fact that Somia worked as hard as him to support the family.

Secondly, Dawacang let her do almost all the housework. Somia cooked for the family, cleaned the house, milk the cow and do all the heavy chores. And even the 9-year-old Tsetseg is also hard-working, she cooks for the whole family, waters the horses and takes care of her three young brothers. The author described the way she worked several times.

She cleaned the room quickly. She opened the window, lit the stove, washed all the dishes, washed the faces of the three boys, with Tsetseg also bustling around. The mud

hut was filled with warmth again, yet not in the chaotic way like last night. (P89, Chapter 7, The Black Horse)

Thirdly, he is violent toward Somia and Tsetseg. In the novel, Somia told Bayan Bulag that Dawacang used to beat Tsetseg and called her a “bastard”. We could infer from the lines that he might have also beaten Somia. He used his physical advantages to oppress the females in the family.

Dawacang is a typical patriarchal husband. They oppress their wives and looked down upon them. They represent man’s dominance over nature – we exploit nature beyond limit and believe that we are the master of nature. Like nature, women offer warmth and support to their family, but more often, women’s contribution, like housework, labour and income, is taken for granted and severely underestimated.

Conclusion. The Black Horse reveals the conflict between man and woman, and more importantly, the conflict between nomadic culture and industrial culture. The nomadic tradition and maternal instinct are eulogized by the author of this novel. Meanwhile, it has showed us the harms of patriarchal oppression towards both women and nature. Because of an engraved patriarchal thinking, Bayan Bulag left Somia and his grandmother, leading to a love tragedy. Somia didn’t have much choice when he left, because the social environment was not woman-friendly. Once she was raped, she was considered “impure”, and not to mention, she had a daughter who was the result of the rape. While the hooligan Xira, who had raped many girls, had never been punished. People scolded him, but no one dared to punish him, so all the aftermaths of his evil deeds were left to the women to bear. At the end of the novel, the author described the “new” Somia with respect, through which he shows the great power and resilience of woman. This could be seen as a worship for women and the Nature. The author reflected through this novel the patriarchal way of thinking and lifestyle, and the end of the story seemed to suggest a better future for Somia and other females alike. Maybe this could be seen as a triumph of the female way of living – more harmonious, sympathetic and inclusive.

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## ПОЛИСАХАРИДЫ НАДЗЕМНОЙ ЧАСТИ *PISUM SATIVUM*

### Аннотация

Разработаны методы выделения и очистки полисахаридов надземной части из растительного сырья *Pisum sativum* сем. (Fabaceae) и изучены качественный и количественный состав полисахаридов в траве как биологически активных компонентов, обуславливающих ее противовоспалительную и абсорбирующую активность при нормализации желудочно-кишечных расстройств. Определены качественные и количественные характеристики содержания полисахаридного комплекса, включающий водорастворимые полисахариды экстрагировали холодной (ВРПС-1) и горячей водой (ВРПС-2) с выходом 3,4% и 1,5%, пектиновые вещества (ПВ) с выходом 4,65% и гемицеллюлозы (ГМЦ) с выходом 3,15% по степени этерификации они оказались высокоэтерифицированными.

**Ключевые слова:** *Pisum sativum*, водорастворимые полисахариды, пектиновые вещества, гемицеллюлоза.

**Введение.** Горох- *Pisum sativum* — род однолетних и многолетних травянистых растений семейства бобовых (Fabaceae), широко используется как пищевая и кормовая культура. Цель данной работы - выделение углеводного комплекса из надземной части *Pisum sativum*, собранной в Джиззакской области в период цветения, установление физико-химических свойств и моносахаридного состава.

Выделение различных групп полисахаридов проводили по ранее описанной методике по схеме 1 [1]. Измельченное сырье обезжиривали смесью хлороформ - метанол 1:1, затем экстрагировали 82% C<sub>2</sub>H<sub>5</sub>ОН для удаления низкомолекулярных соединений. По данным хроматографического анализа спирторастворимые сахара представлены фруктозой и сахарозой.

Водорастворимые полисахариды экстрагировали холодной (ВРПС-1) и горячей водой (ВРПС-2). Пектиновые вещества (ПВ) извлекали смесью 0.5% растворов щавелевой кислоты и оксалата аммония, гемицеллюлозы (ГМЦ) - 5% раствором щелочи. Моносахаридные составы выделенных полисахаридов изучали методами БХ и ГЖХ после полного кислотного

гидролиза. Содержание полисахаридов и их моносахаридный состав приведены в табл. 1.

ВРПС-1 и ПВ представляют собой аморфные порошки, хорошо растворимые в воде с образованием невязких растворов (относительная вязкость 1.64- 7.14 мг/дл). Выделенные пектиновые вещества относятся к высокоэтерифицированным полисахаридам со степенью этерификации 96.4-72.6.

ВРПС-2 выделенные из сырья *Pisum sativum*, представляли собой белый аморфный порошок, который растворялся в воде образуя растворы с высоким показателем относительной вязкости ( $\eta_{\text{отн}}$ ) = 4.21. Доминирующими моносахаридами в гидролизатах ВРПС-1 и ВРПС-2 были арабиноза и галактоза в соотношении соответственно 1:1.7 и 1:1.7. При действии раствора Фелинга водные растворы ВРПС выпадали в осадок, что характерно для арабинозосодержащих полисахаридов.

Как видно из таблицы 1, основными моносахаридами являются галактоза, глюкоза, арабиноза и ксилоза. Выделенные полисахариды представляли собой белый порошок с желтоватым оттенком [2].

**Таблица 1. Содержание и моносахаридный состав полисахаридов *Pisum sativum***

ПС	Выход, %	Соотношение моносахаридных остатков						$\eta_{\text{отн}}$ (1%, H <sub>2</sub> O)
		Gal	Glc	Ara	Xyl	Rha	UAc, БХ	
ВРПС-1	3.4	4.9	3.6	19.0	1.8	1.4	+	1.64
ВРПС-2	1.5	8.3	27.8	11.0	3.4	2.5	+	4.21
ПВ	4.65	15.3	1.0	6.7	1.0	1.9	+	7.14
ГМЦ	3.15	13.3	10.6	1.1	25.0	-	+	

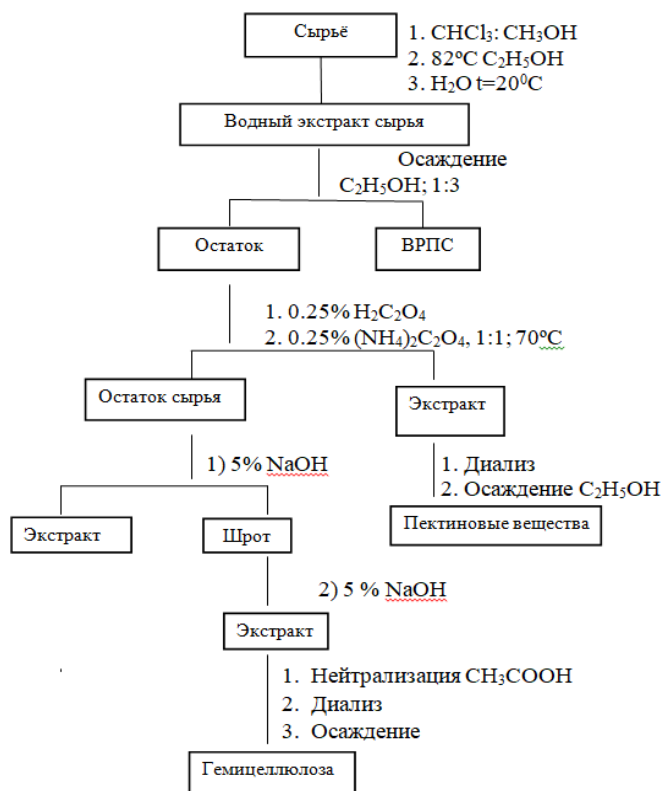
**Примечание:** ВРПС- водорастворимые полисахариды, ПВ- пектиновые вещества, ГЦ-гемицеллюлозы, Gal- галактоза, Glu – глюкоза, Ara- арабиноза, Xyl- ксилоза, Rha – рамноза, GalUA- галактуронозная кислота.

Физико-химические свойства пектиновых веществ изучали методом титриметрического анализа. Титриметрическим методом [3] установлена степень этерификации ПВ (табл. 2). На основании полученных данных полисахариды, выделенные из надземных частей растения.

Таблица 2. Титриметрические показатели полисахариды *Pisum sativum*

ПС	$K_c$	$K_3$	$K_0$	$\lambda, \%$
ВРПС-1	0,90	23,94	24,84	96,4
ВРПС-2	0,72	29,70	30,42	97,6
ПВ	9,00	23,90	32,90	72,6

Схема 1. Выделение различных групп полисахаридов из *Pisum sativum*



Гемиллюлозы надземной частей *Pisum sativum* представляют собой порошки бежевого цвета, растворимые в воде и щелочи, реакция с йодом отрицательная. В большинстве выделенных ГМЦ доминирующим моносахаридом является ксилоза, следовательно, в ГМЦ этого растения преобладают ксиланы [4-5].

Таким образом, изучение содержания полисахаридов и их моносахаридного состава в различных органах растений *Pisum sativum* показало отличие выделенных полисахаридов по количественному содержанию и качественному моносахаридному составу. В надземных органах и стручках выявлено наибольшее содержание ВРПС и ПВ. Выделенные полисахариды по моносахаридному составу являются гетерополисахаридами, ПВ относятся к высокоэтерифицированным пектиновым веществам.

#### Экспериментальная часть

Растворы упаривали на ротормном испарителе при температуре  $40 \pm 5^\circ\text{C}$ . Для БХ использовали бумагу *Filtrak FN 1,3,7,11,12* в системах растворителей:

- 1) бутанол-1-пиридин-вода (6:4:3);
- 2) бутанол-1-фенол-уксусная кислота-вода (5:5:2:1);

Вещества обнаруживали опрыскиванием следующими реагентами:

- 1) концентрированная  $\text{H}_2\text{SO}_4$ ;
- 2) 0,5%-ный спиртовой раствор мочевины-соляная кислота;
- 3) Кислый фталат анилина;
- 4)  $\text{KIO}_4$ - $\text{KMnO}_4$ -бензидин.

ГЖХ анализ проводили на хроматографе Chrom-5 с пламенно-ионизационным детектором в следующих условиях:

А) колонка из нержавеющей стали (200 x 0,3 см), 5% Silicone XE-60 на хроматоне NAW-0,200-0,250 мм,  $210^\circ\text{C}$ , газ-носитель - азот, скорость газа - 60 мл/мин, для ацетатов альдонитрилов.

Б) 3%-ный полинеопентилгликольадипат, на хроматоне NAW-DMC (0,125 x 0,160 мм),  $210^\circ\text{C}$ , газ носитель - азот, скорость газа - 60 мл/мин, для ацетатов полиолов.

С) 5%-ный неопентилгликольсукцинат на хроматоне,  $50^\circ\text{C}$ , газ носитель-гелий, скорость газа - 30 мл/мин, для метилацетатов.

Д) 5% -ный DS 550 на хроматоне NAW (0,16-0,20), программа  $100^\circ\text{C}$ - $200^\circ\text{C}$ , 5мин.

Е) 5%-ный Carboxax на хроматоне NAW DMCS(0,16-0,20),  $160^\circ\text{C}$ .

ИК-спектры образцов ПВ снимали на ИК-Фурье спектрометре фирмы Perkin- Elmer, модель 2000, в пластинках, прессованных с КВг, число сканирований 100. Вязкость растворов ПВ измеряли на вискозиметре Оствальда с диаметром капилляра 0,75 мм при температуре 22 °С, молекулярные массы пектиновых веществ рассчитывали на основании величин характеристической вязкости [6].

Полный гидролиз образцов полисахаридов проводили 2н H<sub>2</sub>SO<sub>4</sub>, 100°С. ВРПС в течение 8 ч, ПВ 36ч. Обработку гидролизатов проводили как [5].

Створки горох были собраны после созревания семян в октябре 2021 года в Джизакской области.

**Инактивация сырья.** 100 г измельченных створок *Pisum sativum* экстрагировали в течение 1,5 ч кипящей смесью хлороформ-метанол (1:1) при гидромодуле 1:2, сырьё отделяли фильтрованием и экстрагировали кипящим 82° этиловым спиртом в течение 1 ч дважды. Спиртовые экстракты объединяли, упаривали и анализировали БХ в системе 1, 2, идентифицировали глюкозу (проявитель 1) и фруктозой и сахарозой (проявитель 2).

**Выделение водорастворимых полисахаридов.** Остаток сырья дважды экстрагировали водой при гидромодуле 1:5 и 1:3 при комнатной температуре в течение 6-8 ч. Экстракты объединяли, сгущали и осаждали двукратным объемом спирта. Осадок отделяли, промывали спиртом, высушили. Выход ВРПС – 3.4 г.

**Выделение пектиновых веществ.** После экстракции водой остаток сырья дважды обрабатывали смесью равных объемов 0,5%- ных растворов щавелевой кислоты и оксалата аммония (1:10) при температуре 70 °С в течение 3 ч. Экстракты диализовали против проточной воды, упаривали и осаждали метанолом (1:3). Осадок отделяли, промывали метанолом, ацетоном. Сушили в вакууме над P<sub>2</sub>O<sub>5</sub>. Выход ПВ- 4.65 г.

**Выделение гемицеллюлоз.** Остаток сырья после выделения ПВ обрабатывали 5 % раствором КОН при комнатной температуре 4 часа, при гидромодуле 1:5. Экстракт отделяли фильтрованием, диализовали против проточной воды до нейтральной среды, упаривали и осаждали спиртом в соотношении 1:3. Выпавший осадок ГМЦ отделили центрифугированием, промывали и высушивали ацетоном. Выход ГМЦ – 3.15 г.

**Фракционирование ВРПС-1 спиртом.** 1 г ВРПС-1 растворяли 100 мл воды и добавляли при перемешивании 100 мл спирта. В осадке получили фракцию 1 с выходом 0.01 г. К надосадочному раствору добавили еще 100 мл спирта и получили фракцию 2 (ГАГ) с выходом 0.4 г, добавив к надосадочному раствору еще 100 мл спирта получили фракцию 3 с выходом 0.3 г. Далее к спиртовому раствору добавляли еще 100 мл спирта и выделили фракцию 4 с выходом 0.02 г. Фракцию 5 получали из маточного раствора с выходом 0.15 г.

**Содержание уронового ангидрида ПВ** определяли карбазольным методом [7].

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## CONTENT OF POLYSACCHARIDES CUCUMIS KASSABA

### Annotation

The article presents the results of a study of the polysaccharide composition of Cucumis Melo peels. It has been established that the carbohydrate complex of Cucumis Melo represented by water-soluble polysaccharides, pectins and hemicellulose; their monosaccharide composition has been established.

Key words: water-soluble polysaccharides, pectin substances, hemicellulose.

Abbreviations: IR: infrared; WSPS: water-soluble polysaccharides; PS: pectin substances; HMC: hemicellulose, Rha: rhamnose, Ara: arabinose, Xyl: xylose, Glc: glucose, Gal: galactose, Man: mannose, UAc: uronic acid, PCh: paper chromatography.

**Introduction.** Plant polysaccharides have high biological activity. So this provision allows them to be widely used in medical practice. Currently, their enveloping and emollient properties [1], antihypoxic, antioxidant, hepatoprotective and radioprotective effects are widely known [2]. A number of researchers emphasize the prospects of using polysaccharides for the correction of lipid metabolism and in the treatment of diabetes mellitus. Some polysaccharides have proven to be effective antitumorogenic agents [3], prevent the formation of free radicals, restore damaged cells and the immune system [4].

For the study, was selected a winter variety of melon "Kassaba", grown in Uzbekistan. Kassaba-type melons are also called winter melons, since their ripening begins extremely late. After harvesting, the fruits are braided with reeds and hung in dry rooms or under sheds for aging and storage. Only by March the hard greenish flesh becomes juicy and sweet.

### Literature review.

Cucumis melo belongs to the gourd family. Most gourds are annual or perennial herbs[5] that overwinter using rhizomes or the underside of the root, some are shrubs and the only representative is the treelike *Dendrosicyos*[6]. Fruit pulp contains 70-94% water, 6-30% solids, 1.5-15% sugars according to various sources, 4-23% cellulose and hemicellulose, 20-24% starch, 0.3-1.4% pectin. It also contains 1-3% nitrogen compounds, fats 0.5-0.7%, acids 0.1%, ascorbic acid 0.25-40 mg per 100 g, carotene 2-28 mg. Fruit pulp is rich in sugars (up to 11%), vitamins C, B1, B2, PP, E, carotenoids, and also contains salts K, Ca, Mg, Fe, P, Si, Co, Cu. Fruit pulp contains a large amount of fiber and lipophilic substances [7]. In folk medicine, it is used as a strong diuretic, anti-inflammatory, antipyretic. Improves intestinal peristalsis and positively affects metabolism [8]. Based on the foregoing, the study of the chemical composition of this plant is an important task.

### Research methodology.

50 g of dried and crushed Cucumis Melo raw materials were treated twice with boiling chloroform for 1 hour at a hydromodul of 1:4 in order to remove coloring and low molecular weight substances. Further, alcohol-soluble sugars were extracted with boiling 82° ethanol. The alcoholic extract was separated by filtration and evaporated to a small volume, then identified by paper chromatography (PCh) in the system

butanol-n-pyridine-water 6:4:3. Acid aniline phthalate (1) (for hexose) and 5% alcohol solution of urea - hydrochloric acid (2) for ketosis were used as a developer.

The rest of the raw material was extracted twice with cold water at room temperature for 1.5 hours at a hydromodul of 1:4. The extracts were separated by filtration, evaporated to a small volume, and precipitated with a threefold volume of ethanol. The precipitate that formed was centrifuged (5000 rpm, 10 min), washed, and dehydrated with alcohol. Yield WSPS- c 3.5 g.

Further, the remainder of the raw material was extracted twice with water at a temperature of 80-85° for 1.5 hours at a hydromodul of 1:3, 1:2. The extracts were combined, evaporated and precipitated with alcohol. The precipitate was treated as indicated above. The output of WSPS-h 2 g.

After isolation of the WSPS, the meal was extracted twice with an equal mixture of 0.5% solutions of oxalic acid and ammonium oxalate at a temperature of 75 ° C, extraction was carried out with a hydromodul of 1:4, 1:3. The extract was separated by filtration, evaporated and precipitated with three times the volume of alcohol. The precipitate was treated in the same way as described above. The PS output is 3.5 g.

After PS isolation, the remainder of the raw material was treated twice with a 5% KOH solution at room temperature, for 1.5-2 hours, with a hydromodul of 1:3. The extracts were separated by filtration, neutralized with CH<sub>3</sub>COOH, dialyzed to remove salts, evaporated and precipitated with 96% ethanol. The precipitated HMC precipitate was separated by centrifugation, washed and dried with alcohol, yield 1.95 g.

WSPS samples were hydrolyzed with 1n H<sub>2</sub>SO<sub>4</sub> at 100 °C, 8 hours; PS and HMC with 2n H<sub>2</sub>SO<sub>4</sub>, at 100 °C, during the 20 hours. The hydrolysates were neutralized with barium carbonate, deionized with KU-2(H<sup>+</sup>) cationit, and evaporated. Identification of monosaccharides in hydrolysates was carried out by paper chromatography, in parallel with reliable samples in solvent systems butanol-pyridine-water 6:4:3, developers 1 and 2, heated in a drying cabinet at a temperature of 100-105 ° C.

### Analysis and results

Various polysaccharides were sequentially isolated from melon crusts: alcohol-soluble sugars (ASP), water-

soluble polysaccharides (WSPS), pectin substances (PS), hemicelluloses (HMC).

The alcohol extract revealed the presence of glucose, fructose and sucrose (sucrose in smaller quantities). Water-soluble polysaccharides (WSPS) were isolated in two ways: by extraction of raw materials with cold water (WSPS-c), at

room temperature and hot water at a temperature of 80-90°C (WSPS-h). Pectin substances (PS) were isolated by a mixture of 0.5% solutions of oxalic acid and ammonium oxalate, hemicellulose (HMC) – 5% KOH solution. The monosaccharide composition of the isolated substances is shown in Table 1.

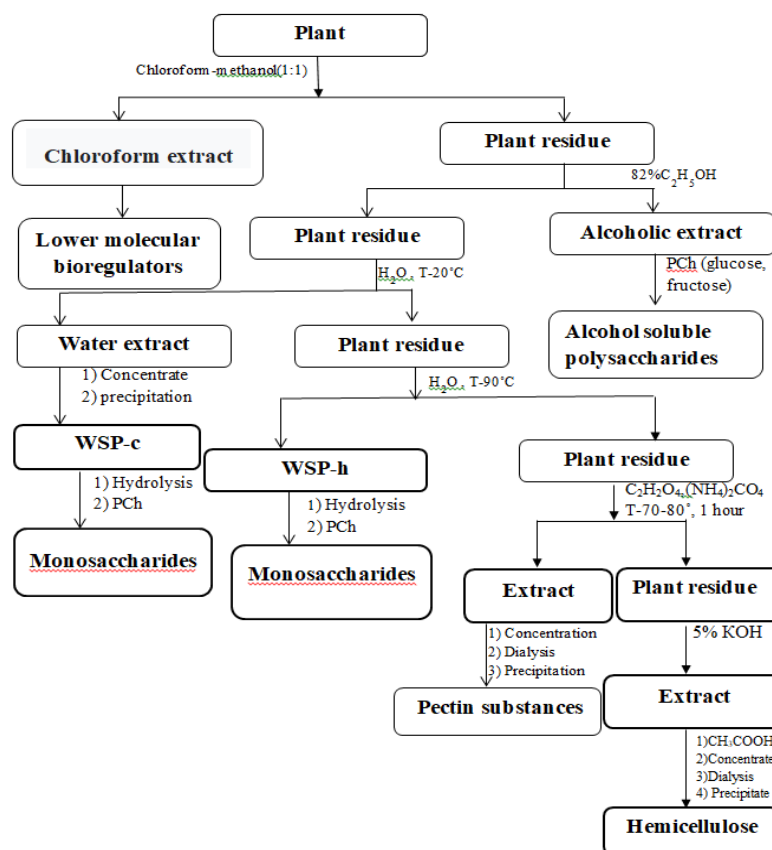
**Table 1. Content of monosaccharides in peels of Cucumis Melo**

Carbohydrate types	Yield, %	The content of monosaccharide, PCh						
		Rha	Ara	Xyl	Man	Glu	Gal	UAc,%
WSPS-c	3,5	-	-	-	-	+	+	-
WSPS-h	2,0	-	+	+	-	+	+	-
PS	3,7	+	+	+	-	-	+	+
HMC	1,95	-	+	+	+	-	+	+

As can be seen from Table 1, PS is dominant among polysaccharides (3.7%), while the content of WSPS-c was 3.5%, WSPS-h and HMC are in smaller amounts of 2% and 1.95%, respectively.

WSPS are amorphous powders of light beige color, well soluble in water, the viscosity index is 1.17-2.3 (1%; H<sub>2</sub>O). The monosaccharide composition of WSPS did not differ dramatically qualitatively, but the difference was in the quantitative ratio. The main monosaccharides of WSPS-c are

*Glu, Gal*, glucose predominates quantitatively, and in WSPS-h *Ara, Glu, Gal* and a small amount of *Xyl*. Solutions of WSPS give a negative reaction to starch. The ratio of monosaccharides suggests that heterogeneous polysaccharides with a dominant content of glucans form the basis of WSPS-c and the presence of both glucans and glucoarabinan is possible in WSPS-h. In chromatography, PS and HMC are well expressed in the form of uronic acids, *Gal, Ara*, as well *Xyl* and *Rha* in smaller quantities.



**Scheme 1. Isolation of polysaccharides**

The main absorption bands were detected in the IR spectra of WSPS-c and WSPS-h: 3339-3418 cm<sup>-1</sup> (OH groups), 1599-1613 cm<sup>-1</sup> (HOH), 1415-1418 cm<sup>-1</sup> (C=O), 1074-916, 1018-911 cm<sup>-1</sup> (α-glycoside bond). According to the yield of WSPS-c, it is the main polysaccharide that has been further studied (fig.1).

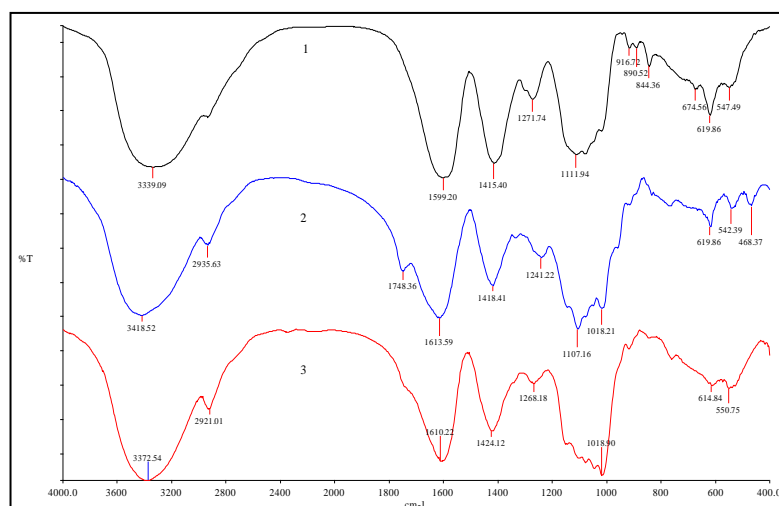


Fig.1. IR spectrum 1. WSPS-c. 2. WSPS-h.

Pectins are an amorphous cream-colored powder, partially soluble in water to form a viscous solution, rel -7.0 (from 1.0%; H<sub>2</sub>O). PS has a relative viscosity index of 7.0.

In the IR spectrum of PS (Fig. 2), absorption bands were found: 3434 cm<sup>-1</sup> (OH-groups), 1748 cm<sup>-1</sup> (C=O free and COO-esterified carboxyl groups), 1434 cm<sup>-1</sup> (ionized carboxyl vibrations), 1365 cm<sup>-1</sup> (-OCH<sub>3</sub>), 827 cm<sup>-1</sup> (α-glycosidic bond) [9].

The monosaccharide composition is represented by neutral and acidic monosaccharides.

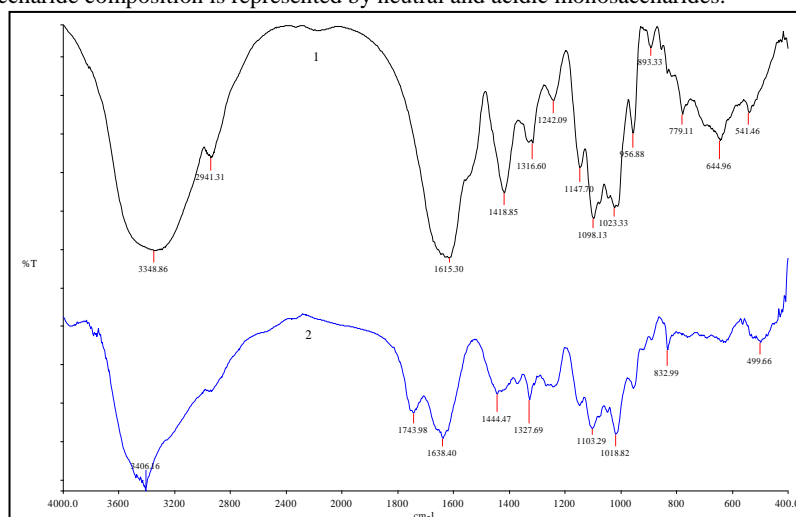


Fig.2. IR spectra: 1. HMC 2. PS

According to the IR spectrum, PS is an esterified polysaccharide. To determine the degree of esterification, a titrimetric analysis was performed, the results of which revealed the content of carboxyl and esterified groups: Kc (free carboxyl groups) - 4.05%, Ke (esterified carboxyl groups) - 9.0%. The data obtained correspond to the degree of esterification - 52.6%, which makes it possible to attribute the studied PS to high-esterified pectins [10].

HMC-amorphous powder of light cream color, partially soluble in water, completely in dilute alkali solutions.

In the IR spectra of HMC, absorption bands were found: 3640 cm<sup>-1</sup> (OH-groups), 1742 cm<sup>-1</sup> (C=O), 1078 cm<sup>-1</sup> (pyranose ring), 1588 cm<sup>-1</sup> (COO-), 850 cm<sup>-1</sup> (α-glycosidic bond) (Fig. 2).

#### Conclusion

Alcohol-soluble sugars, water-soluble polysaccharides, highly esterified pectins and hemicelluloses have been isolated from the peels of Cucumis Melo. Their qualitative characteristics are given. The isolated polysaccharides were analyzed by IR spectroscopy.

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## ГИДРОГЕОЛОГИЧЕСКИЕ УСЛОВИЯ ТЕРРИТОРИИ ЛЕВОБЕРЕЖЬЯ Р. АМУДАРЬИ В СВЯЗИ С ОРОШЕНИЕМ НА СЕЛЬСКОХОЗЯЙСТВЕННЫХ ЗЕМЛЯХ

Аннотация

Изучены гидрогеологические условия и особенности орошаемой зоны территории левобережья реки Амударья, выявлены закономерности изменения уровня и химического состава подземных вод в многолетнем разрезе под влиянием природно-техногенных факторов, оценено воздействие происходящих процессов на окружающую среду. Проблема засоления территории, минерализации речных вод, а также изменение уровня грунтовых вод являются актуальными для данной территории и связаны они в первую очередь с хозяйственной деятельностью человека, т.е. технологией орошения, сменой сельхозкультур, внесением различных видов органических и химических удобрений.

**Ключевые слова:** Интеллект, способности, талант, концепт, семантика, дивергенция, конвергенция, мышление, креативность, умственное движение, восприятие.

**Введение.** В условиях аридного климата, который характерен для бассейна Амударья, вода является главным ресурсом жизнеобеспечения человека и общества, развития производственно-хозяйственной деятельности и экономики государства. В последние 45...50 лет особенно страдает из-за отсутствия пресной воды население низовьев Амударья, где за это время резко упала водоносность реки – единственного источника водоснабжения региона пресной водой. Проблема питьевого водоснабжения остается весьма актуальным вопросом.

Целью работы является исследование гидродинамических и гидрохимических показателей подземных

вод территории левобережья р.Амударья в связи с орошением на сельскохозяйственных землях.

Характеристика объекта и методы исследований. Бассейн реки Амударья с общей площадью 1017,8 тыс. км<sup>2</sup>, расположен на территории замкнутого, отрезанного от океанов, бессточного региона Аральского моря. Амударья наиболее крупная по площади водосбора и водоносности река Центральной Азии, образуется слиянием рек Пяндж и Вахш. Общая ее длина от истоков реки Пяндж до Аральского моря составляет 2574 км, а от слияния с рекой Вахш — 1415 км. Река имеет ледниково-снеговое питание, площадь ледников на правобережных водосборах составляет 7,3 тыс. км<sup>2</sup>. Площадь водосбора равна 226,8 тыс. км<sup>2</sup> [1].

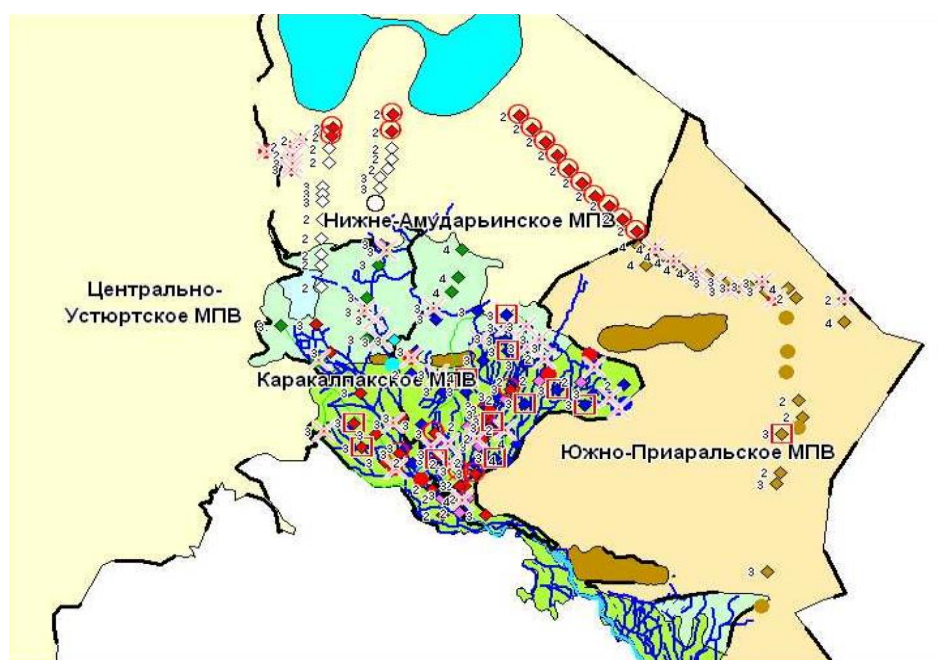


Рис. 1. Карта месторождений подземных вод низовьев р.Амударья

В бассейне р. Амударьи создана сложная ирригационная система, насчитывающая значительное количество каналов, насосных станций, коллекторов, ирригационных сбросов. В современных условиях на левобережье находятся три магистральных канала с пропускной способностью от 130 до 310 м<sup>3</sup>/с – Суенли (бывший канал Ленин-яб), Муйнак и Раушан. Последний идет в русле давно пересохшей крупной дельтовой протоки Раушан. Канал Кунград-Муйнак отходит от канала Суенли у г. Кунграда – до города Муйнак от поселка Даслык канал идет по территории бывших заливов Аральского моря Аджибай и Муйнакский, представляющих собой в настоящее время солончаки и солончаковые почвы. Ирригационно-сбросовым является озеро Судочье, в которое поступает вода из главного Левобережного коллектора. Три озера соленое Шегеколь и пресное Думалак и солоноватое Рыбацкий залив в Муйнакском районе подпитываются из канала Кунград-Муйнак. Также в Муйнакском районе располагается пресное озеро Машанколь, периодически получающее воду из канала Раушан (рис. 1).

Территория бассейна, характеризуется континентальным климатом с обилием теплых и солнечных дней. Средняя годовая сумма атмосферных осадков колеблется в пределах 80-110 мм. Наибольшее количество осадков выпадает ранней весной и частично зимой. Глубина промерзания почвы на орошаемых землях не превышает 0,7-0,8 м. Наибольшие ветреные дни отмечаются в апреле-мае, когда скорость ветра достигает 15-20 м/с, а в отдельные годы до 24 м/с, часто переходящая в песчаные бури, что вызывает ветровую эрозию почв [1,6].

В основу данной работы положены материалы гидрогеологических исследований орошаемой территории левобережья р. Амударьи, зоны распространения естественных потоков подземных вод, относящихся к древним (Присарыкамьшской, Ульдарьинской, Кыпчакардарьинской и Акдарьинской) дельтам Приамударьи; научный анализ отечественных и зарубежных исследований, результаты гидрогеологических режимных замеров уровней, отбора проб воды из наблюдательных скважины, из эксплуатационных и поверхностных водотоков, полевой гидрохимической лаборатории ГП «Приаральская ГГЭ» и Центральной химлаборатории ГУП «Узбекгидрогеологии».

Результаты исследований и их обсуждение. Ухудшение качества вод поверхностного стока отрицательно сказалось на устойчивости линз пресных подземных вод. В большей части ранее разведенных участков линз пресных подземных вод произошло увеличение минерализации подземных вод, что ухудшает их качество. Хотя приречные и приканальные линзы пресных подземных вод по-прежнему остаются одним из основных источников централизованного хозяйственно - питьевого водоснабжения. По схеме районирования, предложенного Н.Н. Ходжибаевым (1970 г.), территории орошаемой зоны левобережья р. Амударьи ниже Тахиаташской возвышенности на востоке руслом

Амударьи, на западе – восточным чинком плато Устюрт, на севере – условно береговой линией Аральского моря до 1960 года, т.е. отметкой + 53,0 абс.м. являются зоной распространения естественных потоков подземных вод, относящихся к древним (Присарыкамьшской, Ульдарьинской, Кыпчакардарьинской и Акдарьинской) дельтам Приамударьи, занимающие общую площадь 610 тыс.га, из них 312,82 тыс. га – орошаемые земли (составляют 25 % общих земельных ресурсов Левобережной зоны) [4].

Режим подземных вод орошаемой территории предопределен режимом орошения, возделываемых сельскохозяйственных культур и работой магистральных каналов. Магистральные каналы, в основном, проложены по долинам староречий древних протоков р. Амударьи, расположение которых в плане, и в определенной степени в разрезе, подчиняется системно-структурным закономерностям. Орошаемая территория северной зоны представлена верхнечетвертичными и современными аллювиальными отложениями (аQIII-IV) Сарыкамьшской, Акчадарьинской и Приаральской дельты Амударьи. Водовмещающие породы не выдержаны по мощности и по литологическому составу. По степени освоенности территории имеются массивы старого, недавнего, нового орошения и целинные неосвоенные территории.

На переложенных землях внутри орошаемых массивов за определенный период времени (2018-2021г.г.) происходил стабильный спад уровней подземных вод с 2,0-3,5 м до 5,0 до 8,6 м от поверхности земли, со скоростью 0,57-2,04 м/год., связанный с упорядочением режима поливов на орошение и маловодьем р. Амударьи и магистральных каналов. Минерализация подземных вод за это время изменилась с 2,5-3,97 г/л до 6,3-9,4 г/л и более.

Режим подземных вод на целинных и адырных площадях Левобережья р. Амударьи и древней Присарыкамьшской дельты имеет тенденцию стабильного спада со среднегодовой скоростью от 0,2-0,34 до 0,30-0,45 м/год (на удалении от орошения) и от 0,50-0,72 м/год (вблизи орошаемых земель).

Глубина залегания уровней подземных вод вблизи орошаемых площадей составляет от 2,0-2,5 до 3,0-3,5 м и 5,0-5,5 до 6,0-9,4 м в удалении от поливных территорий. Особых изменений в химическом составе и минерализации подземных вод рассматриваемых площадей не происходило (от 4,0-6,0 г/л до 27-34 г/л).

На массивах преобладающего возделывания рисовых культур, которые охватывают территории Канлыккульского (вдоль р. Амударьи) района максимум уровня подземных вод в сезонном разрезе наступает в августе 0,92-1,84 м, а минимум, на глубинах 4,0-5,95 м от поверхности земли в ноябре-декабре месяцах. Минимальный уровень на территории Канлыккульского, Кунградского районов отмечается на глубине 3,6-4,2 м, а в Муйнакском районе на 7,0-7,2 м. На этих массивах уровень подземных вод залегал в пределах от 5,9 м до 7,4 м с амплитудой колебаний 1,0-1,5 м. Повышение уровня подземных вод наблюдалось с марта до мая месяц 2020-21гг., снижение уровня подземных вод продолжается до конца года в пределах 8,02- 8,21 м.

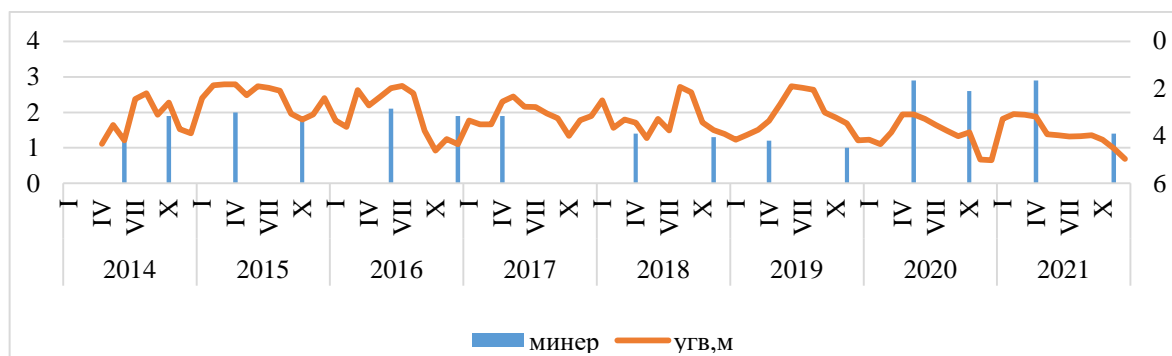


Рис. 2. График наблюдений уровнем и химизма ПВ по НП 79 скв 692

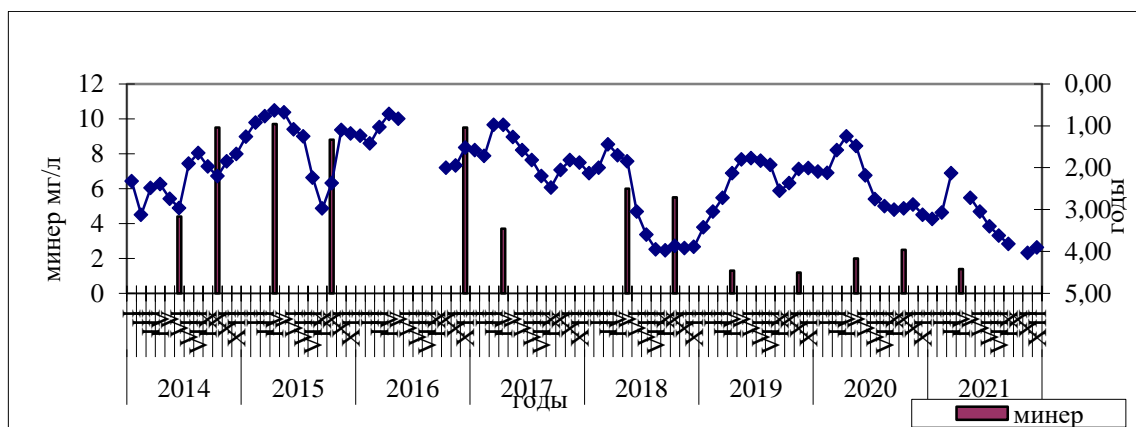


Рис. 3. График наблюдений уровнем и химизмам подземных вод по НП 54 скв 114

На рис. 2.3. приведены изменения среднемесячных уровней подземных вод по скважине №54 (НП-114), расположенной на орошаемой массиве Кунградского района и по скважине №692 (НП-79) Канлыккульского района левобережья р. Амударья. За данный период на этих землях уровни подземных вод залегали на глубине 1,8-6,0 м от поверхности земли. Минерализация подземных вод верхнего слоя (до 10м) на массивах рисосеяния 2018 году повышалась до 6,1г/л, с 2019 года по настоящее время изменялась в пределах 0,8-3,0 г/л. Влияние орошения на минерализацию подземных вод в многолетнем разрезе происходило практически, до глубины 7-15 м при резком уменьшении изменений с глубиной.

На массивах, традиционного преобладания посевов хлопчатника (территория Присарыкамьшской дельты р.Амударья), где расположены территории Канлыккульского Кунградского и Муйнакского административных районов, за период наблюдений 2018-2021 гг., максимальный уровень подземных вод отмечался в мае – августе месяцах на глубине 0,6-1,5 м в период влагозарядковых поливов и вегетационных поливов озимых зерновых культур. Минимальный уровень подземных вод наступал в конце октября и начале ноября на глубинах 3,5-4,2 м от поверхности земли. Амплитуда колебания уровня подземных вод составляла 2,7-3,0 м в зависимости от водности года. Следует отметить, что начиная с сентября до середины ноября все каналы закрыты, и водоподача на орошаемые земли прекращается полностью. Со второй половины ноября начинаются осенне-зимние промывные поливы, которые продолжаются весной следующего года – весенние промывные влагозарядковые поливы. В этот период ежемесячно на массивах хлопкового комплекса Присарыкамьшской дельты подается в среднем, около 100 млн.м3 воды с минерализацией 1,2-1,8 г/л и более.

Тип воды, подаваемой на промывку в основном, сульфатно-хлоридный, натриевый.

В связи с изменением структуры посевов, т.е. с увеличением озимых зерновых культур, время наступления максимальных уровней подземных вод сменилось на март- апрель месяцы в 2019 году и отмечалось на глубинах 0,95-1,8м от поверхности земли. Время наступления минимальных уровней подземных вод осталось неизменным. Среднегодовые уровни подземных вод в многолетнем разрезе имеют тенденцию снижения, обусловленную выше изложенными факторами (рис. 2,3). Исключением из правил, являются земли, расположенные в средней и хвостовой частях основных магистральных каналов Суенли и Шуманай, где в маловодные 2020 – 2021гг., среднемесячные уровни подземных вод снизились от 2,0 – 2,63 м. до 3,7 – 5,04 м. соответственно. В последующие, за маловодным, многоводный период, уровни подземных вод на этих землях интенсивно восстановились со скоростью подъема 0,5 – 3,0 м/год, в зависимости от интенсивности полива возделываемых сельскохозяйственных культур.

Выводы. Таким образом, изменение водохозяйственных условий и гидрологического режима Амударья являются основными факторами изменения гидродинамического режима подземных вод. Гидрохимический режим подземных вод Левобережной зоны формируется под влиянием климатических, гидрологических и мелиоративных факторов, а так же под влиянием орошения.

На неорошаемой территории, примыкающей к Амударье минерализация и химический состав подземных вод за период наблюдения (2018 – 2021) годы стабильны, воды от пресных гидрокарбонатно-сульфатных с плотными остатками 1,6-4,4 г/л до соленых хлоридно-сульфатных натриевых с плотными остатками 7-34,5 г/л.

На старо-орошаемой территории такая же ситуация. На участках нового орошения наблюдалось попеременное опреснение или засоление верхних горизонтов вод. Минерализация подземных вод в после-промывной период (март-апрель) колебалась в пределах от 1,0-1,1 г/л до 1,5-3,0 г/л, в после-вегетационный период (август-сентябрь) пределы колебания минерализации составили 2,6-4,8 г/л, т.е. гидрохимический режим подвержен резким изменениям неуставившего характера во времени и это вызвано в первую очередь техногенной деятельностью хозяйствующего субъекта, т.е. технологией орошения, сменой сельскохозяйственных культур, внесением различных видов органических и химических удобрений и т.д. Повышение минерализации верхних горизонтов подземных вод на орошаемой территории можно объяснить тем, что после зарегулирования стока р. Амударья (1965-75 гг.) её русло стало служить естественной дренажной для подземных вод, начиная от

Тахиаташской плотины до южного побережья Аральского моря. В зимне-весенний период и ранней весной сюда разгружаются потоки подземных вод с прилегающих лево- и правобережных площадей орошений. Пресные воды прирусловой полосы, в первую очередь дренируемые рекой, замещаются соленоватыми и солеными водами из под орошаемых площадей, и интенсивность такого замещения усиливается особенно в периоды проведения зимне-весенних промывок почв.

Все изменения в минерализации подземных вод, происходящие только в верхних водоносных горизонтах аллювиальных и аллювиально-озерных отложений, т.е. в зоне активного водообмена, будут происходить и в дальнейшем. Этот процесс наиболее четко будет наблюдаться с ноября – декабря по март – апрель в период проведения зимне-весенних промывных поливов, когда минерализация оросительных вод Амударья достигает максимального значения 1,1-1,5 г/л.

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## ISSUES OF DEMOGRAPHIC EDUCATION AND DEMOGRAPHIC DEVELOPMENT IN UZBEKISTAN

Annotation

The article examines the development of demography and demographic processes of the Republic at the National University of Uzbekistan, scientific research on them. Detailed information is provided about the stages of development of demography education, the results of the research carried out, books, textbooks, projects. With demographic education, the demographic situation, development are studied in connection.

**Key words:** Demography, population, geodemography, population longevity, demographic policy, migration and urbanization.

**Introduction.** In today's era of globalization and integration, the population's attention to social and economic changes is directly reflected in their demographic development, demographic behavior, and culture. Demographic issues are one of the important factors determining the socio-economic development of any society. The emergence of demographic problems and their gradual impact on development require increased attention to demographic knowledge and research. Therefore, in Uzbekistan, which is in active demographic development, it is necessary to highlight such issues as the development of the science of demography, the conducted scientific works and the attention and need for modern demographic knowledge.

In the conditions of the new Uzbekistan, economic liberalization, the natural, economic-social and demographic development of the regions, the question of the population, in particular, the human factor, its role and development, taking into account the position, influence, potential and weight, has a special place. There are demographic processes such as the number of population, increase and its sources, i.e. birth, death, marriage, divorce, mechanical movement, taking into account these aspects in the conditions of the transition to a new economy requires the training of specialists who study them, conducting in-depth scientific research.

**Literature review.** At the time of the establishment of the Department of Demography, the lack of study guides and textbooks in Uzbek for students and masters was a big problem. "Basics of Demography", "Social Demographic Groups", "Fundamentals of Family and Demography", "How many children is better in a family" written by M.R.Boriyeva and Z.N.Tajiyeva co-authored "Population Geography", "Economic and Demographic Statistics" [6] textbooks by Z.N.Tajiyeva were published. Also, another work related to demography, the monograph "Demography of Rural Areas" prepared jointly by members of the Department of Demography and Social Geography and Regional Economy, was published in 2005. This study was prepared on the basis of the GNTP project number P.2-38 "Problems of socio-demographic and ecological development of rural areas of Uzbekistan" [5].

In the directions of the UNFPA international grant project program, a number of activities were planned, such as preparation of the curricula of the subjects taught in the department in accordance with international standards, creation of personnel capacity based on the new program, establishment of necessary material and technical conditions, creation of textbooks and study guides in the new Uzbek language. On the basis of the UN international grant, the department worked on the project of creating new educational

manuals in the Uzbek language that meet the requirements of the world standard. The book "Population of the world: development processes" [2] by M.R.Boriyeva, D.N.Egamova prepared according to this program in 2008, the scientific monograph "Population of Uzbekistan" by Z.N.Tajiyeva in 2010, M.R.Boriyeva, In 2011, the study guide "Population geography with the basics of demography" co-authored by Z.N.Tajiyeva and S.S.Zakirov was published [1, 159]. It is worth noting here that one of the works related to demography published for the first time in Uzbek is the monograph "Family Demography in Uzbekistan" written in Uzbek in 1997 by M.R.Boriyeva.

**Research Methodology.** Since the second half of the last century, a lot of attention has been paid to the laws of population regeneration, issues of demographic development, training of specialists in demography, study of demographic processes, analysis and diagnosis. In this regard, it is appropriate to cite the works of demographer M.Q.Karakhanov and his students, famous not only in Uzbekistan, but also in Central Asia and the CIS countries, who laid the foundation for the development and formation of demographic sciences in the republic since the 1960s.

M.Q.Karakhanov established the only Central Asia Research Laboratory of Population Studies at the Tashkent State University (now the National University of Uzbekistan) and managed it from 1962 to 1978. It was here that the first sociological-demographic studies in the republic before 1978 began. During 1978-1986, professor O.B.Atamirzaev headed the scientific-research laboratory of population studies, during this period he continued sociological-demographic research. After O.B.Atamirzaev.

In 1998, by the decree of the President, the scientific-practical center "Family" was established in the republic, and the scientific-research laboratory of population studies was transferred to the department of family demography established in this center. In 2000, the Department of Demography was established at the Faculty of Geography of the National University of Uzbekistan on the initiative of Mamlakat Rakhmanovna Boriyeva (2000-2006, M.R.Boriyeva, 2006-2007, Z.N.Tajiyeva, 2007-2010, S.S.Zakirov, head of the department worked as).

The department has started accepting students for the master's degree "Geodemography". For the first time in the republic, educational programs and curricula were developed for the master's specialty "Geodemography". In this specialty, teaching of subjects that are completely new in the conditions of Uzbekistan has been started. In particular, these include "Demography", "Demographic policy", Research methodology", "Migration and urbanization", "Population theory",

"Economic and demographic statistics", "Population mortality and life expectancy" (4) (for the first time this subjects are taught at the National University of Uzbekistan) and so on.

It is appropriate to remember the great support of the university management, especially our late professor T.N.Dolimov, who worked as the rector at that time, in the issues of the establishment of the Department of Demography, the provision of demography textbooks, manuals and software. For the students of the Department of Demography established under the leadership of T.N.Dolimov, many study guides and textbooks were brought from Moscow on population studies. In addition, as far as possible, training manuals and lecture texts were immediately prepared in Uzbek.

International cooperation relations have been established since the beginning of the department's work. Therefore, since 2004, in cooperation with the Population Fund of Uzbekistan (UNFPA) of the United Nations Organization (UNFPA), under the leadership of the head of the Department of Demography of the National University of Uzbekistan M.R. Borieva, candidate of economic sciences, he began to participate in the program in the direction of "Strengthening the national capabilities of training demographers in Uzbekistan" [2].

The participation of teachers, graduate students and students of the department was ensured in the direction of creating the potential of personnel provided for in the international program. As part of this program, graduate students of the department participated in professional development courses abroad and engaged in scientific research.

**Analysis and results.** In the conditions of economic liberalization, consideration of the population, especially the human factor, its role and development, its position, influence, potential and importance in the natural, economic-social and demographic development of the regions has a special place. From this point of view, along with demographic education, conducting demographic research in the republic is one of the urgent tasks. There are demographic processes such as population size, increase and its sources, i.e. birth, death,

marriage, divorce, mechanical movement, which cannot be ignored in any transition. Because each region is made up of complex socio-economic systems, their condition is directly reflected in the process of demographic development.

Economic reforms in Uzbekistan have made changes not only in the rate of growth and natural movement of the population, but also in the professional, social structure and educational level. Such changes are evident in the rate of population growth and birth rate, sometimes decreasing or increasing. At this point, it is worth mentioning that the peak period of birth in our republic is between 70-80 years of the last century [4]. It was true, but at that time, the material conditions and living conditions of the population could not be said to be better than now. In fact, the main goal of the demographic policy of the former Soviet regime at that time was to ensure the full employment of the population. In this, it is envisaged that the population will produce several times more products compared to the products consumed by being employed during the entire period of working capacity, as a result, the high growth rate of the population is considered to be more economically efficient.

According to January 1, 2022, the population of the Republic of Uzbekistan reached 35,271.3 thousand people. The population growth rate was 169,2 percent in 1991-2021, and the average annual growth rate was 1,70 percent. The analysis of the last 4 population censuses and the absolute increase of the population in the subsequent period shows that an average of 4 million people are added to the population of the republic every ten years. Due to the decrease in the birth rate and natural reproduction among the population during 1995-2015, as well as the negative indicators of the migration flow, the growth rate of the population of the republic decreased sharply. In particular, the average annual growth rate of the country's population was 2,40 percent in 1985-1990, 2,15 percent in 1990-1995, 1,75 percent in 1995-2000, 1,20 percent in 2000-2005, 2005-2010, 2010-2015. increased by 2,15 percent in 2015-2020 and restored the situation of 1985-1990.

Table 1

Sources of population growth of the Republic of Uzbekistan, (1989-2021)

Years	Population number, thousand people	Total population increase, thousand people	Natural reproduction, thousand people	Remaining migration, thousand people	Gross migration volume, thousand people
1989	19780,0	442,0	541,9	-99,9	897,4
1990	20222,0	385,7	561,5	-175,8	864,0
1991	20607,7	498,6	593,1	-94,5	772,5
1995	22461,6	444,9	532,6	-87,7	424,6
2000	24487,7	325,4	392,0	-66,6	358,4
2001	24813,1	302,7	380,4	-77,8	381,4
2005	26021,3	291,4	392,9	-101,6	391,2
2010	28001,4	1122,0	496,4	-44,1	323,6
2011	29123,4	435,7	482,3	-47,6	320,7
2015	31022,5	552,8	582,1	-29,3	307,8
2020	33905,2	649,7	666,1	-64,5	394,7
2021	34558,9	653,7	730,7	-77,0	531,8

The table was compiled by the author based on the information of the State Statistics Committee of the Republic of Uzbekistan

The population of the country is increasing year by year mainly due to natural increase. For example, the natural increase of the population by 730,700 people in recent years proves this. The most surprising thing is that during the last three years, a slight increase in the birth rate among the population was clearly felt in the general and natural increase of the population. The mechanical decrease of the population remains unchanged as in all years.

The reproductive tendency of the population formed during the demographic transition had its effect on demographic processes, first of all on birth. The process of limiting the number of children has increased in most families. This situation can be clearly seen in the fact that the number of babies born in families in Uzbekistan is decreasing year by year. For example, in 1991, 723,400 babies were born in republican families, and in 2009, 649,700, that is, their

number decreased by 1,2 times during this period, or 73,700 babies were born less than in 1991 [3. 56-67]. However, in 2021, 905,200 babies were born. Since 2018, the increase in the number of children born in families has led to a sudden increase in the total population.

Since the total amount added to the population of the republic is related to the progress of demographic processes, we cannot say that the changes in these demographic processes will not have an impact on the socio-economic development of the country. Because the quality and quantity of the military spheres and labor resources are directly related to the number of the population and are determined by the activity of the same processes. However, in such a situation, it does not mean that changes in the capacity and weight of labor resources will occur very quickly. However, having a large number of people creating labor force and material wealth is beneficial in any situation and for any country. This should be achieved only in the case of a favorable demographic situation, i.e. high birth rate, stable marital relations, low death rate, and no effect of external migration on the total population.

**Conclusion.** The positive aspects of population reconstruction in our country are that the proportion of young children and youth in the population is always higher than that of adults. However, we can see that the number of young children is decreasing due to changes in the population's reproductive tendencies. This means that after a certain period

of time, the population of the Republic may change from a progressive structure to a stationary structure. In stationary and regressive population, the number of young children and adolescents will not be as large as it is now, that is, their number will decrease year by year, and middle-aged and older people will begin to form the majority. Such a situation may lead to an increase in the proportion of the elderly among the population, and an increase in the incidence of death.

It can be concluded from the studies that the analysis of the demographic issues of the implementation of economic reforms in Uzbekistan, due to the decrease in the population growth rate, the number of children in families is sometimes decreasing and sometimes more are being born, different changes are observed in the size of families in different periods, especially in the second stage of the demographic transition, without moving to the third stage. indicates that we will stay.

The current situation and the future demographic situation in the country's demographic development require great attention to demographic education and acceleration of demographic research. As the socio-economic development of the society is directly related to the population and the laws of its reproduction, the demand for research related to the population is increasing. This means increasing attention to demography and demographic research, establishing teaching of subjects in this direction at universities, and establishing laboratories as important tasks for us.

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## ISSUES OF GEODEMOGRAPHIC DEVELOPMENT OF FERGANA REGION

Annotation

Study and analysis of factors and processes affecting the population of Fergana region.

**Key words:** global, demographic process, territorial location, age structure, population regeneration.

**Introduction.** Geodemographic development is the development of socio-economic and geodemographic processes of regions, and the main emphasis is on demographic issues. Each region differs from each other due to its unique geographical location, specialization, and composition of regional production complexes. The regions of the Fergana Valley make a significant contribution to the demographic development of the Republic of Uzbekistan. These valley regions are located in the eastern part of the country according to their geographical features and differ from other regions in terms of relief and natural conditions.

Fergana region is located in the eastern part of Uzbekistan, and it is also recognized as the jewel of Uzbekistan. Fergana region is located in the east of our republic, in the south of the Fergana valley, borders Namangan and Andijan regions to the north, Kyrgyzstan to the south and east, and Tajikistan to the west. The region includes the plain part of the valley, the mountainous regions of the Oloy and Turkistan ridges. Its total area is equal to 6.7 thousand square kilometers, which is 1.5 percent of the territory of the republic. Katranbashi, Haidarkon, Nazar, Kyzlgaza, Almalik, Ispisar, Belmazor of the Oloy range in Fergana region; The slopes of the Turkistan Ridge include Kampirkak, Guzan, Burgan, Qizilsuv, Kulantog, Suratboshi, Aktash, and Kizilkuyok branches. The height of these mountains is 900-2800 meters. The highest point in the territory of Fergana region is the Sarikkamish mountain in Sokh district, 2817 m.

The surface structure of Fergana is extremely diverse. The surface of the earth can be divided into several hypsometric steps (zones). Its northern part is a plain, and the Syrdarya flows through it. The northern part of Fergana is occupied by the banks of the Sirdaryo, I, II and III terraces, and on the surface of the high terraces, a lot of land is occupied by sand dunes. Their height does not exceed 5-15 meters. The largest sand massif here is Yozyavon and Karakalpak desert.

Now, most of the dunes have been leveled and turned into fields. A number of large rivers originate from the mountain ranges surrounding the region, and most of them dry up before reaching Syrdarya. They form large spreads in their lower parts. Spreads connect with each other and form alluvial-proluvial plains. These will create favorable conditions for the population to live. It is also possible to see various differences in population distribution, somewhat uneven location and development[4,2,5].

Air currents coming from the west are of great importance in the formation of the climate of Fergana region. These currents often blow in the spring, sometimes bringing wet air, sometimes dry air. There will be strong winds in its area. "Kokan" wind blows strongly in the territory of the country from October to March. Its speed reaches 25 meters per second. Winds are especially strong in winter as the air temperature cools. In addition, mountain-valley and fyon winds often blow in the region. As a result of these winds, in the sandy deserts of Yozyavon and Karakalpak, located in the territory of the region, special landforms, i.e., sand dunes, hills, and hills, were created. This also creates a unique landscape and attracts attention at first glance. At the same time, there are many areas that have been strongly changed and appropriated by people. The northern part of Fergana region is surrounded by hills in the form of a ring. They formed the second upper layer of the earth's surface. Alluvial-proluvial deposits, which were mainly laid down in the Quaternary period, are widespread in this area. It is in this hilly region that the land is very fertile and fertile, and orchards occupy a very large area. This is one of the opportunities to open a wide path for the development of the population.

**Methods.** Cartographic, statistical analysis, extrapolation, comparison, mathematical and system composition methods were used in the scientific research of the geodemographic development of this Fergana region.

**Results and discussion.** Specific tendencies of the development and reconstruction of the population of Fergana region are taking shape. Due to the large number of inhabitants, the location of urban and rural residents is formed in its own way. According to such indicators, Andijan and Namangan regions are similar to Fergana region. The population is the total number and amount of people living in a known area and is calculated from demographic classifications. Population figures change as a result of birth, death and migration figures. Also, nationality, customs, religion, economic and social factors affecting the population and the demographic processes observed in it are the most important. In addition, the level of education and employment among the population has a great impact. Currently, the repopulation of the Fergana region as a result of a relatively low migration balance and an increase in natural growth is relatively problematic and unique.

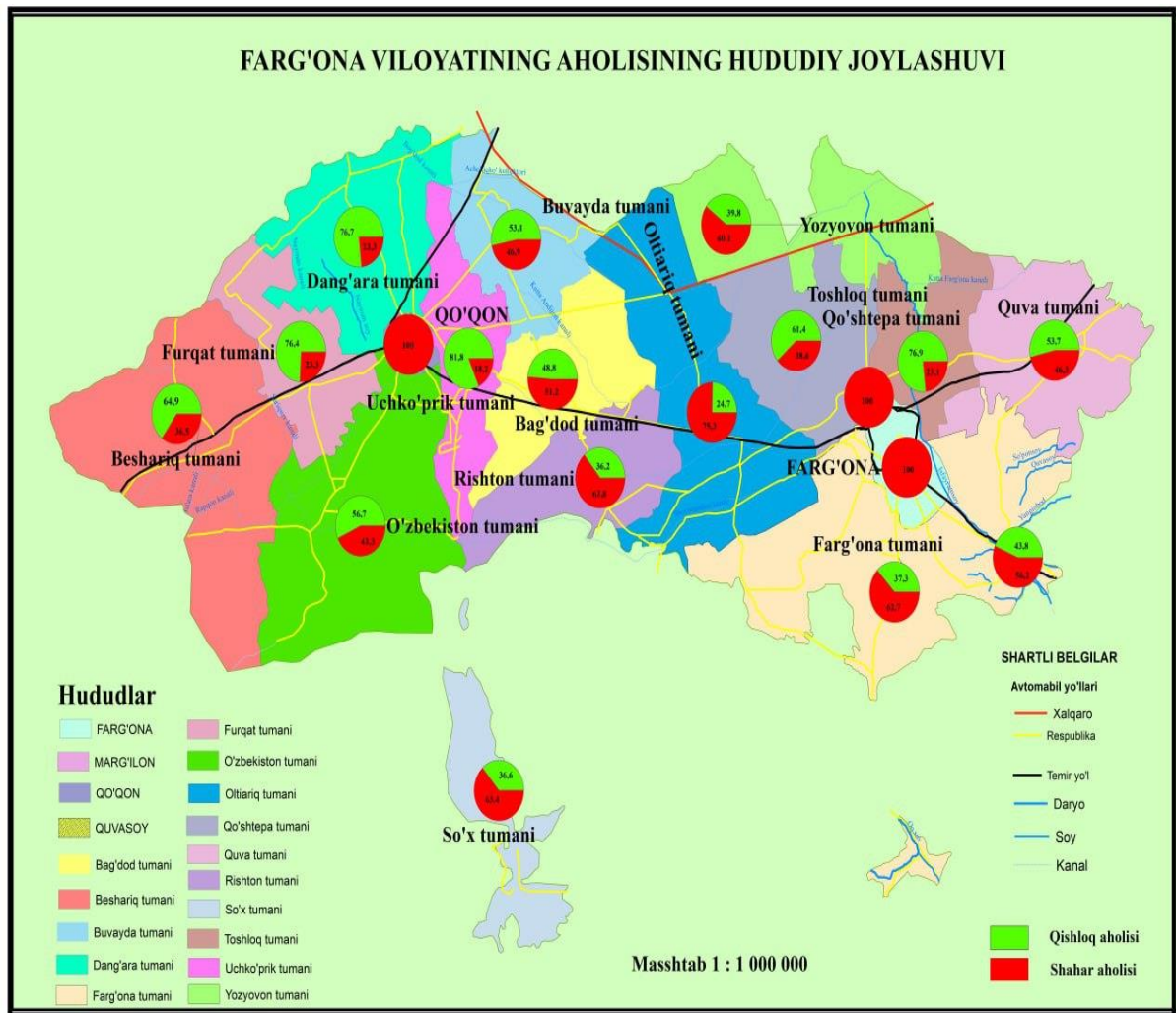


Figure 1. Resident card of Fergana region. The card was created by the authors.

Fergana region has been growing regularly in the last 10 years. In 2011, the total population of Fergana region was 3229.2 thousand people, and there were 1242 population centers, 15 of them districts, 9 cities, 197 towns and 1021 rural population centers were formed. The population of Fergana region will reach 3,820,000 people by 2021, an increase of 590,800 people compared to 2011. There are big cities in Altarik, Beshariq, Kuva, Rishton and Uzbek districts of Fergana region, and the population and their location are unique in these regions. In terms of the number of towns, the most districts are 22 in Uzbek district, 21 in Koshtepa, Fergana and 15 in Kuva district. In terms of the number of rural population points, Uchkoprik district and Dangara district have 120, Uzbek district has 97 and Beshariq district has 96. Out of these districts, Uchkoprik, Dangara and Beshariq districts are Fergana. It was formed as a satellite region near the city of Kokan of the mother region, and it is unique in terms of the level of population, social and economic indicators [1,63.68].

As of 2022, the largest population in Fergana region is 299.2 thousand people in Fergana city (7.7 percent of the population of the region) and 266.0 thousand people (6.8 percent) in Kuva district, on the contrary the smallest population was 96.9 thousand people (2.5 percent) in the city of Kuvasoy and 80.6 thousand people (2.1 percent) in Sokh district.

In terms of regions, the highest population growth rate compared to the corresponding period of 2020 was 2.6% in Koshtepa district and 2.5% in Dangara district, 2.5% in

Uchkoprik district, on the contrary, the most low growth rate was 1.2% in Kokan city and 1.7% in Beshariq district. It can be seen that the population of Fergana region is mainly located in the central parts of Fergana city, Margilon city and neighboring districts of Kokan city. This means that the demographic indicators of the population in these regions belong to the main part of the region. The sharp increase in the population in these areas directly affects the growth of the region's population. We can see that Yozyovon and Sokh districts are separated from such areas. The proof of this can be seen from the demographic indicators of the population.

Fergana region has very comfortable and in one sense good conditions for the population to live. The average population density of Fergana region is 413.9 people per 1 km<sup>2</sup>. According to the data of 2004, the population of the city was 800,000 people, and the population of the countryside was 2,015,000 people, and in 2021, this indicator was 561.7 people. It can be seen that the population of Fergana region has been growing steadily over the years. Due to favorable natural conditions, the population in these regions is very comfortable and has been formed in a state of complex evolution since ancient times. These regions are one of the centers of civilization, where the population lived in a sedentary manner, besides, it had a great influence on its development due to the Great Silk Road [1].

Due to the occupation of these lands by different peoples in different eras, nations were formed and developed in different ways. One of the most influential of such processes was the introduction of Islam due to the Arab

invasion and a drastic change in the standard of living of the population. The reason for this is that many children are encouraged in Islam. Nowadays, Uzbeks, Russians, Kyrgyz, Tajiks, Kazakhs and other nationalities live in these regions. Such processes have changed not only the national composition, but also the Europeanization. Currently, the level of urbanization of the region differs sharply across the region. For example, districts in mountainous regions are characterized by a high proportion of urban residents

The population is unevenly distributed due to the increasing elevation of the regions from the center to the surrounding mountains. In the central part, in Yozyovon and Karakalpok villages, the population centers are characterized by the fact that they live together. In addition, the settlements of ancient cities such as Ko'kan and Margulon and their surroundings have been formed in their own way since ancient times. In such areas, the population is dense and multi-ethnic.

The population of Fergana region varies from year to year in different regions, and this is clearly visible in the regions. This process is considered to be the main factor in population regeneration and has a great impact on indicators. The total birth rate in Fergana region is not homogeneous, due to the large percentage of other nationalities in the population, it is possible to observe that the lowest indicators were returned in the Fagana Valley, as well as in the republic. It is

possible to come to such a conclusion when the highest indicators are observed in the most densely populated areas. Fergana region is characterized by the importance of natural and social factors in population regeneration.

Fergana region has big differences in terms of urban structure and age structure, which has a great impact on the number and quality of the population. We can see such processes in urban and rural population.

Nowadays, the dynamic indicators of the population of the region, the number of permanent residents as of April 1, 2020 is 3,766,000 people, which has increased by 70,400 people or 1.9 percent compared to January-March 2019. In particular, the number of urban residents was 2124.7 thousand people (56.4% of the total population), the number of rural residents was 1641.3 thousand people (43.6%). Please note: the data for January-March 2020 shows this. The population increased by 70,400 people. The number of live births was 18,700. 4,100 deaths were recorded. 4,900 marriages and 0,800 divorces were registered in the registry offices of city and district administrations. Nowadays, the rate of population regeneration is very high. Currently, illegal sharia marriages are also found in some sections of the population. This causes an increase in the number of divorces among the population and a sharp increase in problems that may arise in the family.

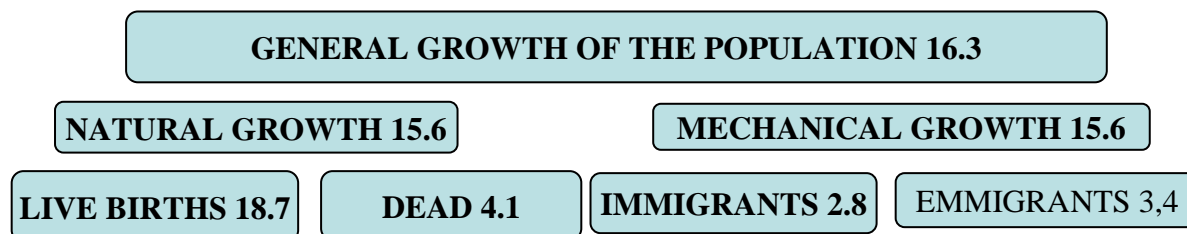


Figure 2. Demographic indicators of the population of Fergana region. Source: Data of the State Statistics Committee of the Republic of Uzbekistan processed by the author.

As can be seen from the data presented above, natural growth is high, and the balance of migration is going to a negative state. In such cases, population regeneration changes over the years in a unique and unrepeatable way. The level of education of the population and the level of employment also have a great influence on the factors influencing population regeneration. A clear example of this is that urban residents have slightly higher indicators in this respect than rural residents, and the age of birth and marriage differ somewhat. We can observe that the birth weight of urban residents is lower than that of rural residents, and the age of marriage is higher. We observe that migration has a stronger effect among the population living in urban conditions. The external migration of the urban population is mainly characterized by those who have moved away, while the internal migration is characterized by a high proportion of those who have moved from the countryside. We can see these processes from the map below and we will come to such a conclusion when we analyze.

The birth rate of the population of Fergana region has decreased by 7.4 per million in 2020 compared to 2011. The highest indicators were recorded in Sokh district by 9.9 per million and Fergana city by 0.2 per million. We can observe that the lowest indicators were 12.6 per million in Fergana district, 12.4 per million in Tashlak district and 11.5 per million in Dangara district.

Mortality rates are one of the most important factors, and such a process has been taking shape in Fergana region in recent years. Factors affecting such indicators depend on the level of health of the population, sanitary condition and the level of provision of medicine. In the last year of 2020, 18,500 deaths were recorded, correspondingly, the death rate per

1,000 inhabitants was 4.9 per thousand. Compared to the corresponding period of 2019, it was observed that it increased by 0.3 per thousand and was 4.6 per thousand in 2019 [5].

In recent years, the number of marriages and divorces has been increasing year by year. As a result of the divorce, it causes a decrease in the number of births in the population, a change in the age structure and other demographic problems. "Divorce is a complex socio-demographic process, which occurs under the influence of a number of factors." In recent years, there has been a slight increase in divorce cases in the regions of Uzbekistan. According to statistical data, 39,200 divorces were registered in the republic in 2021, and the divorce rate per 1,000 population was 1.1 per thousand, and it was observed that it increased by 0.3 per thousand compared to 2020. the indicator was 0.8 per thousand in 2020. In 2021, 50.5% of all divorcees in the republic were childless, 28.4% with one child, and 21.1% with two or more children. In 2021, according to the education of divorced men, 17.2% of those with higher education, 52.9% of those with secondary specialized, professional education, general secondary education 29.9 percent of those who have

According to the education of divorced women in 2021, 13.3 percent of those with higher education, 62.4 percent of those with secondary specialized, professional education, general secondary education it is possible to observe that 24.3 percent of those who have the most surprising thing is that it is sad that the divorce is increasing more and more among those with higher education and those with secondary specialized, professional education.

In 2020, 2.8 thousand divorces took place, correspondingly, the divorce rate for every 1000 population is 0.8 per thousand. In 2021, 3,200 divorces were recorded,

corresponding to the divorce rate of 1.1 per 1,000 population, which once again confirms that its level is increasing.

In 2020, Fergana city had 1.3 per thousand, Kokand city had 1.3 per thousand and Uzbekistan district had 1.0 per thousand. The lowest indicators were 0.4 per thousand in Yozyavon and Kuva districts, 0.5 per thousand in Sokh, Tashlak and Buvayda districts, and 0.6 per thousand in Dangara, Uchkoprik and Rishton districts. In 2021, the highest of these indicators is 2.1 per thousand in Fergana city, 1.8 per thousand in Kokan city and 1.4 per thousand in Sokh district, and the lowest indicators are in Kuva district. 0.7 ppm,

Yozyovon district was 0.8 per thousand and Furqat district, Tashlak district, Rishton district, Buvayda district, Dang'ara district, and Beshariq districts were 0.9 per thousand.

Such territorial development features of demographic processes are especially evident in studies at the scale of cities. In addition, Fergana region is rapidly developing. In particular, these indicators are characterized by large regional differences.

As we know, the demographic structure of the population means its age and gender. The age and gender of the population of Fergana region is unique and complex in terms of regions. In terms of population structure, it is important to consider the number of children, people of working age and pensioners in the indicators of population regeneration. We know that many factors develop among the population depending on age and gender. The most important factor in predicting and predicting the next generation change. If there is a high proportion of young people among the population, the indicators of population regeneration will also be high. On the contrary, if the weight of the elderly population is high compared to the weight of the young population, a decrease in population regeneration is observed, which leads to demographic aging [7].

Currently, the age and gender composition of the population of Fergana region is complex, and its unique

aspects are also noticeable. We can see these indicators in the cross-section of regions. According to the data of 2020, the proportion of children under the age of 0-14 in the population of Fergana region is 27% of the total population. This indicator is higher than in other regions of our republic. In turn, the weight of the population aged 16-60 is 62%, which is the average indicator for the republic. The share of the population aged 60 and over is 11%, and this indicator is higher than in other regions of our republic. As can be seen from this, the age structure and demographic situation of the population of Fergana region is characterized by its own characteristics. This is a rather complicated process[7].

Nowadays, the increase in the proportion of young people and the increase in the share of able-bodied people will lead to an increase in the proportion of the elderly in the coming years. This causes a demographic breakdown in the society. We can see the negative consequences of such processes in countries like Eastern Europe and Russia. Therefore, it is appropriate to control the repopulation of the region. Economic, social and psychological methods are suitable for this purpose. Development of a specific program for each population point in the region and their control are also important aspects.

The distribution of the age structure of the population by regions is also of great importance. Especially if you look at the section of districts, you can see big differences. Among them, urban and rural areas develop differently.

Among the young population of Fergana region, the share of able-bodied people is the highest at 59.9 percent. This means that the birth rate among the population is high and the number of births is increasing. In such processes, it has a great impact on the migration process. Because the main part of migration is the working age population. A high share of the young population leads to an increase in the working population. On the contrary, the increase in the weight of the elderly slows down the repopulation.

Table 1

Permanent population by age groups

Areas		As of 2020, age groups include:					
		0-15 years old	%	16-60 years old	%	60 older than age	%
Republic of Uzbekistan	33905242	10400583	27	20742162	62	2762497	8,1
Fergana region	3 752,0	1017185	25	2309659	65	1124196	10
Farg'ona sh.	289,0	71791	28	186700	60	75490	12
Qo'qon sh.	252,7	71169	25	152573	63	75908	12
Quvasoy sh.	93,2	23570	28	58922	61	25906	11
Mapg'ilon sh.	235,0	66090	26	143275	64	71196	10
Oltiariq	210,5	54375	27	133993	62	60202	11
Qo'shtepa	189,2	51077	27	118091	61	56917	12
Bog'dod	214,3	57225	29	130029	60	64730	11
Buvayda	226,7	65510	30	136611	60	72010	10
Beshariq	227,3	67184	27	136884	63	72749	10
Quva	257,1	68931	28	161157	60	75768	12
Uchko'prik	227,4	63143	26	137345	62	70171	12
Rishton	201,1	53135	31	125061	60	59818	9
So'x	77,7	23758	26	46815	62	25919	12
Toshloq	201,0	52674	27	124491	61	59593	12
O'zbekiston	237,7	63541	26	144151	62	72539	12
Farg'ona	212,0	56041	26	130750	60	63628	14
Dang'ara	172,8	45737	26	103350	61	52611	13
Furqat	117,3	30547	29	71965	61	34457	10
Yozyovon	110,0	31687	27	67496	62	34584	11

Source: Data of the State Statistics Committee of the Republic of Uzbekistan processed by the author.

In terms of population age groups, the regions with the highest percentage of 0-15 year olds are Rishton district with

31%, Buvayda district with 30%, Furqat district with 29%, Fergana city and Kuvasay city with 28%. This means that these regions are characterized by a high proportion of young people among the population and show good indicators of population regeneration. The regions with the highest percentage of the population aged 16-60 are 64% in the city of Margilon, 63% in the city of Kokand and Besharik districts. Because the population of this age group is employed and has high reproductive health. Fergana district 14 percent, Dangara district 13 percent, Fergana city, Kokand city, Koshtepa district, Kuva district, Uchkoprik district, So X district, Tashlak district, and Uzbekistan districts make up 12 percent. In such regions, the weight of the aging population is higher than in other regions, which affects the population's somewhat poor rate of reconstruction.

Regions with a small share of the population under the age of 0-15 compared to the total population include Kokand city 25 percent, Margilon city, Uchkoprik district, Sokh district, Uzbekistan district, Fergana district, Dangara districts make up 26 percent. If we pay attention, the population is densely located in these areas and the level of employment is high. Fergana city, Bagdad district, Buvaida district, Kuva district, Rishton district and Fergana district accounted for 60 percent of the regions with the lowest population age groups of 16-60. As a result of some observations, the population

strata in such regions are not much different from the rest of the regions. In the regions with 60 and above, the lowest rate was Rishton district 9 percent, Margilon city, Buvaida district, Besharik district and Furkat district 10 percent. This is characterized by a slightly lower proportion of the elderly among the population.

**In conclusion.** It is worth noting that my careful study of the specific aspects of each region of the region shows that the importance of the living conditions of the population and the factors affecting it has been proven once again. For example, the demographic situation in remote areas of the region and large cities has sharp differences.

Among the large cities, the demographic indicators of Fergana and Kokand differ from those of other regions with low natural increase and high mechanical balance. Sokh and Yozyovon districts are also characterized by some differences in demographic indicators compared to other regions. Buvayda, Uchkoprik, Dangara and Uzbek districts are distinguished by high natural reproduction. In addition, the fact that migration also has its own sphere of influence shows that the greater the migration, the greater the impact on population regeneration. If the number of emigrants is large or if there is a greater share of men or women, the gender equality of the population will be violated and it will have a negative impact on the demographic process.

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## О НОВОЙ СТРАТИГРАФИЧЕСКОЙ СХЕМЕ ЧЕТВЕРТИЧНЫХ ОТЛОЖЕНИЙ УЗБЕКИСТАНА

Аннотация

Магнитостратиграфическое изучение эталонных разрезов Узбекистана позволило установить стратиграфические границы эоплейстоцена, плейстоцена и голоцена в лёссово-почвенной толще и их границы на временной «линейке». На основе проведенных палеомагнитных исследований и обобщения стратиграфических материалов составлена обновленная стратиграфическая шкала квартера. Определено, что нижняя граница четвертичного периода на территории Узбекистана проходит на временной отметке 2,4 млн лет.

**Ключевые слова:** Стратиграфическая шкала, магнитостратиграфия, квартал, эоплейстоцен, плейстоцен, голоцен, эпоха Матуяма, эпоха Брюнес, лёссовые отложения.

**Введение.** Вопрос о стратиграфической шкале четвертичного периода всегда был спорным. В последнее время неожиданную остроту приобрела проблема нижней границы четвертичной системы. Как известно, до конца 40-х годов XX века эта граница проводилась в основании отложений, в которых отчетливо проявляются следы материковых оледенений (около 0,8 млн. лет назад). В 1948 г. Международный геологический конгресс признал целесообразным понизить эту границу; однако дискуссия по этому вопросу продолжалась еще более 20 лет. Ему был посвящен специальный проект Международной программы геологической корреляции, в рамках которого рассматривалось несколько вариантов границы и предпочтение отдано уровню около 1,8 млн. лет. В 1984 г. Международная комиссия по стратиграфии (МКС) приняла границу на этом уровне и утвердила ее лимитотип в разрезе Ври-ка (Италия) в верхней части палеомагнитного эпизода Олдувей. В России решение о понижении границы четвертичной системы до 1,8 млн. лет было принято Межведомственным стратиграфическим комитетом (МСК) в 1990 г. Однако в настоящее время МКС предлагает включить в состав четвертичной системы последний ярус неогена - гелазий, т.е. принять основание квар-тера на уровне около 2,6 млн. лет. Усилиями Международной комиссии по стратиграфии (МКС) и ее рабочих групп представлена обновленная шкала.

Исполнительный комитет Международного союза геологических наук (МСГН) ратифицировал предложение МКС относительно определения нижней границы четвертичной системы и верхней границы неогеновой системы: нижняя граница четвертичной системы определяется точкой глобального стратотипа границы Монте Сан Никола (Сицилия, Италия), она же определяет основание яруса гелазия. Нижняя граница плейстоценового отдела понижается до включения в него яруса гелазий и совпадает с основанием четвертичной системы. Ярус гелазий перемещен из плиоценового отдела в плейстоцен. Понижение границы четвертичного периода до ~2,6 млн лет объясняется ходом глобальных климатических событий – именно с начала гелазия проявилась тенденция к глобальному похолоданию. Уточнен возраст нижних границ ярусов (млн лет): гелазий – 2,588; калабрий – 1,806; ионий – 0,781; тарантий – 0,126; голоцен – 0,011784.

Нами предложено привести стратиграфическую шкалу Узбекистана в соответствие с международной стратиграфической шкалой, не нарушая ее стабильности на основе палеомагнитных данных. Это предложено сделать путем включения в нее международных ярусов с сохранением подразделений, принятых в Узбекистане (эоплейстоцен, плейстоцен и голоцен) (рис. 1)

Международная стратиграфическая шкала четвертичной системы 2009, 2013г.					Хронологическая шкала в млн. лет
Система	Отдел	Подотдел	Ярус		
ЧЕТВЕРТИЧНАЯ - Q	Голоцен - Q2	Современный	Голоцен	0,0 - 0,012	
			Тарантинский (тарант)	0,1 - 0,128	
	ПЛЕЙСТОЦЕН - Q1	Верхний	Ионический (ионий)	0,2 - 0,3	
			СРЕДНИЙ	0,4 - 0,7	
			Калабрийский (калабри)	0,78 - 1,8	
	НИЖНИЙ		Гелазийский (гелазий)	1,8 - 2,5	
				1,9 - 2,0	
				2,1 - 2,2	
				2,3 - 2,4	
				2,5	

Стратиграфическая шкала Узбекистана				
Система	Отдел	Комплекс	Серия	Литологическая характеристика
ЧЕТВЕРТИЧНАЯ - Q	Голоцен - Q2		Аральская-Q2	Глины, лессовидные суглинки, палеочочвы, галечники
			ПЛЕЙСТОЦЕН - Q2	Лессовидные суглинки, палеочочвы, галечники, конгломераты
	ЭОПЛЕЙСТОЦЕН-Q1	ТЯНЬШАНСКИЙ ОРОГЕННЫЙ	ПОЗДНЕТЯНЬШАНСКАЯ-Q2	Лессовидные суглинки, палеочочвы, каменные лёсы
			РАННЕТЯНЬШАНСКАЯ-Q1	Алевриты, каменные лёсы Алевриты, мергели, слабо-цементированный галечник на глинистом цементе

Рис. 1. Корреляция международной стратиграфической шкалы четвертичного периода с стратиграфической шкалой Узбекистана [9]

**Литературный обзор.** Основоположником создания шкалы геомагнитной полярности считают М.Д. Рутюна, который в 1959 г. определил направление намагниченности и абсолютный возраст нескольких лавовых потоков в Италии. Вслед за М.Д. Рутюн, в 1906 г. французский геофизик Б.Брюнес исследовал магнитные свойства образцов из лавовых потоков Южной Франции. В результате этой работы им впервые было обнаружено, что одни лавовые потоки обладают намагниченностью, совпадающей по направлению с современным магнитным полем, а другие намагничены противоположно ему. Подробное изучение слоистых лавовых потоков в различных регионах мира позволило ученым-магнитологам сделать заключение о том, что магнитное поле Земли обладает свойством периодического обращения, или инверсии (т.е. меняет знак на противоположный). Смена знака поля происходит довольно быстро, по-видимому, не дольше чем за несколько тысячелетий, а в промежутках устанавливаются более или менее длительные эпохи прямой (нормальной, т.е. совпадающей по знаку с современным полем) или обратной полярности [1,2].

На основании изучения многочисленных, хорошо датированных образцов плиоцен-четвертичных лав известный американский геофизик А.Кокс составил в 1963 г. шкалу палеомагнитной геохронологии. Систематические и целенаправленные работы по созданию такой шкалы были начаты позже. В 1964 г. А.Коксом (Cox et al., 1964; Cox, 1969) и др. был предложен первый вариант магнитохронологической

шкалы. Она охватывала последние 4,5 млн. лет и состояла из трех зон: двух зон прямой полярности и одной зоны обратной полярности, каждая продолжительностью по 1 млн. лет. Увеличение числа определений в последующем показало, что многие из них не укладываются в эту схему. Это привело к необходимости детализации длительных интервалов полярности (106 лет) более короткими (105 лет). С 1964 г. по 1968 г. Коксом, Р., Дюеллом и Г. Далримплом было предложено несколько уточненных вариантов магнитохронологической шкалы. Наиболее широко в разных странах исследователи используют шкалу геомагнитной полярности, разработанную для последних 4,5 млн. лет [2, 3, 4].

Палеомагнитная шкала основана на 150 определениях возраста (калий - аргонным методом) и полярности основных лав в самых разных точках земного шара. В предложенной шкале последние 4,5 млн. лет истории геомагнитного поля, на основании режима развития данного поля, разделен на четыре интервала и названы палеомагнитными эпохами. Им освоены имена известных магнитологов и определена их продолжительность.

Самая молодая эпоха геомагнитной шкалы, представленная прямой полярностью с продолжительностью 0-0,8 млн. лет, названа эпохой Брюнес, следующая эпоха переменной полярности с преобладанием обратной и продолжительностью 1,7 млн. лет (0,8-2,5 млн. лет) названа эпохой Матуяма, эпоха переменной полярности с преобладанием прямой полярности и продолжительностью 2,5 – 3,32 млн. лет,

эпохой Гаусс и эпоха переменной полярности, продолжительные более 3,32 млн. лет, эпохой Гильберт. В пределах эпох выделены сравнительно кратковременные интервалы (порядка 103-105 лет) инверсий геомагнитного поля, которые названы эпизодами. Эти эпизоды получили название по месту, где они впервые были установлены.

В эпохе обратной полярности Матуяма были выделены три относительно кратковременных эпизода прямой полярности Харамильо, Гильса и Олдувей. В изученной части эпохи обратной полярности Гильберт, выделены два эпизода прямой полярности - Кочити и Нунивак, а в эпохе прямой полярности Брюнес выделены три кратковременных эпизода Готтенбург (12 тыс.лет), Лашамп (20 тыс.лет) и Блейк (108-114 тыс.лет). Однако, они еще не получили повсеместного подтверждения и есть сомнения в оценке их возраста.

Не исключено, что приведенная шкала является не полной, так данные, полученные за последние 10-15 лет из различных регионов показывают, что эпизодов и экскурсов геомагнитного поля гораздо больше, чем приведены в общепринятой шкале.

**Методы исследования.** Палеомагнитология изучает явления палеомагнетизма, т.е. магнитное поле Земли геологического прошлого, закрепленное в своеобразных отпечатках этого поля - векторах естественной остаточной намагниченности (J<sub>s</sub>) горных пород. Исследуются распределение в пространстве и изменение во времени геомагнитного поля в геологическом прошлом, закономерности распределения этого поля в горных породах и последующая история его отпечатков. Все эти явления находят приложение в изучении строения Земли, ее эволюции, а также в решении вопросов геологической практики [3, 4, 5].

Магнитостратиграфическая шкала - это хронологическая последовательность магнитозон полярности, привязанная к стратиграфической шкале, строится путем синтеза магнитостратиграфических материалов по региону или континенту. Общая магнитостратиграфическая шкала - это последовательный ряд магнитозон прямой и обратной полярности, образующих магнитостратиграфические подразделения разного ранга отвечающих определенным интервалам общей стратиграфической шкалы.

Геомагнитные инверсии, если их рассматривать за длительные интервалы (эры и более), подчиняются сложной ритмичности. Они неравномерно распределяются по шкале времени, позволяя выявить интервалы сгущений и разрежений, характерные группировки и др. При этом палеомагнитные зоны прямой намагниченности получают индекс N, обратной индекс R, переменной полярности сочетанием преобладания Ng и Rn.

При составлении магнитостратиграфических шкал А.Н.Храмов предложил называть палеомагнитным горизонтом "интервал с одной и той же прямой или обратной первичной намагниченностью пород" а группу горизонтов с характерным их чередованием выделять в качестве палеомагнитной зоны. Следовательно, в магнитостратиграфической и магнитохронологической шкалах полярности можно выделить единицы разного ранга - таксономические единицы.

В стратиграфическом кодексе Узбекистана (2000 г.) приняты следующие магнитополярные и

магнитохронологические единицы, ранг которых определяется длительностью и значением соответствующего ей этапа в общей истории геомагнитного поля:

- мегазона - мегахрон (продолжительность > 100 млн. лет, сравнимы с эратемами),
- гиперзона - гиперхрон (100-30 млн. лет, сравнимы с системами),
- суперзона - суперхрон (30-5 млн. лет, отдел - ярус),
- ортозона - ортохрон (5-0,5 млн. лет, ярус или его часть),
- субзона - субхрон (0,5 -0,01 млн. лет),
- микрозона - микрохрон (< 0,01 млн. лет).

Ранг единицы определяется длительностью и значением соответствующего ей этапа в общей истории геомагнитного поля. Мегазоны по своему объему примерно отвечают эратемам общей стратиграфической шкалы, гиперзоны - системам, суперзоны - отделам или нескольким ярусам, ортозоны - ярусам или их частям. В практике до сих пор используются термины магнитной полярности "эпоха", "эпизод" (event) и "событие" для хронологических аналогов "ортозоны", "субзоны" и "микрозоны".

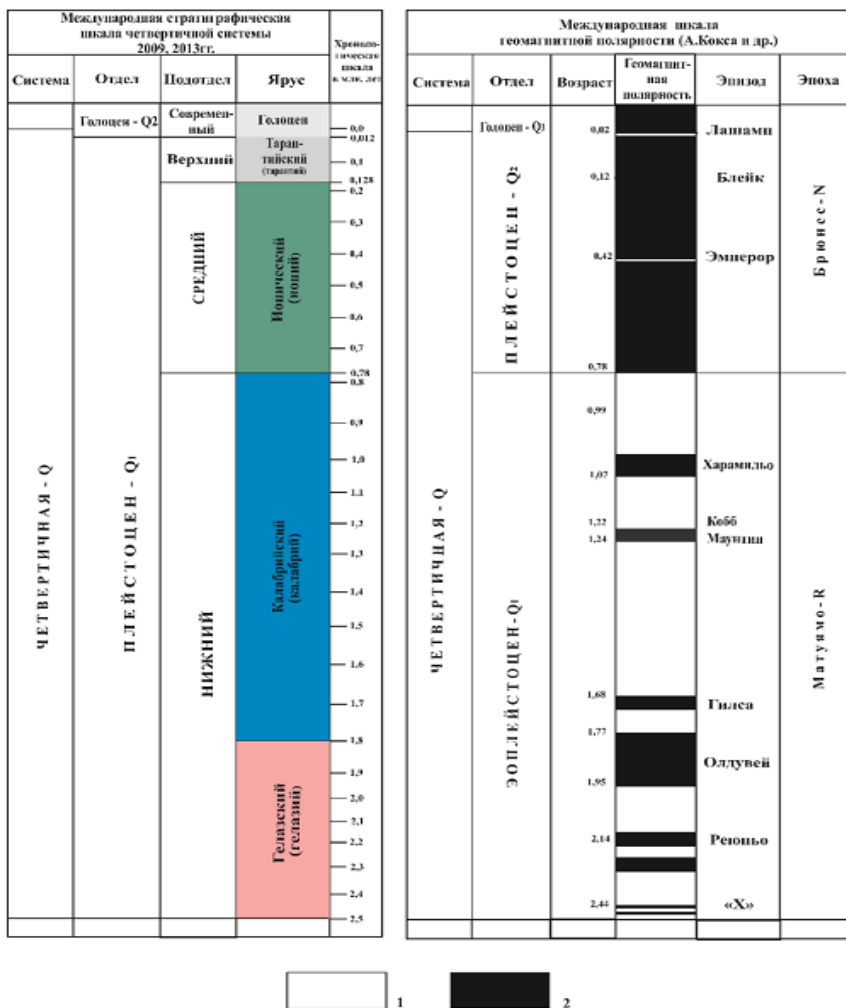
В разрезах часто наблюдаются интервалы, соответствующие неустойчивому состоянию геомагнитного поля (сильному отклонению направления поля, незавершенной инверсии). Такой интервал называется аномальным, включается в состав вмещающего магнитостратиграфического подразделения и не представляет самостоятельной таксономической единицы, но может служить реперным уровнем. Его временной аналог называется экскурсом магнитной полярности [6,7,8].

**Анализ и результаты исследований.** Из анализа магнитохронологической шкалы можно заключить, что разрешающая способность геомагнитной шкалы различна для различных интервалов времени. Наиболее обоснованным в возрастном отношении являются границы эпох магнитной полярности, они могут служить наиболее надежным репером при расчленении и корреляции разрезов, при использовании эпизодов точность будет меньше, так как возраст последних определен с меньшей точностью, особенно если эпизоды сближены по возрасту [2,5].

Магнитостратиграфические исследования ведутся по нескольким направлениям, которые включают в себя:

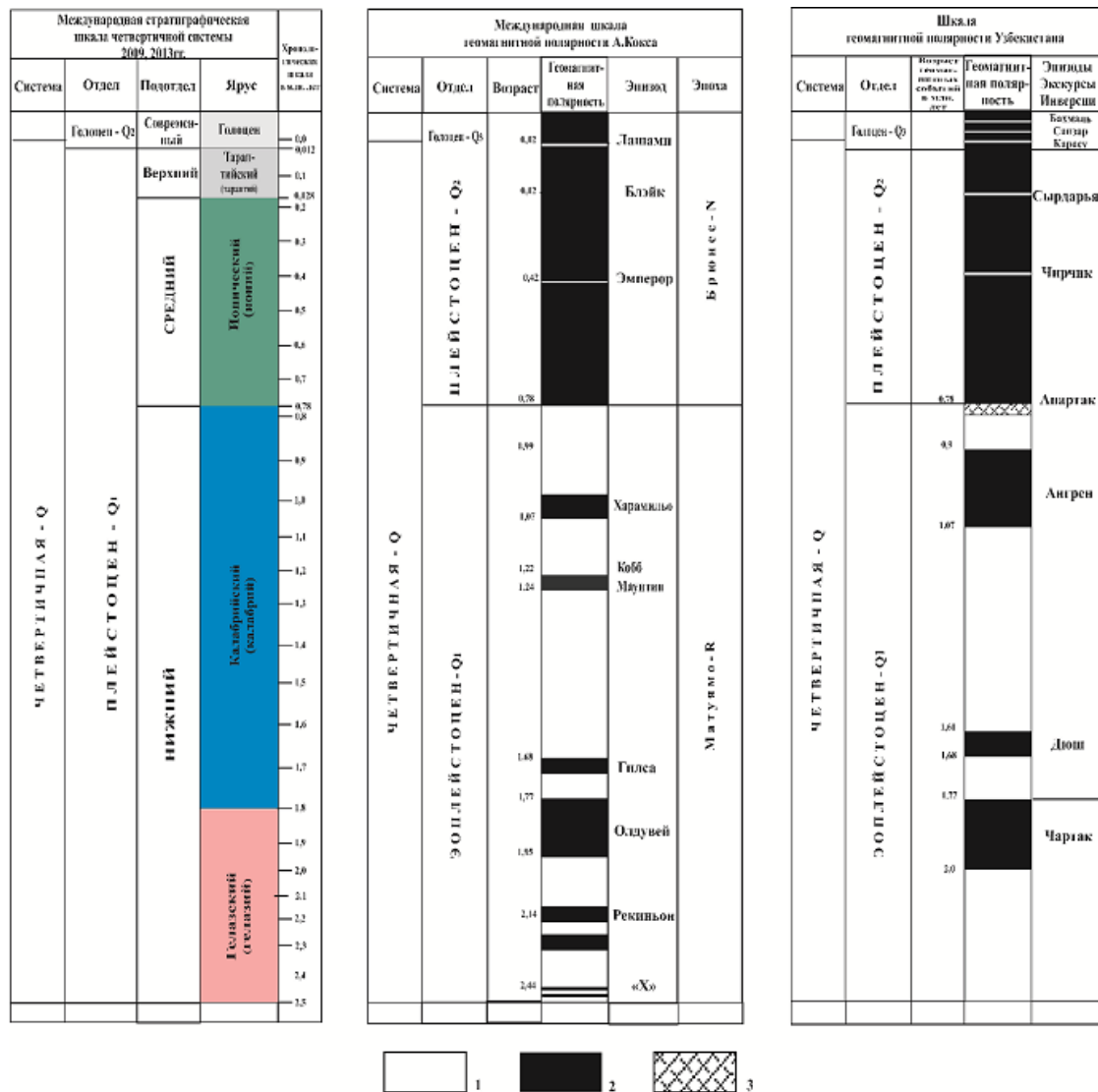
- расчленение толщ горных пород по палеомагнитным характеристикам (полярности, координатам полюсов, реперным горизонтам аномальных направлений векторов, скалярным параметрам);
- палеомагнитную корреляцию региональных и местных стратиграфических схем и их сопоставление с общей стратиграфической шкалой;
- создание единой магнитостратиграфической шкалы.

При полноте палеомагнитных разрезов данная задача решается значительно проще - методом идентификации эпох и эпизодов, если в палеомагнитном разрезе выпадают те или иные эпизоды, то для сопоставления необходимо использовать все возможные методы (рис. 2).



1 – прямая полярность, 2 – обратная полярность  
 Рис. 2. Корреляция международной стратиграфической шкалы четвертичного периода со шкалой геомагнитной полярности (А.Кокса и др.) [9]

В целом, необходимо отметить, что создание магнитостратиграфической шкалы с применением палеомагнитного метода позволило составить обновленную шкалу квартера Узбекистана (рис. 3).



1 – прямая полярность, 2 – обратная полярность, 3 – переходная зона  
 Рис. 3. Корреляция международной стратиграфической шкалы четвертичного периода со шкалами геомагнитной полярности А.Кокса и Узбекистана [9].

**Выводы.** Применение палеомагнитного метода позволило обновить стратиграфическую схему квартера Узбекистана и решить следующие вопросы:

- определить продолжительность и временной объем четвертичного периода;
- установить нижнюю границу и границы новых стратиграфических подразделений четвертичного периода;
- провести расчленение и корреляцию различных в генетическом и литологическом отношении разрезов четвертичных отложений на основе палеомагнитных данных;
- выявить палеомагнитные репера для межрегиональной корреляции разрезов лёссовых отложений Узбекистана.

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## ПСИХОЛОГИЯ СИРОТСТВА И ПАТРОНАТНЫХ СЕМЕЙ: ОПЫТ ЗАРУБЕЖНЫХ ИССЛЕДОВАНИЙ

### Аннотация

В настоящей статье широко освещена тема патронатного воспитания и его специфических особенностей, а также рассмотрены зарубежные исследования, посвященные детям-сиротам, и освещены некоторые специфические вопросы, связанные с их заботой и благополучием.

**Ключевые слова:** приемные семьи, сиротство, патронатные семьи, защита детей, психологическое благополучие.

**Введение (Introduction).** Исследования сирот распределены по литературным источникам и крайне редко встречаются единичные специализированные сборники исследований, посвященных психологии сиротства. На протяжении десятилетий значительное количество исследований в области социальных наук десятилетиями значительное количество исследований в области социальных наук было сосредоточено на изучении проблем, связанных с сиротами. Это стремление обусловлено тем, что сироты нередко рассматриваются как наиболее уязвимая группа детей, подверженных риску (SOS Children's Villages International, 2015).

Дети попадают в приемные семьи по разным причинам, связанным с их безопасностью и благополучием, чаще всего из-за отсутствия заботы, злоупотребления родителями психоактивными веществами и физического насилия (U.S. Children's Bureau, 2020). Каждый из этих случаев может стать источником травматического стресса, как и изъятие ребенка из родной семьи и последующее помещение его в приемную семью.

**Литературный обзор (Literature review).** Чапин (1915, 1917; Gray, 1989) был одним из первых исследователей, который пришел к выводу, что младенцы подвергаются большому риску трудностей в развитии и быстрой смерти при помещении в детские учреждения. Исходя из этого убеждения, он создал систему интернатов или семейного воспитания, в рамках которой госпитализированные младенцы помещались в дома частных семей. Эффект для младенцев был драматическим - они не только выживали, но и процветали в семьях.

Позже, в Румынии Бухарестская группа раннего вмешательства провела аналогичное сравнительное исследование, которое показало, что если детей из детских учреждений в первые несколько лет жизни направить в высококачественные приемные семьи, то у них наблюдаются заметные улучшения в познании, привязанности и развитии по сравнению с детьми, которые остаются в учреждениях (Nelson et al., 2007; Smyke, Dumitrescu, & Zeanah, 2002; Zeanah, Smyke, & Dumitrescu, 2002; Zeanah et al., 2003). Другие исследования показали, что дети в приемных семьях также демонстрируют лучшее общее развитие, чем дети в учреждениях опеки, и способны достичь контрольных показателей развития, в то время как дети в учреждениях опеки этого не сделали (Chapin, 1915; MacLean, 2003; Tarullo, Bruce, & Gunnar, 2007; Van Londen, Juffer, & Van IJzendoorn, 2007). Кроме того, приемные дети демонстрируют менее неуверенную и дезорганизованную привязанность, чем дети из учреждений (Van den Dries, Juffer, Van IJzendoorn, & Bakermans-Kranenburg, 2010), а

проблемы с сенсорной обработкой и регуляцией реже возникают у детей в приемной семье, чем в группе или учреждении (Cermak & Groza, 1998). Миллер, Чан, Комфорт и Тирелла (Miller, Chan, Comfort, and Tirella, 2005) сообщили, что по сравнению с учреждением опеки, дети в приемной семье имеют лучшие показатели физического развития и когнитивного функционирования.

**Методология (Methodology).** Несмотря на то, что контекстуальная природа сиротства и сложность жизни сирот требуют обширных исследований в различных контекстах и методологиях, представление коллекции результатов научных исследований в одном источнике может помочь дать целостное представление о состоянии исследований сиротства заинтересованным исследователям и заинтересованным сторонам.

**Анализ и результаты (Analysis and results).** Под патронатным воспитанием понимаются ситуации, когда дети помещаются государственным органом или с его разрешения в квалифицированную, одобренную и контролируемую семью с целью обеспечения альтернативного семейного воспитания (Организация Объединенных Наций, 2010).

Приемная семья соглашается удовлетворять (т.е. патронировать) потребности ребенка, который не может жить со своими родителями или расширенной семьей, в развитии, психосоциальной, медицинской, образовательной и духовной сферах.

Приемная семья может быть временной или долгосрочной, а также формальной или неформальной. Официальное патронатное воспитание описывает меры, которые были приняты по распоряжению или разрешению административного или судебного органа. Обычно это предполагает оценку приемной семьи для ребенка и предоставление определенной постоянной поддержки и контроля. Неформальное патронатное воспитание - это частная договоренность, заключенная между двумя семьями. Специализированная патронатная семья обеспечивает детей с особыми потребностями (например, ребенка с ВИЧ/СПИДом или психическими расстройствами), а кризисная патронатная семья используется, когда возникает чрезвычайная ситуация и ребенку требуется временный уход (Groza & Bunkers, 2008).

Гвензи и Рингсон (2023), ученые из области социальной работы, представляют интересный и заставляющий задуматься глубокий анализ реакции социальной среды на детей, которые жили в интернатных учреждениях. В статье показано, что поскольку во многих детских учреждениях интернатного типа часто содержатся сироты, и поэтому их принято называть детскими домами, дети, которые жили в этих учреждениях по другим причинам, кроме сиротства, по-прежнему считаются

сиротами, и с ними обращаются так даже после того, как они покинули интернаты. Помимо наглядного изображения социальных последствий таких ярлыков и стереотипов для детей, авторы также освещают некоторые психологические последствия, такие как чувство растерянности и снижение самооценки, которые являются следствием таких ярлыков и стереотипов.

В кросс-секционном исследовании МакГиннис (McGinnis, 2021) изучает, испытывают ли 170 подростков, находящихся в учреждениях опеки в Южной Корее, после изъятия из семьи и помещения в альтернативную семью, когнитивную оценку потери биологических родителей, и является ли такой опыт фактором риска возникновения проблем с психическим здоровьем и поведением. Когнитивная оценка потери биологических родителей влечет за собой негативное или тревожное отношение к потере биологических родителей и любопытство или озабоченность тем, какими могут быть биологические родители (Smith & Brodzinsky, 2002). В данном исследовании автор обнаружил связь между когнитивной оценкой потери биологических родителей и проблемами психического здоровья. Автор утверждает, что когнитивная оценка потери биологических родителей может быть фактором риска депрессивных симптомов, симптомов посттравматического стрессового расстройства и интернализационных проблем поведения у подростков, находящихся в учреждениях опеки. Автор указывает на необходимость оказания помощи молодым людям, находящимся в учреждениях интернатного типа, в получении информации о своих биологических родителях и возможном поддержании контактов с ними.

В своих исследованиях Ван ден Дрис и коллеги (2010) обнаружили, что дети, усыновленные из приемных семей, превосходят детей, усыновленных из детских домов, в умственном и двигательном развитии. Дети, воспитывающиеся в приемных семьях, реже имеют серьезные проблемы со здоровьем, такие как гепатит и туберкулез, по сравнению с детьми, воспитывающимися в учреждениях (Mandalakas et al., 2007). Гавриловичи и Гроза (2007) также обнаружили, что дети в приемных семьях в Румынии реже, чем их сверстники в учреждениях интернатного типа, страдают от жестокого обращения и подвергаются насилию. Передовая практика предоставления патронатного воспитания Ключевыми передовыми практиками патронатного воспитания являются стабильность, конфиденциальность, уважение культурной, языковой и духовной идентичности ребенка, патронатной семьи и биологической семьи, а также подход многопрофильной команды к оценке, ведению случая, планированию случая и поддержке патронатных семей (Davis, Brown, & Groza, 2009). Основным элементом патронатного воспитания является то, что о детях заботятся в семейном окружении. Они не меняют личность, и, когда это отвечает наилучшим интересам ребенка, дети поддерживают отношения с биологической и/или расширенной семьей, сообществом и этнической группой.

В теоретической статье Clerc, Khamzina, & Desombre (2023) утверждают, что во Франции потребности детей-сирот почти не выявляются, почти не признаются и почти не учитываются. В ответ на это они пытаются определить различные специфические потребности детей-сирот и обсуждают различные способы снижения риска пренебрежения сиротами во французских школах с помощью модели экологических систем Бронфенбренера и предлагают пути для соответствующих педагогических мер. Авторы далее утверждают, что из-за пагубного влияния потери родителей на академическую успеваемость, студентов-

сирот следует рассматривать как студентов с особыми образовательными потребностями. Авторы также полагают, что такое рассмотрение обеспечит то, что сироты не будут обделены вниманием, а получат соответствующие образовательные ответы, соответствующие инклюзивному образованию. В более концептуальной работе Frimpong-Manso (2021), опираясь на литературу из Ганы и других стран с низким уровнем дохода, рассматривает финансирование детских домов и последствия, которые оно несет для детей, живущих в детских домах. В статье представлены довольно интересные литературные данные, которые показывают, насколько сильно ганские детские дома зависят от донорской поддержки из-за недостаточной государственной финансовой поддержки. Автор также ясно показывает, как эта зависимость от доноров, большинство из которых являются иностранцами, влияет на управление детскими домами, социально-эмоциональное развитие детей, растущих в них, и последствия ценности доноров в ганском социокультурном контексте. Используя теорию экологических систем, Салифу Йендорк (2020) глубоко погружается в различные международные концептуализации сиротства, демонстрирует контекстуальные различия, которые могут подвергать детей, переживших смерть родителей, различным типам и степени уязвимости, и вносит ценные предложения по обсуждению, разработке и реализации вмешательств для различных заинтересованных сторон.

Дети в приемных семьях реже имеют серьезные проблемы со здоровьем, такие как гепатит и туберкулез, по сравнению с детьми, за которыми ухаживают в учреждениях (Mandalakas и др., 2007). Гавриловичи и Гроза (2007) также обнаружили, что дети в приемных семьях в Румынии реже, чем их сверстники в учреждениях интернатного типа, страдают от жестокого обращения и подвергаются насилию. Передовая практика предоставления патронатного воспитания Ключевыми передовыми практиками патронатного воспитания являются стабильность, конфиденциальность, уважение культурной, языковой и духовной идентичности ребенка, патронатной семьи и биологической семьи, а также подход многопрофильной команды к оценке, ведению случая, планированию случая и поддержке патронатных семей (Davis, Brown, & Groza, 2009). Основным элементом патронатного воспитания является то, что о детях заботятся в семейном окружении. Они не меняют личность, и, когда это отвечает наилучшим интересам ребенка, дети поддерживают отношения с биологической и/или расширенной семьей, сообществом и этнической группой

**Заключение (Conclusion).** Приемная семья помогает объяснить ребенку суть вещей, пока ребенок находится в безопасной среде, и помогает в подготовке ребенка к усыновлению. Приведенные аргументы представляют собой платформу для научной дискуссии о финансировании детских домов в контексте развивающихся стран, а также систематического определения различных форм уязвимости, которые могут развиваться для предотвращения ошибок в осуществлении политики деинституционализации. Эти работы подтверждают сохраняющийся риск для благополучия сирот. Учитывая глобальный рост числа сирот, вызванных различными социальными и политическими изменениями в мире, необходимо проводить дополнительные исследования по проблеме сиротства, и настоящая статья может послужить ступенькой для дальнейшего изучения этой темы.

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## THE PROSPECTIVE FUTURE OF VISUAL ANTHROPOLOGY IN TERTIARY EDUCATION

### Abstract

Today, visual anthropology, which is considered one of the new directions formed in the field of anthropology science, is rapidly developing with media technology. Visual anthropology includes two directions as its research aim:

Creation of anthropological media products, in particular, creation of ethnographic films, videos, pictures, drawings.

Performs such works as analysis of created anthropological media products.[1]

From a conceptual point of view, visual anthropology is a theoretical and methodological connection of human spiritual and material culture based on ethnographic knowledge in the form of audiovisual media. Audiovisual materials are the most important guide in the field of visual anthropology. Since the 50s of the last century after the sale of imaging devices at affordable prices for the general public, the achievements of this technology have been widely used during many ethnographic and cultural research expeditions. Since the 1980s, after the establishment of methodological programs of visual anthropology in some academic institutions, methods of creating important anthropological images and working with pictures were determined by combining video and digital media technologies. Today, visual anthropology is divided into four important research areas: ethnographic filmmaking and its theory, visual culture science, indigenous and activist media, and multimodal anthropology. In this article, the scientific role of the visual anthropologist is analyzed based on the science of anthropology.

**Key words:** Visual anthropology, filmmaking, informational technology, 3ds Max, audiovisual materials, image, tertiary education.

**Introduction.** As mentioned above, visual anthropology also includes anthropological media, and the creation of ethnographic films, exhibitions and photographs, as well as the analysis of existing anthropological media as its priority. Ethnographic films based on ethnographic field research can be cited as the most famous works in this direction. Although modern visual anthropology acknowledges as its center of inquiry a wide range of processes, such as the creation of ethnographic visual materials and media products, its main core relies on several important directions. According to visual anthropologists, audiovisual recordings or similar materials are used not only as a text-based process, but also as a tool for analyzing these processes. In other words, many visual anthropologists believe that pictures, audio recordings, and drawings are not complementary to written data, but that written and visual data are of equal quality, and are equally important in enhancing the quality of research.

**Literature review.** Through preparation for making this article, several basic literatures have been revised and we can take Fadwa El-Guindini's book about the theory and methodology of visual anthropology, Paul Hockings Principles of Visual Anthropology, Robert Lemlson & Annie Tucker Widening the Frame with Visual Psychological Anthropology as an example. In addition, in Anna Grimshaw's ethnographic film about the lives of selected indigenous people in the town of Main (Germany), adapted to fishing, she notes that texts alone cannot reveal research based on ethnographic knowledge. In *Descending with Angels* (2019), anthropologist Suhr created a valuable anthropological documentary combining ethnographic film and written monographs on psychiatry and Islamic exorcism in Denmark. [2]

**Research Methodology.** An important direction of ethnographic method in visual anthropology and its reflection. In other words, how you approach ethnographic visual materials and activities is critical to creating truly useful ethnographic content. In this way, visual anthropology provides the anthropologist with a picture of the cultural

process. The method of image-making in ethnographic research is not only based on the purpose of the research, but also consists in returning the information covering the lifestyle of the representatives of the local population to the representatives of this population on the basis of visual materials.

Secondly, many researchers note that visual sources, which are the main source of visual anthropology, are limited in their ability to convey information. However, pictures, recorded sounds, films and videos, visual aids that reflect the beautiful environment all together serve to provide the anthropologist with a wide range of valuable information about a particular culture. In a word, voice, tone, emotions all serve to reveal a certain culture in an effective and lively way.

In 2017, the chapter of "American Anthropologist" magazine, which has been called "Visual Anthropology" for a long time, began to be published under the name "Multimodal Anthropology" because, as mentioned above, visual anthropology includes several directions in its composition because of its covers. On the other hand, instead of creating only text-based scientific works, many grants and opportunities are being created for scientific works based on many directions.

**Analysis and results.** The history of visual anthropology, in particular, the stage of development of ethnographic films, is one of the well-studied areas, and shows a single fundamental fact: anthropology, as a field that studies social and cultural life, always supports visual materials. From the beginning of the 20th century, the use of visual materials as a scientific source began in the field of anthropology. However, the use of photographs and their advantages in the field of anthropology began in the middle of the 19th century. He used the photographs in his research on racial types within the framework of physical anthropology, which was the study of the biological evolution and species of the newly formed man at that time. In particular, the governments of the colonial countries, in order to further strengthen their rule, widely used the advantages of photographs to categorize the racial and

ethnic origin of the "underdeveloped" (in their opinion) peoples in the subordinate territories. Unfortunately, these ethnographic studies based on racial discrimination and oppression continued into the 20th century.

The first anthropologists who appreciated the scientific value of audiovisual materials are A.S. Haddon, Franz Boas and E.E. Evans-Pritchard[1] and noted as a part of ethnographic field research as both a data storage and an auxiliary source that complements research findings. During their research, they recorded many audio-visual materials, drawings and pictures on recording devices and published them. Decades later, Margaret Mead and Gregory Bateson tested the value of film and images in anthropological analysis while conducting fieldwork in Bali. For Mead and Bateson, video recordings and photographs helped to re-examine their research and re-anthropologically analyze their non-verbal behaviors, body movements, voices and thoughts.[3]

**Conclusion and recommendations.** Nowadays, it is very difficult to imagine ethnographic field research without recording devices. The global growth of media technologies has increased the importance of visual anthropology as a field of science, and new areas have appeared in it, including digital anthropology, media anthropology, and sensory anthropology. In addition, with the growing number of scientific programs of visual anthropology, new theories and methods of visual anthropology are being formed on the basis of general anthropological theory in many universities and institutes.

According to Seika Wazaki who is Japanese anthropologist, visual anthropology divided into six subdivision methods such as participatory, observational, expository, making, fantastic and poetic. He came to Uzbekistan in 2019 in order to filming one of the ritual traditional activities conducted with flower called Armugan which took place in Fergana Bisharik region every spring. During this expedition, he used observation and participatory methods of visual anthropology with text definition in his documentary ethnographic film. The film which called "Guli Armugan" lasted 23 minutes and involved a lot of valuable information which continued through ages from ancestors to generations in the local area[2]. This scientific work is initial as well as unique in terms of visual anthropology. Throughout Japanese expedition several young knowledgeable local anthropologists also conducted to the expedition through leading of Professor Adham Ashirov. As a consequence, they were also motivated to use such new scientific way in their future scientific researches. According to Sieka Wazaki, observational and participatory methods of visual anthropology is the most important way of the methods list which can illustrate perfectly the culture and its original presence without interpretation or definition of anthropologist. There are a lot of valuable sources for visual anthropology such as suburban and rural areas still preserve their traditional

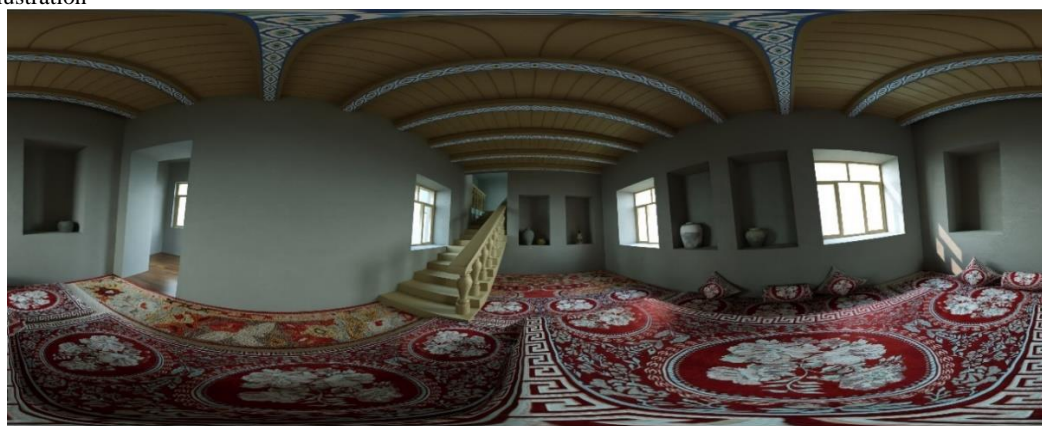
environment, inhabitants concern to save and live under the conventional lifestyle. That's why if we accelerate to organize anthropological expeditions in terms of visual anthropology, we can introduce a lot of valuable news on Uzbek anthropology. Nowadays we have dozens of young anthropologists who know English and other international languages and we can also create such essential materials not only for local publications but also for international anthropology.

According to above-mentioned information, we can boldly say that today visual anthropology has taken a strong place as an independent direction in the field of anthropology. Ethnographic films, which caused the rapid development of this field, should also be noted, and this direction is gaining a special place in anthropology. As an example, there are many ethnographic film festivals around the world, which are increasing more and more. We learned that interrelated subfields such as media anthropology, digital anthropology, and multimodal anthropology have the analytical study of visual processes as the basis of their research. The works created in these directions undoubtedly contribute to the development of visual anthropology. According to the definition of Edward Taylor, processes such as knowledge, belief, art, and customs acquired as a part of society are called culture [9] and every human-being should understand core value of their own custom.

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Illustration



Visual image of interior design of traditional local uzbek house. (Based on 3ds Max program)

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## ILM-FAN TARAQQIYOTIDA OLIY TA'LIM TIZIMIDAGI ISLOHOTLARNING O'RNI

Annotatsiya

Ushbu maqolada bugungi mustaqil O'zbekiston taraqqiyotining yangi bosqichida oliy ta'lim tizimini rivojlantirishga berilayotgan e'tibor, amalga oshirilayotgan islohotlar haqida batafsil yoritilgan. Maqolada yoshlarni ta'lim sohasidagi ilm-fan yutuqlaridan samarali foydalanishga, ertangi kunga bo'lgan ishonchini oshirishga, yurtning ozod va obod bo'lishi uchun hamma kuch va imkoniyatlarini safarbar etishiga oid taklif va xulosalar berilgan. Davlatimizning o'z oldiga qo'ygan maqsad va vazifalaridan biri oliy ta'lim tizimining samarali faoliyatini ta'minlash, ilm-fanni yuksaltirish, yoshlarni ilmga intilishida va ilmni yuksaltirishida zarur chora tadbirlarni amalga oshirish hisoblanadi. Maqolada ham bu maqsadni ro'yobga chiqarish uchun millatimiz va xalqimizning ko'p asrlik tarixga ega bo'lgan ma'naviy merosini o'rganish, jahon ilm-fani yutuqlaridan dasturilamal sifatida foydalanish lozimligi chuqur tahlil etilgan.

**Kalit so'zlar:** Ilm-fan, ta'lim, meros, texnika-texnologiya, taraqqiyot, ma'naviy-axloqiy rivojlanish, millat, innovatsiya.

**Kirish.** Har qanday xalq o'z oldiga taraqqiy etish, rivojlangan mamlakatlar qatoridan o'rin olish kabi maqsadlarni qo'yadi. Mustaqil O'zbekistonimizda ham amalga oshirilayotgan keng ko'lamlı islohotlar, bunyodkorlik ishlari va yangilanishlar natijasida xalqimizning ong-u shuuri, tafakkuri va dunyoqarashi o'zgarib bormoqda. Yurtimizda ta'lim-tarbiya masalasi davlat siyosatining ustuvor yo'nalishiga aylanib, ta'lim va tarbiya, texnika-texnologiyalarni takomillashtirish, ilm-fanni rivojlantirish masalasiga katta e'tibor qaratilmoqda. O'zbekistonning jahondagi taraqqiy etgan mamlakatlar qatoridan munosib o'rin egallashi, ravnaq topishi, shubhasiz, uning ilm-fan salohiyatiga, oliy ta'lim tizimiga bevosita bog'liqdir. 105 yillik tarixga va tajribaga ega bo'lgan otaxon universitet hisoblanuvchi O'zbekiston Milliy universitetida ham amalga oshirilayotgan yangilik va o'zgarishlar ta'lim sifatini oshirishga xizmat qilmoqda. O'zbekiston Milliy universiteti o'z oldiga ta'limning yuqori standartlarini belgilab, oliy ta'lim standartlarini takomillashtirishni, xalqaro andozalar asosida ta'lim sifatini yaxshilashni amalga oshirmoqda. Shu jumladan, xalqaro maydonda O'zbekiston Milliy universiteti Turkiya davlatining oliy talim muassasalari, xususan, Istanbul, Anqara kabi nufuzli universitetlari bilan maqsadli hamkorlik aloqalarini o'rnatganligini misol tariqasida keltirish mumkin. Shuningdek, O'zbekiston Milliy universitetining delegatsiyasi va Turkiyaning Anqara universiteti o'rtasida imzolangan memorandum asosida ikki mamlakat oliy ta'limi do'stona munosabatlari o'rnatilmoqda. Oliy ta'lim tizimini rivojlantirishga qaratilayotgan e'tibor zahirida yoshlarni yetuk, intellektual salohiyatli, ilm-ma'rifatli qilib tarbiyalash, yuksak bilim va ma'naviyatga ega mutaxassis sifatida tayyorlash, mamlakatimizning dunyo miqyosidagi nufuzini oshirish singari ustuvor vazifalarni izchil va tizimli amalga oshirish maqsadi turadi. Prezidentimiz Shavkat Miromonovich Mirziyoyev tomonidan 2019-yil 8-oktabrdagi PF-5847 sonli "O'zbekiston Respublikasi oliy ta'lim tizimini 2030-yilgacha rivojlantirish konsepsiyasini tasdiqlash to'g'risida"gi farmonning imzolanihi ham oliy ta'lim tizimida fan, talim, innovatsiya va ilmiy tadqiqotlarning rivojlanishida debocha vazifasini o'tamoqda. Bundan tashqari, jahon ilm-fani rivojiga katta hissa qo'shgan ulug' ajdodlarimizning ilmiy va ma'naviy merosini chuqur o'rganish, tahlil etish va ularning an'alarini rivojlantirish masalasiga ham katta e'tibor qaratilmoqda. Yoshlarga munosib ta'lim berish, ularning ilm-fanga, ma'rifatga bo'lgan intilishlarini ro'yobga chiqarish maqsadida oliy ta'lim tizimini, oliy o'quv yurtlarining ilmiy va o'quv jarayonlari sifatini tubdan yaxshilash ishlari olib borilmoqda.

**Metodlar.** Bugungi dunyoda ko'plab yuz berayotgan murakkab geosiyosiy va mafkuraviy jarayonlarda yurt tinchligi, Vatan ravnaqi, xalq farovonligi kabi tamoyillarning yangi O'zbekiston taraqqiyotini belgilashdagi ahamiyati katta. Zero, Muhtaram Prezidentimiz Shavkat Miromonovich Mirziyoyev ta'kidlaganlaridek: "Biz o'z oldimizga mamlakatimizda Uchinchi Rennans poydevorini barpo etishdek ulug' maqsadni qo'ygan ekanmiz, buning uchun yangi Xorazmiylar, Beruniylar, Ibn Sinolar, Ulug'beklar, Navoiy va Boburlarni tarbiyalab beradigan muhit va sharoitlarni yaratishimiz kerak. Bunda, avvalo, 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"[1]. Darhaqiqat, ta'lim tizimidagi islohotlar taraqqiyot va rivojlanishning mustahkam ustuni. Millatimiz ilm-ziyoni boshga toj darajasida ulug'lab, uni ko'z qorachig'idek asrab-avaylab, unga doimo sadoqatda bo'lib kelgan. Hozirgi zamonaviy taraqqiyot bosqichida "Yangi O'zbekiston — maktab ostonasidan, ta'lim-tarbiya tizimidan boshlanadi"[2], degan g'oya asosida keng ko'lamlı islohotlarning amalga oshirilayotgani bu boqiy va o'chmas qadriyatlarimizning amaliy va hayotiy nishonasidir. Xususan, mamlakatimizda oliy ta'lim tizimini takomillashtirish maqsadida amalga oshirilgan islohot va yangilanishlardan biri 2020-yilning 23-sentabrda "Ta'lim to'g'risida"gi qonunning yangi tahriri qabul qilinishi bo'ldi. Ushbu qonun bilan 1997-yil 29-avgustdagi "Ta'lim to'g'risida"gi hamda "Kadrlar tayyorlash milliy dasturi to'g'risida"gi qonunlar o'z kuchini yo'qotdi. O'zbekiston oliy ta'lim tizimi sohasidagi islohotlar sog'lom, yetuk, raqobatbardosh kadrlarni tayyorlash, tarbiyalashga qaratilgan bo'lib, unda bir qator ustuvor yo'nalishlar namoyon bo'lgan:

talaba yoshlarni ma'naviy-axloqiy jihatdan tarbiyalash va rivojlantirish;

— yoshlar ma'naviyati va mafkuraviy immunitetini mustahkamlash;

— yoshlarda xalqqa muhabbat, yurt farovonligi uchun kurashish kabi fazilatlarini tarbiyalash;

— mustaqil fikrlash va faoliyat olib borish;

talabalarning kreativ tafakkuri va liderlik xislatlarini rivojlantirish;

ta'lim tizimi, pedagoglarning burch va mas'uliyatlarini belgilash masalalariga berilayotgan e'tibor kabilar o'z aksini topgan.

Natijalar va muhokama

Oliy ta'lim sohasini tubdan isloh qilish, yurtimizda xalqimizning ko'p asrlik tarixga ega bolgan ma'naviy-

intellektual merosini o'rganish, jahon ilm-fani va texnikasi yutuqlaridan bahramand bo'lish, dunyoning mashhur ilm dargohlarida o'qish-o'rganish imkoniyati vujudga keldi. Qolaversa, mamlakatning ilmiy-intellektual salohiyatini kuchaytirishga katta e'tibor qaratilmoqda. Tadqiqot natijalariga ko'ra "Taraqqiyot strategiyasi"ning 42, 43 va 44-maqсадlarida o'z aksini topgan "2026-yilga qadar o'quv dasturlari va darsliklarni ilg'or xorijiy tajriba asosida to'la qayta ko'rib chiqib, amalda joriy etish", "Malakali o'qituvchilarning oylik maoshlarini bosqichma-bosqich 1000 AQSh dollari ekvivalentiga yetkazish", "Maktablarda ta'lim sifatini oshirish, pedagog-kadrlarning bilimi va malakasini xalqaro darajaga olib chiqish"[3] kabi masalalarni birinchi ustuvor vazifa sifatida qabul qilish, shuningdek ta'lim va ma'rifat masalalari, yangi texnika, zamonaviy texnologiyalarni va ulardan amaliyotda foydalanish tamoyillarini ishlab chiqishni amalga oshirish lozimligi haqida o'z fikr va mulohazalarimni bildirmoqchiman. Jumladan, oliy ta'lim tizimi sifatini oshirishning ustuvor yo'nalishlarini ta'minlash zamon talabi hisoblanadi. O'z tengdoshlarimizning fikrlarini, qarashlarini o'rgangan holda oliy ta'lim tizimidagi barcha islohot va yangilanishlar faqat qog'ozda, qaror yoki hujjatlarda emas, amaliyotda ham keng joriy etilayotganligini alohida ta'kidlash lozim. Oliy ta'lim tizimi ikki bosqichli ta'limdan iborat ya'ni bakalavriat va magistratura bosqichlari hisoblanadi. Oliy ta'lim tizimi sifati va samaradorligini oshirish yo'lida ularning moddiy-texnik bazasini shakllantirish, yangi avlod o'quv-ilmii adabiyotlarini yaratish, ta'lim sifatini monitoring qilish ishlari olib borilmoqda. Bundan tashqari, iqtidorli talaba yoshlarining xorijiy davlatlarda amaliyot o'tashlari va hamkorlik aloqalarini ishlab chiqishlari uchun ham sharoitlar yaratilmoqda. Talabalarning o'z mutaxassisliklari bo'yicha amaliy ko'nikmalarni shakllantirish, raqobatbardosh kadrlarni tayyorlash masalalari ham keng ilgari surilmoqda. Oliy ta'lim tizimida tizim sifati va samaradorligini oshirishning yo'nalishlaridan biri o'qitish jarayoniga innovatsion ta'lim va axborot-kommunikatsiya texnologiyalarini tatbiq qilishdir. Quacquarelli Symonds xalqaro reyting agentligining "QS World University by Subject Rankings 2023" natijalariga ko'ra Ozbekiston Milliy universiteti quyidagi 3 ta fan yo'nalishi bo'yicha dunyoning eng kuchli universitetlari ro'yxatidan o'rin egalladi:

- "Matematika" yo'nalishi,
- "Zamonaviy tillar" yo'nalishi;
- "Fizika va astronomiya" yo'nalishi.

Bu erishilayotgan yutuqlar ta'lim tizimida sifat va samaradorlikning yuqorilayotganligini, ilm-fan rivoji va jamiyat taraqqiyotida muhim o'rin tutayotganligini anglatadi. Oliy ta'lim sifatini ta'minlashning ustuvor yo'nalishlariga quyidagilarni misol qilib keltirish mumkin:

- ta'lim sohasiga oid Davlat ta'lim standartlarini joriy qilish;
- o'quv jarayonlarini izchil va tizimli sistema asosida amalga oshirish;
- iqtidorli talabalarning zamonaviy, interaktiv g'oya va takliflarini qo'llab-quvvatlash;
- o'quv jarayonlariga xorijiy oliy talim muassasalari, ilmiy markazlarining professor-o'qituvchilarini jalb qilish.

Oliy ta'lim tizimini tizimli isloh qilish va samaradorligini ta'minlashning ustuvor yo'nalishlarini belgilash, oliy ta'limni modernizatsiya qilish, rivojlangan ta'lim texnologiyalariga asoslangan holda ijtimoiy soha va iqtisodiyot tarmoqlarini rivojlantirish maqsadida O'zbekiston Respublikasi Prezidentining 2019-yil 8-oktyabrda PF—5847-son Farmoni bilan tasdiqlangan O'zbekiston Respublikasi oliy ta'lim tizimini 2030-yilgacha rivojlantirish Konsepsiyasi oliy ta'lim sohasidagi yangi islohotlar uchun poydevor vazifasini bajarib bermoqda. Bugungi kunda mamlakatimizda yangi-yangi oliy o'quv yurtlari, dunyodagi yetakchi universitetlarning filiallari tashkil etilmoqda. Misol

uchun, so'nggi 4 yilda mamlakatimizda 47 ta yangi oliy talim muassasasi, jumladan, xorijiy universitetlarning filiallari tashkil etilib, oliy o'quv yurtlarining soni 125 taga yetganligi hech kimga sir emas. Jonajon Vatanimizning qiyofasi tubdan o'zgarib, xalqimiz farovonligi kundan-kunga oshib borarkan, ta'lim tizimidagi islohotlarning keng qamrovda olib borilishi barkamol, komil insonlarni tarbiyalash, inson shaxsining ma'naviy-ruhiy, axloqiy kamolotini rivojlantirish va yuksaltirishda muhim o'rin tutadi.

O'zbekiston Respublikasida ta'lim turlari quyidagilardan iborat:

- maktabgacha ta'lim va tarbiya;
- umumiy o'rta va o'rta maxsus ta'lim;
- professional ta'lim;
- oliy ta'lim;
- oliy ta'limdan keyingi ta'lim;
- kadrlarni qayta tayyorlash va ularning malakasini oshirish;

maktabdan tashqari ta'lim[4].

Ta'lim tizimidagi islohotlar va amaliy chora-tadbirlar yuqoridagi yo'nalishlarda amalga oshirilmoqda. O'zbekistonda oliy ta'lim sohasidagi islohotlarni talaba yoshlar manfaatlarini ko'zlagan holda o'tkazish hamda xalq ta'limi, sog'liqni saqlash, sport, madaniyat, ilm-fan sohalariga doimiy e'tibor qaratgan holda amalga oshirish lozim. Kelajagi buyuk davlat bunyod etish, kelgusi avlodlarga ozod va obod Vatanni meros qoldirish borasidagi oliyanob maqsadlar taqdiri, yoshlarning jahon ilm-fan yutuqlari va zamonaviy kasblarni nechog'lik mukammal darajada egallashlariga bog'liqdir. Barkamol avlodni tarbiyalash esa O'zbekistonda yangi jamiyat barpo etishning eng muhim sharti hisoblanadi.

**Xulosa.** Oliy ta'lim sifatini yaxshilash, samarali faoliyatini ta'minlash 2017-2021-yillarda O'zbekiston Respublikasini rivojlantirishning beshta ustuvor yo'nalishi bo'yicha Harakatlar strategiyasida ham o'z aksini topgan bo'lib, bu sohada qilingan islohotlar va o'zgarishlar besh yil ichida davlat siyosatida ustuvorlik kasb etdi. Harakatlar strategiyasining beshta ustuvor yo'nalishi bo'yicha amalga oshirilgan ishlar, o'zgarishlar yangi bir uyg'onishga, taraqqiyotga asos soldi. Islohotlar natijasida ta'lim dasturlarini xalqaro miqyosda uyg'unlashtirish va ta'lim jarayoniga xorijiy mutaxassislarni jalb qilish imkoniyatlari kengaymoqda, qo'shma dasturlar asosida o'qitish imkoniyatlari yaratilmoqda. Bundan tashqari, mamlakat oliy ta'lim tizimi jahon ta'lim makoniga to'liq integratsiya qilinmoqda. Milliy tiklanishdan — milliy yuksalish sari dadil qadam qo'yar ekanmiz Prezidentimiz asarlari va ma'ruzalaridagi bildirgan fikrlari bizga hamisha dasturilamaldir. Shu jumladan, "Yoshlarimizga munosib ta'lim berish, ularning ilmiy-fanga bo'lgan intilishlarini ro'yobga chiqarishimiz kerak — deya ta'kidlaydi muhtaram Prezidentimiz Shavkat Mirziyoyev, shu maqsadda maktabgacha ta'lim tizimini rivojlantirishimiz, o'rta va oliy o'quv yurtlarining moddiy-texnika bazasini, ilmiy va o'quv jarayonlari sifatini tubdan yaxshilashimiz kerak[5]. Bizning bosh strategik maqsadimiz Ozod va obod Vatan, erkin va farovon hayot etish ekanligini anglagan holda, insonlar baxtli va farovon yashaydigan jamiyatning milliy modeli ilm-fan tomonidan nazariy asoslab berilmoqda. Xulosa qilib aytganda, oliy ta'lim sohasida amalga oshirilayotgan istiqbolli maqsad va vazifalar, o'zining dolzarbligi hamda amaliy ahamiyati bilan yuqori o'rinda turadi. Chunki ushbu sohadagi islohotlarni yanada keng ko'lamda targ'ib qilish zamon talabidir. Xususan, men tahsil olayotgan O'zbekiston Milliy universiteti ilm-fan rivoji va jamiyatimiz taraqqiyotida malakali kadrlarni va mutaxassislarni tayyorlash yuzasidan, ta'lim tizimining sifatli ekanligi jihatidan yuqori o'rinda turadi. Oliy ta'lim tizimida sifatning ortishi, salohiyatli kadrlarning yetishib chiqishi uchun amalga oshirilayotgan islohot va yangiliklarni, biz yoshlar ijobiy qabul qilamiz va qo'llab-quvvatlaymiz. Kelgusida biz ham tashabbuskorlik bilan

oliygohlarimiz uchun ko'plab yangiliklar qilishni va manfaatli loyihalarni amalga oshirishni maqsad qilganmiz. Biz yoshlar bu maqsadlarni amalga oshirish yo'lida hamma kuch va imkoniyatlarimizni sarflagan holda harakat qilamiz.

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## HYDROLOGICAL REGIME AND WATER RESOURCES OF MOUNTAIN RIVERS UNDER CLIMATE CHANGE CONDITIONS (BY THE EXAMPLE OF THE RIVERS OF ZERAFSHAN BASIN)

Annotation

The research is devoted to the assessment of the impact of climate change on the hydrological regime and water resources of the rivers of Zeravshan basin. Comparing the results of estimations performed for the selected two climatic periods, some changes in the regime of the main climatic indicators - air temperature, precipitation were revealed. The impact of these changes on the long-term fluctuations and intra-annual distribution of river flow, the timing of observation of their phases of the water regime and maximum water discharges were estimated. Particular attention was paid to the issues of assessing the water resources of the rivers of the studied basin.

**Key words:** Climate change, river runoff, long-term variations, intra-annual distribution, phases of the water regime, maximum water discharges, assessment.

**Introduction.** The study of the hydrological regime and the assessment of water resources of rivers in the context of climate change has current scientific, theoretical and applied importance. The study of the problem on the example of the rivers of Zeravshan basin is especially important, because their water resources determine the current state and prospects for the development of various sectors of the economy of the four regions of Uzbekistan (Samarkand, Navoi, Jizzakh and Kashkadarya) and the Sughd region of Tajikistan.

**Literature review.** The issues of the impact of climate change on the hydrological regime and water resources of rivers were considered in the studies of scientists from far abroad (R.M. Perkins, J. Gibson, T. Edwards, S. Birks, W. Buhay, P. Education, B. Wolfe, L. Alfieri, B. Bisselink, F. Dottori, G. Naumann, K. Wyser, Ya. Kong, Z. Pang, A. Al-Alsheikh and others). Similar studies were also carried out by scientists from the former Soviet Union and the current CIS countries (T.S. Abalyan, M.N. Bolshakov, M.I. Budyko, A.I. Voeikov, V.G. Glushkov, M.I. Lvovich, A. S. Monin, I.S. Sosedov, D.P. Sokolov, N.L. Frolova and others). In Uzbekistan, the first studies on this problem were carried out by E.M. Oldekop, L.K. Davydov, later by V.L. Schultz, O.P. Shcheglova, Z.V. Ovchinnikov and others. At present, studies of the hydrological regime and water resources of rivers, taking into account climate change, have been continuing by V.E. Chub, E.I. Chembarisov, F.Kh. Khikmatov, L.M. Karandaeva, S.A. Khaidarov, D.M. Turgunov and others [3, 8, 9, 13]. However, in the works of the above-mentioned scientists, the issues of the hydrological regime and the quantitative assessment of the runoff of the rivers in the Zeravshan basin, as well as their changes under the conditions of climate warming, were not considered as a separate object of study.

The purpose of this work is to assess the impact of changes in climate indicators on the hydrological regime and water resources of the rivers of the Zeravshan basin. To achieve this goal, the following tasks were considered and

solved in the work: collection, primary processing, generalization and systematization of materials of hydrometeorological observations; assessment of hydrometeorological knowledge of the Zeravshan river basin and selection of observation points; assessment of changes in the main climatic indicators - air temperature and precipitation in the territory of the basin under study; assessment of the impact of changes in these climatic indicators on long-term fluctuations and intra-annual distribution of river flow, on the timing of observation of the phases of the water regime and maximum water discharges; clarification of the main hydrological indicators of river flow and assessment of their water resources.

**Main results and their discussion.** Materials of direct hydrometeorological observations of meteorological elements and hydrological regime of rivers in the Zeravshan river basin were very limited both in terms of the density of observation points and their duration. In addition, hydrometeorological observations were carried out mainly in the low- and middle-mountain parts of the basin, while its high-mountain part is almost unexplored in this respect.

In the Zeravshan river basin, from the beginning of the organization of hydrometeorological observations to the present, there have been 78 hydrological gauges and 71 meteorological stations. 42 hydrological and 44 meteorological stations and posts out of total are located on the territory of Uzbekistan, the remaining 36 hydrological and 27 meteorological observation points are located on the territory of Tajikistan.

When selecting reference meteorological observation points and hydrological sites, the main criteria were: their distribution over the territory of the basin by altitude; reliability of measurements and duration of observations over hydrometeorological elements; the most important thing were the natural condition for the formation of river flow.

Despite the territorial unevenness, we chose 20 meteorological (13 - Uzbekistan part, 7 - Tajikistan part) and 29 hydrological (11 - Uzbekistan part, 18 - Tajikistan part) observation points covered the entire range of altitude, within

which the runoff of the rivers of the Zeravshan basin is formed.

**Analysis and results.** As indicated in previous studies [1, 2, 4-6, 10, 13, 15], air temperature and precipitation are the main meteorological factors affecting the hydrological regime and water resources of rivers. In this regard, the paper studied the issues of their change in the conditions of climate warming. For this purpose, the entire estimation period (1960–

2020) was divided into the first base (FBCP, 1961–1990) and current (CCP, 1991–2020) climatic periods.

The assessment of changes in climatic parameters - air temperature and precipitation was carried out using two methods: 1) according to data from individual meteorological stations (Table 1); 2) according to the data of groups of meteorological stations (Fig. 1).

Table 1

Assessment of air temperature changes in the high-mountainous part Zeravshan basin

№	Weather stations	Height, H, m	Air temperature, 0C FBCP			Air temperature, 0C CCP, 0C			$\Delta t_{av.} = \bar{t}_{II} - \bar{t}_I$
			max	min	aver.	max	min	aver.	
1	Anzob pass	3379	-0,7	-3,2	-1,74	1,40	-3,4	-1,24	0,50
2	Shakhristan pass	3143	1,55	-0,56	0,70	3,10	-2,3	0,86	0,16
3	Dehouse	2564	5,30	3,12	4,37	6,02	3,54	4,72	0,35
4	Madrushkat	2254	8,44	6,16	7,49	9,83	6,63	8,03	0,54
5	Iskanderkul	2204	7,61	5,33	6,62	8,01	6,02	7,07	0,45
6	Sangiston	1521	12,8	9,81	11,6	13,9	10,6	12,0	0,40
7	Panjikent	1015	13,9	10,5	12,7	14,6	12,0	13,3	0,60

Note:  $\bar{t}_{II}$  и  $\bar{t}_I$  – average long-term values, respectively, of the first and current climatic periods;  $\Delta t_{av}$  – air temperature difference, 0C.

The essence of the second method lies in the fact that when it is applied, the data of all meteorological observation points operating in the study area are used simultaneously. At the same time, joint graphs of the dependence of the studied meteorological elements on height for the selected calculated climatic periods are constructed. The vertical ordinates between straight or curved lines expressing these

dependencies characterize the quantitative changes in the studied meteorological elements during the considered climatic periods.

To assess the change in air temperature in the Uzbekistan part of the basin, data from 13 meteorological stations located in this territory were used (Fig. 1).

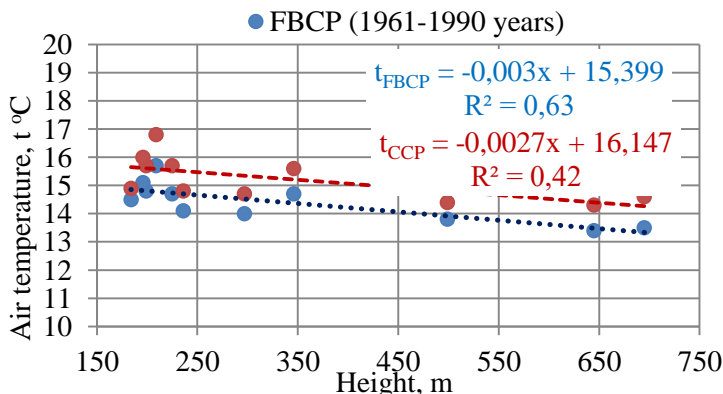


Fig.1. Changes in air temperature in the Uzbekistan part of the basin

The issues of long-term runoff fluctuations were considered on the example of the Zeravshan River on the basis of data from the hydrological posts Dupuli, Ziyavitdin, Navoi and Khazar located along its length (Fig. 2).

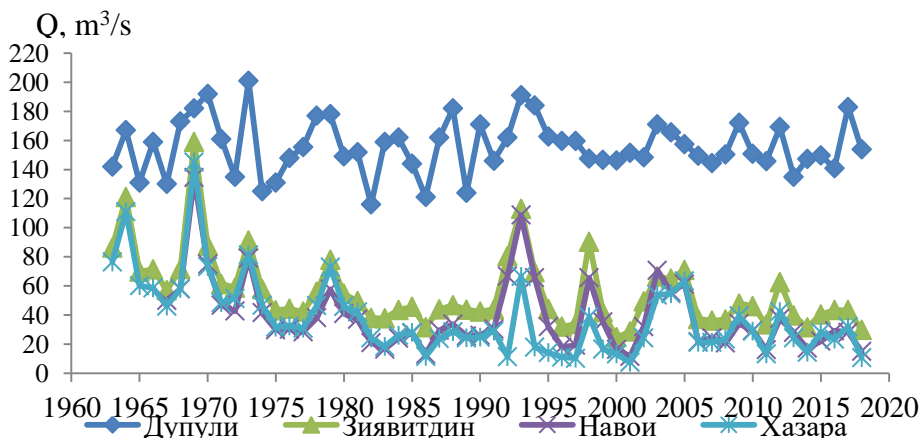


Fig.2. Long-term variations of mean annual water discharges of the Zeravshan River



An analysis of the estimation results showed that at Dupuli hydrological station, 1973 is characterized by high water (201.0 m<sup>3</sup>/s). Taking into account the flow of the Magiandarya (Sudzhina), the mean annual water flow that entered the Ravatkhodzha hydroelectric complex this year amounted to 209.6 m<sup>3</sup> / s, or the annual flow volume was equal to 6.611•10<sup>9</sup> m<sup>3</sup>. Of this volume of water, only 43.7% reaches the Ziyavitdin gauging station, and 37.7% reaches Navoi. It should be noted that due to the flow of collector-drainage and groundwater into the channel of the Zeravshan River, a slight increase (up to 38.8%) in the volume of runoff is observed at the Khazar hydrological station, located below the Navoi gauging station. In dry years, such as 1982, both absolute and relative values of annual runoff recorded at stations downstream of the Zeravshan River were even less. In general, the paper shows that starting from the Ravatkhodzha

water distribution facility to the lowest Khazar post, there is an increase in anthropogenic impact on the water regime of the Zeravshan River [10, 15].

The analysis of interannual fluctuations of the average annual water discharges of 11 rivers of the Middle Zeravshan for a 60-year period (1961-2020) was made. In 9 cases out of 11, the fluctuation trend equations had a positive sign, and in the remaining two cases they had a negative sign. The largest increases in average annual water discharges over the specified calculation period were observed in Amankutansay ( $\Delta Q=0.352$  m<sup>3</sup>/s), Kuksaraysay ( $\Delta Q=0.27$  m<sup>3</sup>/s), Maidansay ( $\Delta Q=0.324$  m<sup>3</sup>/s) and Beglyarsay ( $\Delta Q=0.304$  m<sup>3</sup>/s). A decrease in the values of average annual water discharges was observed in Tusunsay ( $\Delta Q=-0.103$  m<sup>3</sup>/s) and Aktepasay ( $\Delta Q=-0.041$  m<sup>3</sup>/s).

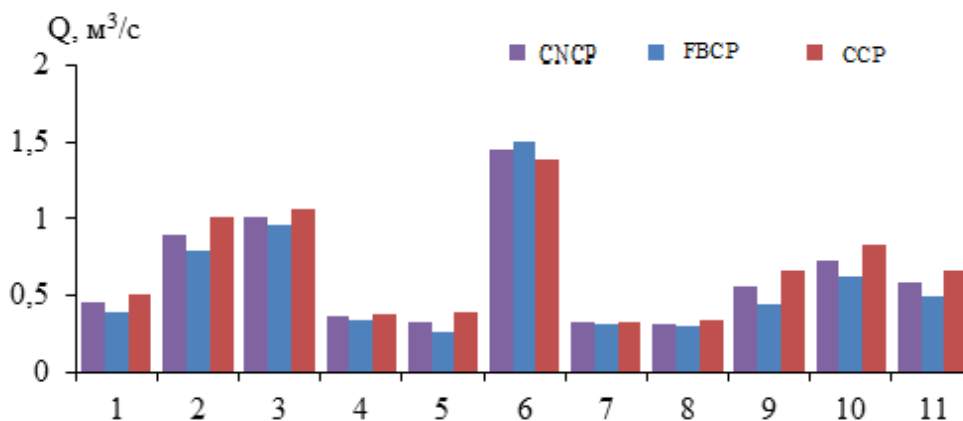


Fig. 3. Quantitative changes of mean long-term water discharges of the rivers of Middle Zeravshan

1 - Urgutsay-Urgut city, 2 - Amankutansay-qishl. Amankutan, 3 - Akdaryasay-kishl. Agalik, 4 - Sazagansay-qishl. Sazagan, 5 - Tegirmansay-qishl. Sagishman, 6 - Tusunsay-estuary, 7 - Aktepasay-kishl. Ocha, 8 - Karagachsay-kishl. Mavlon, 9 - Maidansay-qishl. Olmata, 10 - Kÿksaraisai - at the exit from the mountains, 11 - Begliarsai-kishl. Yangi Akchob, GRP - general reference period (1961-2020).

The coefficients of variation ( $C_v$ ) of the annual water discharges of the rivers of the Middle Zeravshan for different estimation periods were calculated and compared with the results of previous researchers. The results of estimations performed for PBKP (1961-1990) showed that their highest values, like those of V.E. Chub, corresponded to Tegirmansay ( $C_v=1,18$ ) and Kuksaraysay ( $C_v=1,02$ ). The values of variation coefficients calculated for Amankutansay, Akdaryasay and Sazagansay were relatively small and

fluctuate within  $0,457\pm 0,515$ , which were close to the results of V.E. Chub [14, 15].

High water, when 65-80% of the annual runoff of the Zeravshan River passes, was observed in April-September, and on small rivers and sayas of the Middle Zeravshan it occurs in March-May, their reasons were indicated. This issue was analyzed on the example of the Zeravshan River based on the materials of the Dupuli hydrological station (Fig. 4).

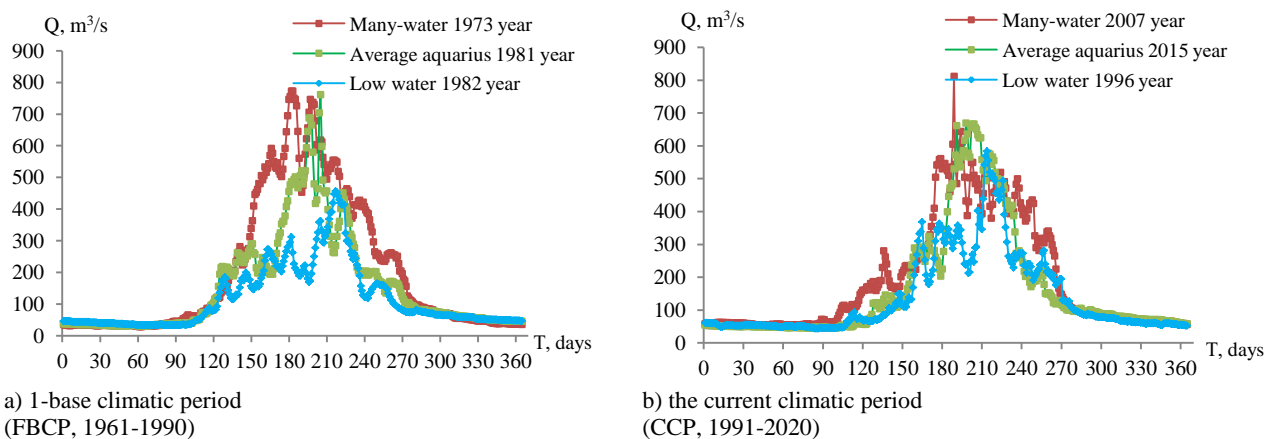
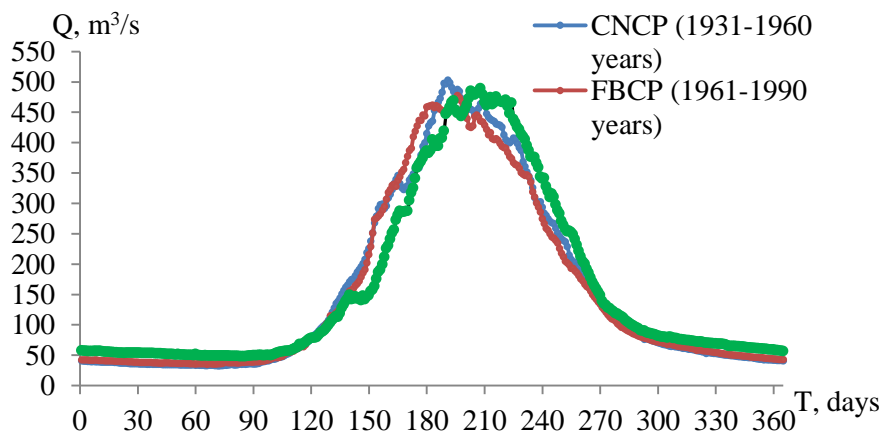


Fig.4. Hydrographs of extreme water years observed on the Zeravshan (Dupuli) River in different climatic periods

Floods on the rivers of the high-mountainous part of the Zeravshan basin can be observed during intensive melting of snow cover and glaciers as a result of a sharp increase in air temperature or due to heavy rainfall. Small rivers and sairs of the Middle Zeravshan were characterized by autumn and early spring floods. If the Zeravshan River is characterized by autumn-winter low water, and on its small tributaries, which were formed on the territory of Uzbekistan, there is a long summer-autumn-winter low water [4, 15].

In the paper, the issues of shifting the dates of the beginning, end and total duration of the flood period, as well

as the maximum water discharges, were considered on the example of the Zeravshan (Dupuli) River. For this purpose, the general series of hydrological observations was divided into the following three estimation periods: 1) conditional natural climatic period (CNCP, 1931-1960); 2) the first basic climatic period (FBCP, 1961-1990); 3) the current climatic period (CCP, 1991-2020). For each estimation period, the mean daily water discharges over many years were calculated and, on their basis, joint annual hydrographs were constructed, with the help of which the main changes in flood elements were determined (Fig. 5).



Rice. 5. Hydrographs of the Zeravshan (Dupuli) River for different climatic periods

The analysis of joint hydrographs was made and the following was revealed: 1) in all three climatic periods, the dates of the beginning of the flood period almost coincide, however, the dates of their end in the CCP were shifted a week later; 2) as a result of this shift, the duration of the flood in the CCP increased by one week; 3) if you do not take into account some small shifts during the rise and fall, the hydrographs of the CNCP and FBCP almost coincide; 4) there is a shift of the CCP hydrograph to the right side relative to the hydrographs, on average 10-12 days, and when it declines, 8-10 days; 5) hydrographs of the UECP and FBCP show that the values of their runoff during the low water period coincide completely; 6) an increase in the low-water runoff is observed in the CCP,

i.e. spring-winter period by 20-25% relative to the two previous settlement periods [4, 5, 8].

It is known that one of the most important tasks of hydrological calculations is the determination of the maximum water discharges. This is due to the fact that hundreds and thousands of bridge crossings, outlets, hydraulic dams, power lines over them and others have to be designed on rivers. Typically, the maximum flow of water was observed during periods of high water. The analysis of the average dates of the passage of the maximum water discharges during the flood period according to the calculated climatic periods was carried out. Quantitative changes in the maximum water discharges during the flood period and shifts in the timing of their passage were revealed (Table 2).

Table 2

Maximum water discharges of the flood period and shifts in the timing of their passage

Indicators	Estimated climatic periods			Difference	
	CNCP (1931-1960 гг.)	FBCP (1961-1990 гг.)	CCP (1991-2020 гг.)	between CNCP and FBCP	between FBCP and CCP
$Q_{max}$ , m <sup>3</sup> /c	503	478	489	-25	+11
Date	09.07	14.07	26.07	5 cyr.	12 cyr.

The water resources of the rivers of the Zeravshan basin were assessed. For this purpose, the water resources of the rivers formed in its mountainous part were initially assessed. According to the estimation results, the sum of mean long-term water discharges formed in the high-mountainous

part of the Zeravshan river basin and entering Uzbekistan is 163 m<sup>3</sup>/s, and mean long-term runoff is 5.141 km<sup>3</sup>. Of this amount of runoff, the Zeravshan (Dupuli) River accounts for 95.1%, and the Magiandarya River - 4.9% (Table 3).

Table 3

Mean long-term runoff values of rivers in the Zeravshan basin

Parts of the pool	F, km <sup>2</sup>	Hcp, m	$\bar{Q}$ , m <sup>3</sup> /s	W, 109 m <sup>3</sup>	M, l/s·km <sup>2</sup>	h, mm	
Alpine part	1	10200	3100	155	4,889	15,2	479
	2	1110	2660	7,95	0,251	7,2	226

Runoff indicators		11310	3057	163	5,141	14,4	454
Mid- and low-mountain part	3/11	1888	-	7,01	0,221	3,7	117
	4/19	695	-	2,19	0,069	3,2	99
Runoff indicators		2583	-	9,2	0,290	3,6	112
General flow rates		13893	-	172,2	5,431	12,4	391

Note: 1 - Zeravshan - Cape Dupuli; 2 - Magiandarya - p. Sujin; 3 - hydrometrically studied rivers, the denominator - their number; 4 - hydrometrically unexplored rivers, the denominator - their number; F - is the catchment area; Have - hav is the average weighted watershed height;  $\bar{Q}$  – average long-term water consumption; W - is the flow volume; M - is the sink module; h is the runoff layer.

The water resources of the rivers of the Middle Zeravshan were assessed by dividing them into hydrometrically studied (221.1·106 m<sup>3</sup>) and hydrometrically unexplored (69.1·106 m<sup>3</sup>) rivers. Their sum, i.e. mean long-term runoff of the rivers of the Middle Zeravshan was 290·106 m<sup>3</sup>. In general, the total mean long-term runoff of the rivers in the Zeravshan basin is 5.431·109 m<sup>3</sup>.

#### Conclusions:

1. An assessment was made of changes in air temperature and precipitation in the Zeravshan river basin. Materials of 20 meteorological (13-Uzbekistan part, 7-Tajikistan part) and 29 hydrological (11-Uzbekistan part, 18-Tajikistan part) observation points were used. The general estimation period (1960-2020) was divided into the first base (FBCP, 1961-1990) and current (CCP, 1991-2020) climatic periods;

2. Assessment of changes in climatic parameters (temperature, precipitation) was carried out using two methods: 1) according to data from individual meteorological stations; 2) according to the data of groups of meteorological stations. An increase in air temperature was revealed both in the high-mountainous part (according to the 1st method by 0,43 0C, and according to the 2nd method by 0,40 0C), and in the territory of the Middle Zeravshan (according to the 1st method by 2-method at 0,88 0C);

3. The increase in the layer of atmospheric precipitation according to the 1st method for the high-mountainous part averaged 7.4 mm, and for the Middle Zeravshan its decrease by 2.1 mm was revealed. The results of assessing the change in atmospheric precipitation by the 2-method showed that in the high-mountainous part of the basin at high altitudes in the TST, precipitation decreases, while at its relatively low altitudes, on the contrary, they increase. A similar picture was observed in the Middle Zeravshan;

4. The issues of long-term runoff fluctuations were considered on the example of the Zeravshan River on the basis of data from the hydrological posts Dupuli, Ziyavitdin, Navoi and Khazar located along its length. It is shown that the data of the Dupuli gauging station characterize the natural regime of variations in the runoff of the Zeravshan River. Starting from the water distribution facility of Ravatkhodzha to the

lowest post of Khazar, an increased anthropogenic impact on its water regime is observed;

5. The estimated values of the coefficients of variation of mean annual water discharges of the rivers of the Middle Zeravshan were compared with the results of previous researchers. The results of estimations performed for FBCP showed that their highest values, like those of V.E.Chub, corresponded to Tegirmansay (Cv=1.18) and Kuksaraysay (Cv=1,02). The CV values calculated for Amankutansay, Akdaryasay and Sazagansay were relatively small and fluctuate within 0,457÷0,515;

6. The intra-annual distribution of the annual river runoff by months and seasons of the year for the selected two calculated climatic periods (FBCP, CCP) was studied. It was revealed that in Urgutsay in the CCP the volume of runoff during the flood period (March-May) decreased relative to the FBCP, at the same time, in all months of the low water period (except December), the runoff increased;

7. The issues of shifting the dates of the beginning, end and total duration of the flood period, as well as changes in the value of maximum water discharges were considered on the example of the Zeravshan (Dupuli) river. The analysis of joint hydrographs showed that in the calculated climatic periods, the dates of the beginning of the flood almost coincide, however, the dates of their end in the CCP were shifted a week later. The hydrographs of the CNCP and FBCP almost coincide, however, there was a shift of the CCP hydrograph to the right side relative to them, on average 10-12 days;

8. The water resources of the rivers of the Zeravshan basin were assessed. Estimations showed that the sum of mean long-term water discharges formed in the high-mountainous part of the Zeravshan river basin and entering Uzbekistan is 163 m<sup>3</sup>/s, and the mean long-term runoff is 5,141· km<sup>3</sup>.

9. The water resources of the rivers of the Middle Zeravshan were assessed by dividing them into hydrometrically studied (221.1·106 m<sup>3</sup>) and hydrometrically unexplored (69.1·106 m<sup>3</sup>) rivers. Their sum, i.e. mean long-term runoff of the rivers of the Middle Zeravshan is 290·106 m<sup>3</sup>.

10. The total mean long-term runoff of rivers in the Zeravshan basin is 5,431·109 m<sup>3</sup>.

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## LULC CHANGE ASSESSMENT USING GIS AND RS APPLICATION: A CASE STUDY OF TASHKENT CITY, TASHKENT REGION (1990 - 2020)

Abstract

A topical issue in the field of GIS and remote sensing is the analysis of changes in land use and land cover in cities, which is very useful for a wide range of conservation applications and for the effective implementation of landscape planning and management policies. This study attempts to track changes in land use characteristics of the city of Tashkent and the Tashkent region.

**Key words:** LULC, Landsat, LULC change assessment and GIS

**Introduction.** From a geographical point of view, the 21st century should be considered as an era of urbanization, even if in some places this movement began earlier, now it has become a global phenomenon. As the name suggests, cities are dynamic; this is because change is inevitable. These changes can be attributed to one or another factor depending on the socio-economic, political and climatic conditions of the area. However, one fundamental factor underlying the changes in cities, both in terms of size and structure, remains unchanged for most cities, that is, "population growth". However, other factors related to land use and vegetation cover change (LULC) directly or indirectly depend on population growth. The growth of population and the rapid expansion of built-up area in recent decades have caused a substantial LULC change [1].

Land cover corresponds to the physical state of the ground surface, such as natural vegetation, water bodies, rock/soil, artificial cover and others noticed on the land whereas land use reflects human activities such as the use of the land for different purpose such as industrial zones, resident zones [2].

Land use land cover (LULC) change is the change in the biophysical cover and use of land for different purposes [4].

**Literature review.** Land use and land cover (LULC) classification of satellite imagery is an important research area and studied exclusively in remote sensing. However, accurate and appropriate land use/cover detection is still a challenge [5]. To understand recent changes in the Earth system, the scientific community needs quantitative, spatially-explicit data on how land cover has been changed by human use over the last 300 years and how it will be changed in the next 50–100 years [6]. These changes in terrestrial ecosystems are closely linked with the issue of the sustainability of socio-economic

development since they affect essential parts of our natural capital such as climate, soils, vegetation, water resources and biodiversity [7]. Much study in recent years point out that, land cover is changing rapidly in many parts of the world, particularly in areas with high population density. Land changes, especially the transformation of cropland and forest land to urban uses, are an important environmental change, which affect ecology and human beings [3].

Capital city of Tashkent the center of the Tashkent urban agglomeration, the most important political, economic, cultural and scientific center of the country, as well as an aviation, railway and automobile hub. Tashkent is the 3rd city in the Commonwealth of Independent States [5] in terms of population. It is one of the oldest cities in Central Asia - the 2200th anniversary of the city was celebrated in 2009. Tashkent is located in the northeastern part of the republic, near the border with Kazakhstan and on a plain in the valley of the Chirchik River, at an altitude of 440-480 meters above sea level and occupies an area of 30,000 hectares. The latitude of Tashkent is 41.311081, and the longitude is 69.240562. In the category of cities with GPS coordinates 41° 18' 39.8916" N and 69° 14' 26.0232" E.

The area of the city is 35784.47 hectares (357.84 km<sup>2</sup>), including 22186.58 hectares (62.00%) of industrial, transport, communications, defense and other lands; 9248.36 hectares (25.84%) of the land of settlements; 2299.71 hectares (6.43%) of agricultural land (almost all of them are concentrated in Yangikhaet district, in which make up half of its territory); 1125.95 ha (3.15%) of water fund land; 485.05 ha (1.36%) of historical and cultural significance land; 315.50 (0.88%) of nature conservation land; 121.82 (0.34%) of nature reserves land; 1.50 ha (0.00%) of forest fund land (all in Chilanzar district).

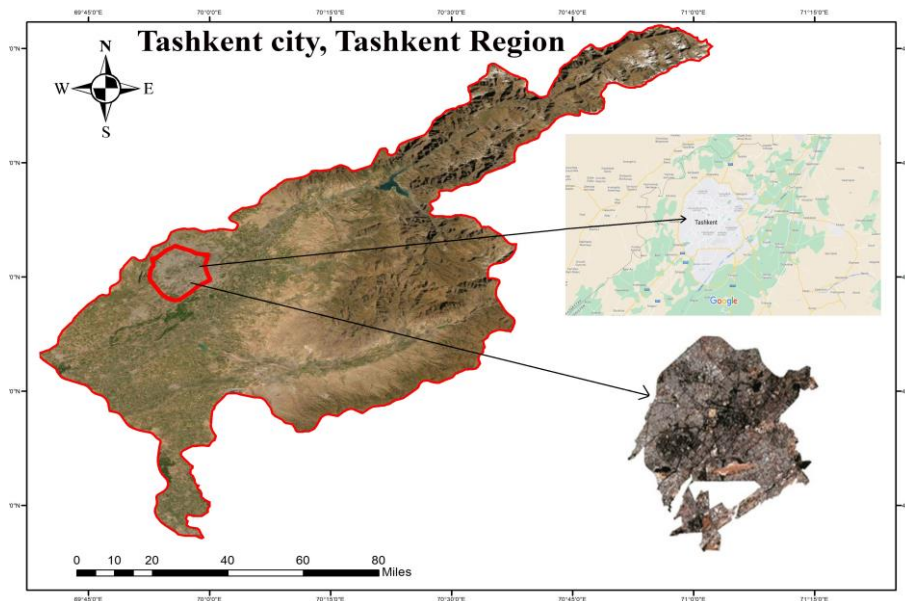


Fig 1. Location of study area

**Research Methodology.** A complete flow chart for the processing procedure is described in Figure 2, which involves the details working procedure for data preparation, data analysis, observation data and validation of satellite data with observation datasets.

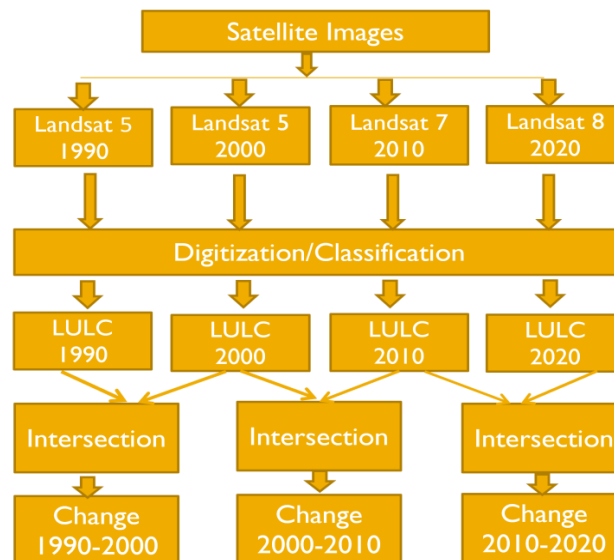


Fig 2. Overall Methodology flowchart

Different methods are used LULC mapping. Initially satellite imagery download. In our work we used satellite from Landsat 5, 7 and of course Landsat 8. Firstly image pre processing is carried out to remove error from Landsat image.

**Analysis and results. LULC Classification Data.** Landsat 5, 7 Enhanced Thematic Mapper (ETM+) images from 1990, 2000, and 2010 and Landsat 8 Operational Land Imager (OLI) images from 2020, with a resolution of 30 m, were

utilized in this study to evaluate changes in LULC in the study region during a 30-year period from 2020. Three cloud-free Landsat satellite scenes were downloaded freely from the United States Geological Survey (USGS) website (<http://earthexplorer.usgs.gov/>). For easy visibility, the cloud-free imagery used in this study was captured during the dry season (August). The detailed characteristics of the Landsat images used in this study are presented in Table 1.

**Table 1. Description of satellite imageries used in LULC change assessment**

Year	Time	Satellite images	Spectral resolution	Spatial resolution
1990	1990-08-01	Landsat 5	Band 1 to 7 (0.45-2.35)	30 m
2000	2000-08-01	Landsat 5	Band 1 to 7 (0.45-2.35)	30 m
2010	2010-08-01	Landsat 7	Band 1 to 7 (0.45-2.35)	(30,15) m
2020	2020-08-01	Landsat 8	Band 1 to 11 (0.43-12.51)	(30,15) m

The different LULC classes of the study area were grouped into five for easy analysis and assessment of change detection. The LULC classification includes Built up area, Wet land, Farm land, Shrub/grass and Other land. The built up

area category includes high, medium and low densities; disperse settlements, and all other man-made structures such as schools, hospitals, industries, bridges and roads. The wet land category includes wet and dry river, river banks, water

logged areas and small ponds. The farm land category includes lowland crop and highland crop fields with and without crops. Grass/shrubs were combined into a common class; this was due to the fact that grass and shrubs naturally grows together. Finally, other land category includes ditches, and rocks[8].

The land use and land cover assessment is done for different time periods, i.e. 1990, 2000,2010 and 2020 by using Landsat images. The supervised classification technique with Maximum Likelihood Classifier was used to classify the image pixels belonging to different land use and land cover categories. After classification of the images of different periods, conventional change detection technique was used to know the areas covered by different land use and land covers categories. The total number of pixels identified in different categories are multiplied by pixel resolution, 30m x 30m (for Landsat 5) and 30m x 15m (for Landsat 8). The following

results are obtained. These are discussed according to different time periods.

#### Land Use and Land Cover in 1990 :

The entire study region is divided into five categories of land use and land cover viz. cropland, urban area, plantation, wasteland and water bodies. In the year 1990, as per results of pixel based supervised classification technique, about 75 percent area of the total geographical area was under cropland cover (Table No. 2). The second largest use of land is for urban area. Of the total geographical area, about 22.2 percent area is under urban area. It lies in the region of the Tashkent. About 1 percent land is classified as wasteland which mainly comprises the hilly and rugged terrain laying in the western part of the region. Water bodies have occupied about 1 percent area which mainly includes river Chirchik its tributaries and many lakes located in the north part of the study region. They are appearing more in numbers in this time period

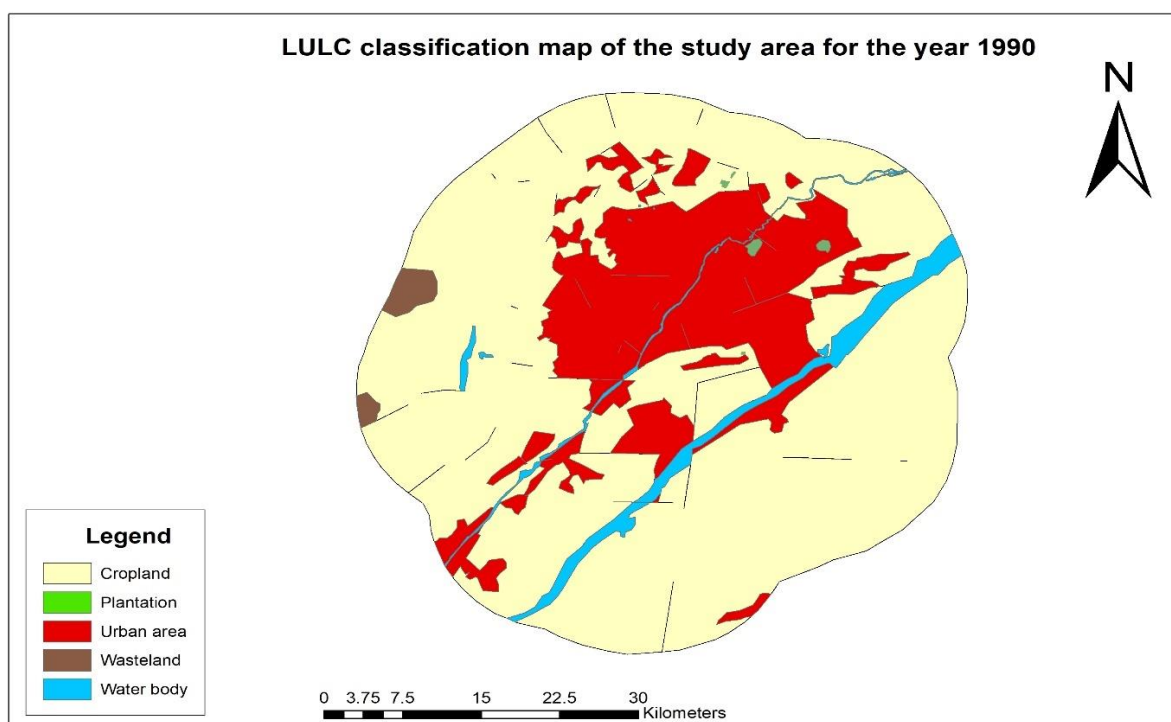


Fig. 3- Land use and Land cover map of of Tashkent city, Tashkent Region (1990).

Table2. Area under differentLand Use Land cover in 1990

Sr.No.	Class Name	Area in sqkm	Area in %
	Cropland	2043	75.96
	Urban area	598.608	22.26
	Plantation	4.15443	0.15
	Waterbody	19.5969	0.73
	Wasteland	24.3265	0.90
Total		2689	100.00

#### Land Use and Land Cover in 2000 :

As per the classification technique, about 66 percent area of the total area was under cropland (Fig. No. 4). The area under urban area is limited with big change. It is 30.33 percent only (Table No. 4).The proportion of area under plantations was 0.21 percent. About 1.31 percent of the total area was calculated as wasteland while water bodies had occupied about 1.14 percent area.

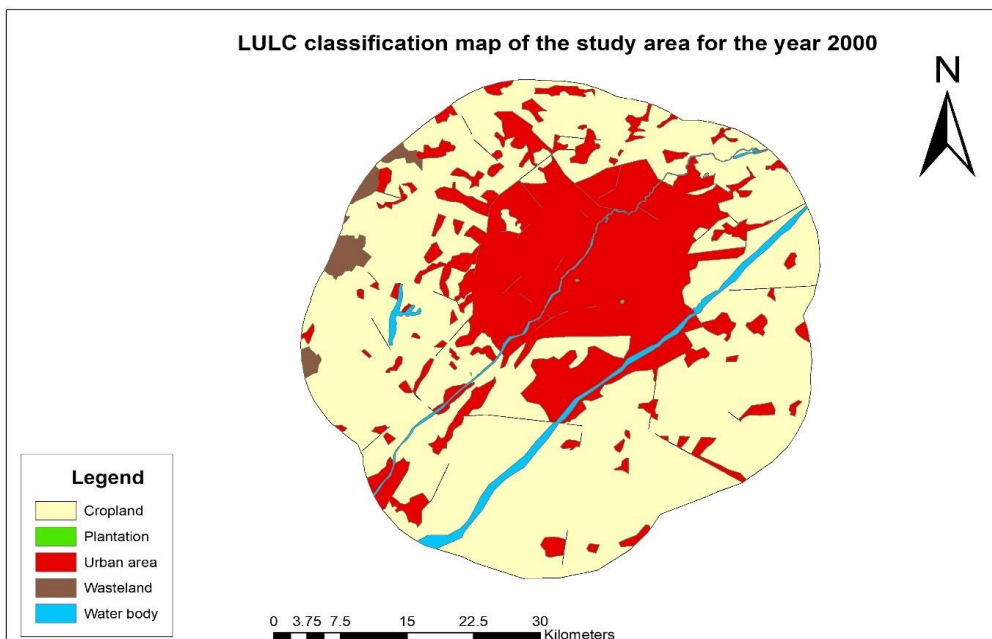


Fig. 4- Land use and Land cover map of of Tashkent city, Tashkent Region (2000).

Table 3. Area under different Land Use Land cover in 2000

Sr.No.	Class Name	Area in sqkm	Area in %
	Cropland	1801.5965	66.99
	Urban area	815.741	30.33
	Plantation	5.67	0.21
	Waterbody	30.7604	1.14
	Wasteland	35.2355	1.31
Total		2689	100.00

Land Use and Land Cover in 2010:

The proportion of area under cropland has decreased up to 60 percent while the area under plantations has occupied percent 0.15 of the total geographical area (Fig. No 5). Wasteland has accounted 1.48 percent (Table No. 4). The area occupied by water bodies is only 1.24 percent.

Again the proportion of area under human settlements is increased to 36.9 percent of the total geographical area. For the next year's (2020) this indicators have been changed.

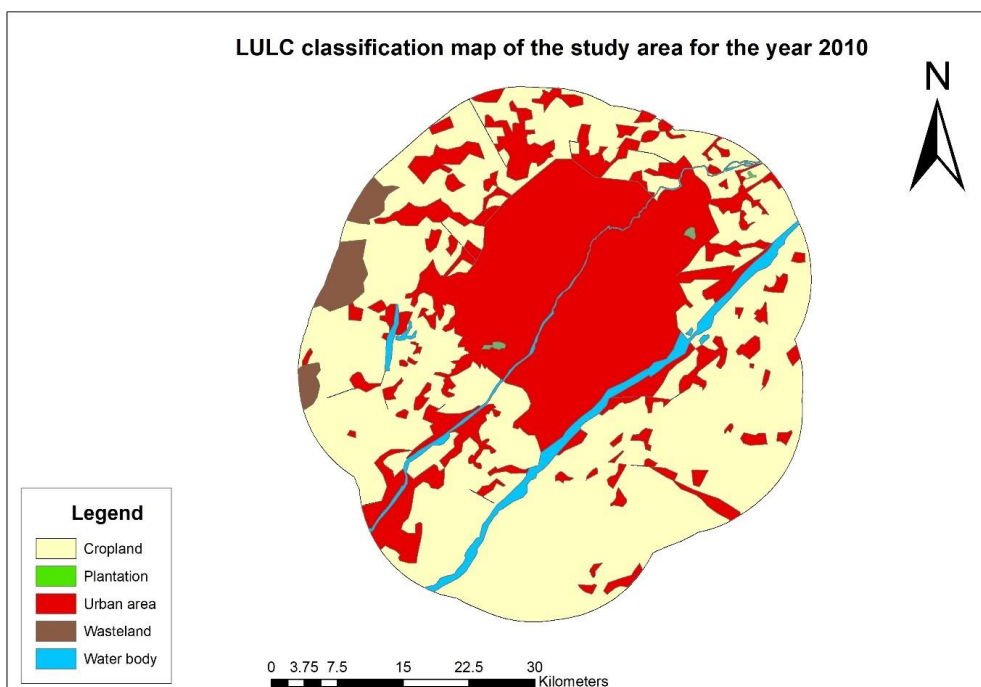


Fig. 5- Land use and Land cover map of of Tashkent city, Tashkent Region (2010).

Table 4. Area under different Land Use Land cover in 2010



Sr.No.	Class Name	Area in sqkm	Area in %
	Cropland	1619.27	60.21
	Urban area	992.257	36.90
	Plantation	4.19619	0.15
	Waterbody	33.4765	1.24
	Wasteland	39.8004	1.48
Total		2689	100.00

Land Use and Land Cover in 2020:

The study revealed that urban area had increased whereas agriculture and others had decreased during the period of 30 years between 2020.

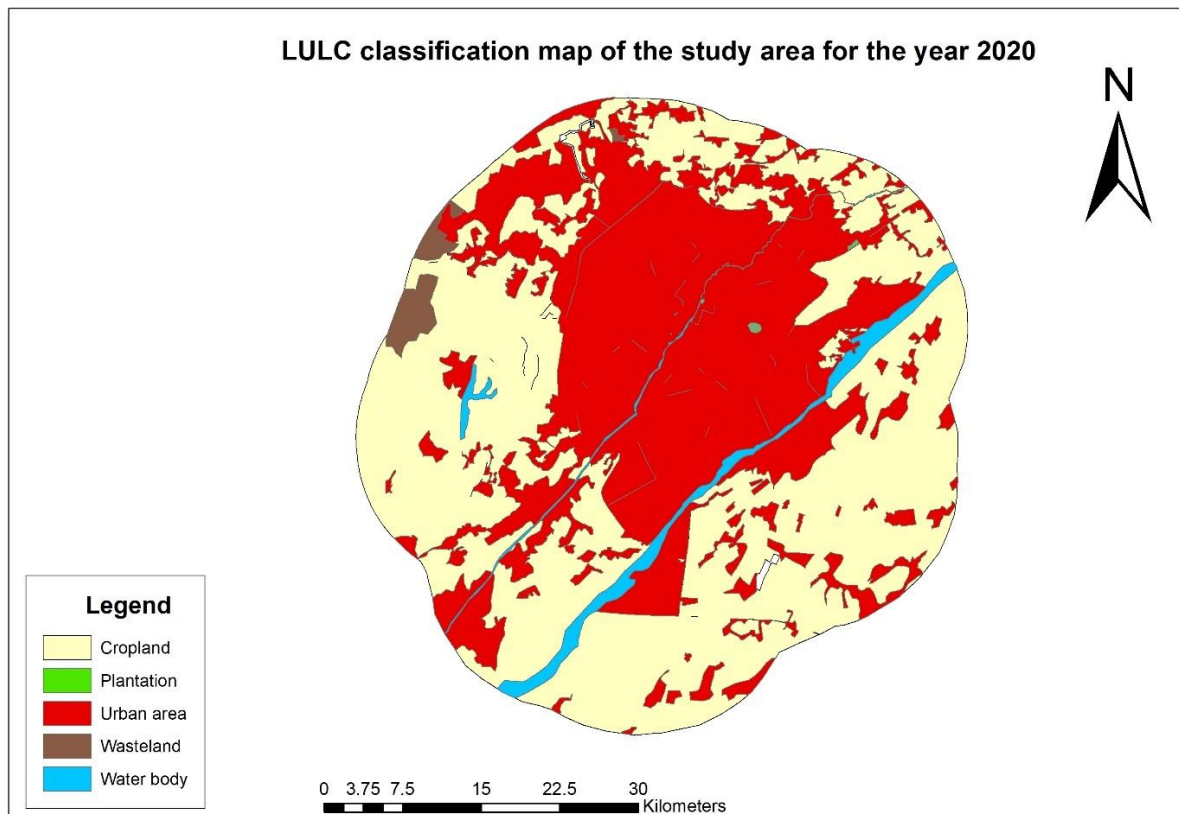


Fig. 11- Land use and Land cover map of of Tashkent city, Tashkent Region (2020).

Table 5. Area under different Land Use Land cover in 2020

Sr.No.	Class Name	Area in sqkm	Area in %
	Cropland	1458.1	54.22
	Urban area	1163.48	43.26
	Plantation	5.569	0.20
	Waterbody	29.4575	1.09
	Wasteland	32.45	1.20
Total		2689	100.00

Result can be seen in Table 6. There are you can see five groups different LULC types. F/e in 2020 study area was mostly covered by croplands more (54.22%), followed by the urban area more (43.26%), and water body more (1.09%), plantation spanned only (0.20%).

**Conclusion and recommendations.** Hence, proper information on LULC is necessary for implementing various developments, planning, and land use schemes to meet up the increasing demands of basic human needs. The utilization of Remote Sensing and GIS tools were helpful in detecting the LULC change that has taken place in Tashkent and surrounding area (Tashkent region) over the past 30 years. For these purposes the 1990, 2000, 2010 and 2020 Landsat imagery was analysed in this study. As a result of digital analysis 5 different categories of Tashkent's surface area were classified:

Urban area, Water bodies, Cropland, Plantation and Wasteland. The results show that during the past 30 years Tashkent and its surrounding areas were heavily urban area (+20.94%) at the cost of losing cropland, respectively (-20.46%). The outskirts of the city are poly-functional, urban development zones. However, in the case of Tashkent the urbanisation and general growth does not only take place in the outskirts. It is usually the central areas that are subjected to the vertical development at the cost of the environment. Assessment of LULC changes in Tashkent during 1990–2020 revealed that the speed of expansion was in fact worrying. The study also revealed a significant expansion of Tashkent city size. The study has revealed that the expansion of Tashkent city is more concentrated around the north and northwestern part of the city.

The next important change is reported in area under cropland. Cropland area is accounted as 73.23, 65.95, 58,0 and 52.77 percent in the years 1990, 2000,2010 and 2020 respectively. It shows continuous decrease. This decrease is the most possible reason for increase in area under urban areas. In addition, analysis of the changes in the land use is of the most importance not only for quantitative evaluation of the changes already implemented, but for future modeling and prognosis of urban development[9].

The other land use and land cover categories like wasteland, water bodies and plantation show little change during the time period.

Recommendation. The integration of LULC mapping and its changes over 30 years as well as the quantification of

the landscape metrics with the aid of remote sensing and GIS techniques disclosed important changes in the LULC practices in the study. Urban areas were the main land uses that underwent expansion, whereas agricultural, plantation and bareland are the main land covers, which have been reduced. Such changes in LULC lead to changes in the landscape structure and composition, which were evaluated by quantifying the landscape metrics. Landscape metrics, in turn, were used to assess the environmental consequences of LULC changes such as habitat destruction and fragmentation.

In addition, it will help to assess rate of growth of the capital city of Tashkent and assist in the urban growth planning, development and redevelopment of the city.

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**POS TAGGING OF UZBEK TEXTS USING HIDDEN MARKOV MODELS (HMM) AND VITERBI ALGORITHM**  
Annotation

Nowadays one of the popular problems of Natural Language Processing (NLP) is defining the categories of words in a given text. Being able to determine whether words in a sentence belong to such categories as noun, pronoun, verb, adverb, etc. is important and is called the POS tagging task in NLP. Phrase tagging (POS tagging, PoS tagging, or POST) in NLP, is also called grammar tagging or phrase segmentation. The process of assigning a word in a text (corpus) to a certain category is based on the context. This article presents methods and algorithms for tagging Uzbek texts using hidden Markov models and the Viterbi algorithm based on the tagged corpus of the Uzbek language.

**Key words:** Parts of Speech Tagging, POS tagging, Hidden Markov Model, Markov chain, Hidden Markov Model, HMM, stochastic methods, NLP, transition probability, emission probability, Viterbi Lattice, Viterbi algorithm.

**Introduction.** Parts of speech (also known as POS) and named objects are important in learning the grammar of any language. Knowing whether a word is a noun or a verb, the ability to determine the syntactic structure of the words next to it may belong to, indicates that the tagging of word groups is one of the main factors. Knowing the meaning of nouns, names of persons, names of places, etc., is significant in performing many tasks of NLP. In this article, we will study tagging of word groups, the probability of word sequences, as well as the detection of named objects (NER), and also tagging words in the form of as a person, a place, an organization.

The world languages have four main categories: nouns (including proper nouns), verbs, adjectives, and adverbs, and a smaller category such as interjections. English has these five categories, but other languages may not have such categories [1; 2].

Nouns are words that refer to a name, place, thing, person, or event. In many languages, including English and Uzbek, common nouns are divided into countable and uncountable nouns. Countable nouns can be singular and plural (goat/goats, relationship/relationships), they can also be counted (one goat, two goats). Uncountable nouns show something as a group. Thus, snow, salt, and justice are not considered countable nouns [3; 4]. Parts of speech also have different subgroups.

Verbs describe actions, situations, and processes. Adjectives often describe characteristics or qualities of a

horse, such as its color (white, black), age (old, young), and value (good, bad). Some languages do not have adjectives. For example, in Korean, words that are adjectives in English act do the function of verbs, so the adjective "beautiful" in English is used as a verb meaning "to be beautiful" in Korean. Adverbs express the state, amount, degree, time, place of the action. Pronouns act as stenography for an event. Personal pronouns refer to persons or objects. Possessive pronouns are other forms of pronouns that mainly express possession and indicate the relationship between a person and an object. Conjunctions join two phrases, clauses, or sentences. The auxiliary words in a sentence link the noun to another category. Complements add extra meaning to words and sentences [4].

A simplified form of this (such Grammar) is usually taught to school-aged children to identify words like nouns, verbs, adjectives, adverbs, and other parts of speech. Identifying Parts of Speech tags is a much more complex process than simply comparing Parts of Speech tags. This is because there is no general approach to POS tagging in NLP. One word can belong to different tags in different sentences based on the context [3; 5].

It is not possible to manually index (record) Parts of Speech tags for the given language corpus. Dictionaries are constantly adding new words from different languages, and it's impossible to expand POS tags by themselves manually. That's why we use a machine-based POS tag.

The main part

POS tagging

POS tagging itself cannot solve any NLP problems. POS tagging is one of the first steps in the NLP pipeline and is a prerequisite for simplifying many NLP tasks.

POS tagging algorithms are divided into two separate groups [6,7]:

POS taggers based on rules.

Stochastic POS taggers.

The E.Brill POS tagging method is one of the first and most widely used English POS taggers and uses algorithms based on rules [8].

POS tagging based on rules

Automatic POS tagging is one area of NLP where statistical methods are more effective than rule-based methods. Conventional rule-based approaches use context information to tag unknown or ambiguous words. POS is performed by analyzing the linguistic features of a word, the preceding and following words, and other aspects in order to eliminate ambiguity in tagging. For example, if the preceding word is an adjective, then the word in question is most likely to be a noun. This information is coded in the form of rules [9].

An example of a grammar rule:

If the indefinite/unknown X word is preceded by a determiner and followed by a noun, mark it as an adjective.

It is very difficult to manually define a set of rules. So, we need some automated method or system is needed to do this.

The Brill tagger is a rule-based tagger that looks through training data, finds a set of tagging rules that define the data well, and minimize POS tagging errors [8]. The most important thing to note about Brill tagging here is that the rules are not created manually, but instead are defined using the provided corpus. The only requirement for feature

development is to define a set of rule templates that the model can use to generate new features.

Stochastic POS tagging

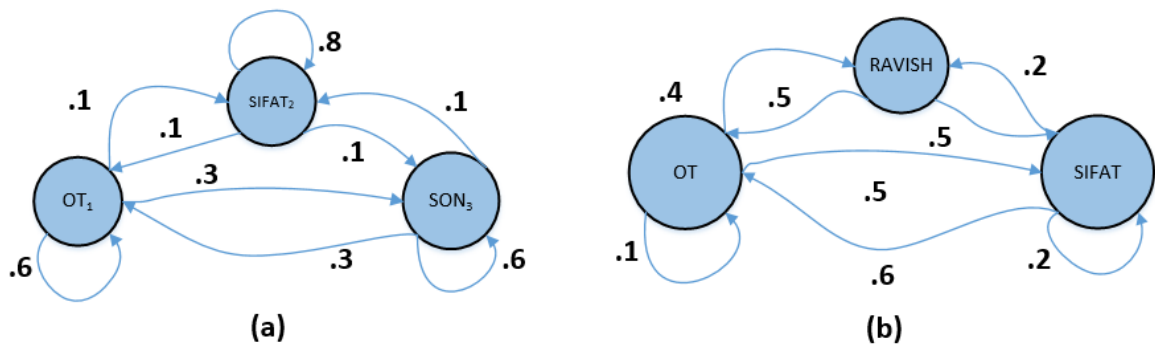
The term "stochastic tagger" can refer to different approaches of the POS tagging problem. Any model that involves frequency or probability in some way can be called stochastic. The simplest stochastic taggers identify words based on the probability of the words occurring with a given tag. In other words, the most frequent tag and training dataset with a word is the tag assigned to the ambiguous word pattern [10; eleven]. The problem with this approach is that while it may return the correct tag for a given word, it may return the wrong sequence of tags.

An alternative approach to word frequency is to calculate the probability of occurrence of a sequence of tags. This approach is sometimes referred to as the n-gram approach and is based on determining the best tag for a given word by the probability of its occurrence with the previous n tags. This approach considers tags for individual words depending on the context. An approach using tag sequence probabilities and word frequency measures is known as the Hidden Markov Model (HMM) [12;13;14].

Hidden Markov Models (HMMs)

The Markov chain is a model that describes the probability of a sequence of random events/variables. In a Markov chain, only the current state is used to predict the next element in the sequence. All conditions before the current state do not affect the next steps [15,16].

We will study the Markov chain model for predicting the next word from the current word in a sentence to be generated in Uzbek. Words can belong to the noun/adjective/number group of words. The word sequence of the current word can be used to predict the next word. In this case, the previous word is not used in the prediction. The following examples illustrate this process:



Picture. Predicting parts of speech using Markov chain.

In the first Markov chain (a), there are states of NOUN, ADJECTIVE and NUMERALS, and the numbers in decimal format on the edges connecting the vertices of the graph indicate the probability of transition from one state to

another state (State1→State2). In this graph, the probability that a NOUN word group will be followed by group of words belong to an ADJECTIVE 0.1. Table 1 below shows all the components of a Markov chain:

Table 1. All components of Markov chain

$Q = Q_1, Q_2, \dots, Q_n$	A group of N cases
$A = a_{11}, a_{12}, \dots, a_{1n} \dots a_{nn}$	A is a transition matrix of probability, representing the probability of transition from each state $a_{ij} - i$ to another state $j. \sum_{i=1}^n a_{ij} = 1, \forall i$
$\pi = \pi_1, \pi_2, \dots, \pi_n$	The initial probability distribution for S cases. $\pi_i - i$ represents the probability that the Markov chain starts in a certain state. $\sum_{i=1}^n \pi_i = 1$

HMM

HMM is a very powerful statistical modeling tool whi is used for speech recognition, handwriting recognition and other NLP tasks. Hidden Markov Model (HMM) is an unsupervised machine learning algorithm that is part of graphical models. If the training data is available, the HMM is trained using a supervised learning method [17;18]. It is important to understand where the

Hidden Markov Model algorithm actually fits or is used. Today, the HMM graphical model is used to predict (hidden) states using sequential data such as weather, text, speech, etc. [19;20;21].

In some cases, it was necessary to predict the sequence of events that cannot be directly observed in the environment. But while we are given a sequence of other observable states in the environment, these hidden states depend on the observable states. That is, the most important point established by HMM is that the future state/event depends only on the current state/event and not on other past states.

Arithmetically, the probability of a state at time t depends only on the time step t-1. In other words, the probability of s(t) given s(t-1) is  $p(s(t) | s(t-1))$ . This is used as a first order Markov model. If the probability of state s at time t depends on time steps t-1 and t-2, this is called a 2nd order Markov model. That is, when dependence on past events increases, order increases accordingly. A second-order Markov model can be written as  $p(s(t) | s(t-1), s(t-2))$ . The probability of successive occurrence of events s1, s2 and s3 is calculated as follows [22]:

$$\begin{aligned} p(s_3, s_2, s_1) &= p(s_3 | s_2, s_1) p(s_2, s_1) \\ &= p(s_3 | s_2, s_1) p(s_2 | s_1) p(s_1) \\ &= p(s_3 | s_2) p(s_2 | s_1) p(s_1) \end{aligned}$$

The figure below is a schematic of the simple Markov model that we have defined in the above equation.



Picture 2. Diagram of a simple Markov model

Probability of transition

It is defined as the probability of transition from one state to another. Thus, if there are 3 states (Q1, Q2, Q3), there will be a total of 9 possible transitions. In the diagram below, all transition probabilities for states A, B, C are determined. The transition probability is usually denoted by A. It is interpreted as the probability of transition of the system from state i to state j in time step t+1.

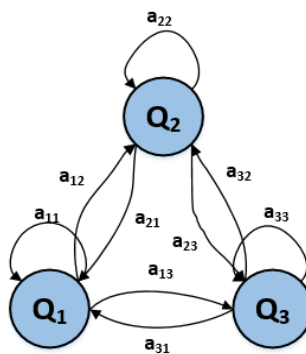


Figure 3. 3-state transition probability diagram

Mathematically,

$$a_{ij} = p(s(t+1) = j | s(t) = i)$$

For example, in the state diagram above, the transition probability from state Q1 to state Q2 is defined as a12. If we observe state Q1 for two days in a row, then the probability of transition from state Q1 to state Q1 in step t+1 is a11. It is usually defined using the transition probability matrix (M x M). For our example above, the transition probability matrix can be determined as follows:

$$A = \begin{pmatrix} a_{11} & a_{12} & a_{31} \\ a_{21} & a_{22} & a_{32} \\ a_{31} & a_{23} & a_{33} \end{pmatrix}$$

One important property to note is that when the machine transitions to another state, the sum of all transition probabilities, given the current state, must be equal to 1. In our example,  $a_{11} + a_{12} + a_{13} = 1$  yoki:

$$\sum_{i=1}^n a_{ij} = 1, \quad \forall i$$

The initial state of the Markov model (when the time step is t = 0) is denoted by p, which is a vector of size M. The sum of all probabilities must be equal to 1, that is:

$$\sum_{i=1}^n \pi_i = 1$$

During initialization, all cases can be assigned the same probability. In our example, we set the initial state to  $\pi = (\frac{1}{3} \quad \frac{1}{3} \quad \frac{1}{3})$ . In some cases, we can have  $\pi_i = 0$  because they (i) cannot be the initial state.

Markov chain

There are 4 main types of Markov models [12;13;19]. When a system is completely observable and autonomous, it is called the Markov chain. What we have learned so far is an example of a Markov chain. Thus, we can conclude that the Markov chain consists of the following parameters:

- M is the set of cases;
- A is the matrix of transition probabilities;
- p is the initial probability distribution.

If the probability of transition from any step to other steps is zero, this is fixed as a final state. Thus, when the system enters the final state, it never moves to the next step.

In a hidden Markov model, the state of the system is hidden (unknown), but at each time step  $t$ , the system in the state  $s(t)$  determines the observed/visible value  $v(t)$ . The diagram below shows the general outline of a Hidden Markov Model:

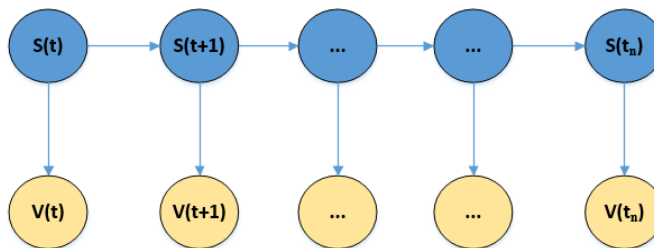


Figure 4. General scheme of Hidden Markov model

The following considerations apply to HMM:

We can define a certain sequence of visible/observable states as  $V^T = \{v(1), v(2) \dots v(T)\}$ ;

Let's denote our model as  $\theta$ . Therefore, for any state of  $s(t)$  there is a probability of the state  $v_k(t)$ .

Since we only have visible states,  $s(t)$  is not observable, and such model is called the Hidden Markov model.

Such network is called the Limited state machine.

If state machines are associated with transition probabilities, this is called the Markov network.

Biz ko‘rinadigan/kuzatiladigan holatlarning ma‘lum bir ketma-ketligini

$V^T = \{v(1), v(2) \dots v(T)\}$  sifatida belgilashimiz mumkin;

Probability of emission

Let's redefine our previous example. Suppose that depending on any 3 states ( $Q_1, Q_2, Q_3$ ), there are visible/observable symbols of  $V_1$  and  $V_2$ . An HMM model containing the latent state and characters in the model is as follows:

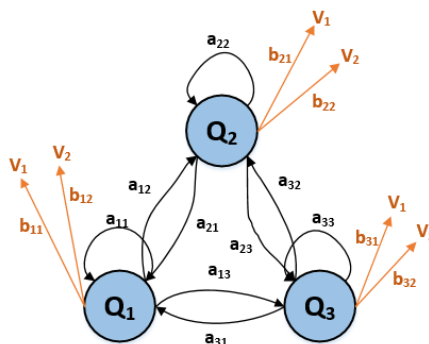


Figure 5. Emission probability in a hidden Markov model

The observables in the hidden Markov models are ( $V_1, V_2$ ), and one of them must be extracted from each case. The probability of emitting any character is known as the emission probability, commonly denoted  $b_{jk}$ . Mathematically, the probability of producing a symbol  $k$  given state  $j$  is defined as:

$$b_{jk} = p(v_k(t) | s_j(t))$$

The emission probability matrix is defined using an  $M \times C$  matrix:

$$B = \begin{pmatrix} b_{11} & b_{12} \\ b_{21} & b_{22} \\ b_{31} & b_{32} \end{pmatrix}$$

Like the transition probability, the sum of the emission probabilities is 1. That is,

$$\sum_{k=1}^C b_{jk} = 1, \quad \forall j$$

Various attributes/properties of Hidden Markov Model have been identified in the above comments. Prediction of subsequent states is the ultimate goal for any statistical model/algorithm. However, before making predictions, we need to solve two main problems in HMM.

Assessment problem;

A learning problem.

Decoding problem.

Assessment problem

First, we define the model ( $\theta$ ) as follows:

$$\theta \rightarrow s, v, a_{ik}, b_{jk}$$

Considering the model  $\theta$  and the sequence of observed signs ( $V^T$ ) we need to determine  $\theta$  probability of the generation of a certain sequence of states / signs generated (determined) based on the  $\theta$  model.

There can be many  $\{\theta_1, \theta_2 \dots \theta_n\}$  models. We need to find such  $p(V^T | \theta_i)$  and correctly classify the sequence  $V^T$  using Bayes rule  $V^T$ . In this case, the following equality is relevant:

$$p(\theta|V^T) = \frac{p(V^T|\theta)p(\theta)}{p(V^T)}$$

#### Learning problem

In general, HMM is an unsupervised machine learning process where different types of visible characters are known. But the number of hidden cases is unknown. The idea behind the HMM is to try different options and require more computation and processing time. Therefore, HMM uses study data and a certain number of hidden states to make faster, better predictions.

After determining the high-level structure of the model (the number of hidden and visible states), it is necessary to estimate transition ( $a_{ij}$ ) and emission ( $b_{jk}$ ) probabilities using training sequences. This is noted as the learning problem in science.

We use the evaluation problem to solve the learning problem. Therefore, it is important to understand how the estimation problem works. Also, in many cases, the Expectation Maximization (EM) algorithm is used to estimate the probability of transition ( $a_{ij}$ ) and emission ( $b_{jk}$ ) [23]. The learning problem is solved by the forward-backward or Baum-welch algorithm [24;25].

#### Decoding problem

Once the transition ( $a_{ij}$ ) and emission ( $b_{jk}$ ) probability estimates are determined, we can use the ( $\theta$ ) model to predict the WT hidden states that produced the VT visible sequence. The decoding problem is also known in science as the Viterbi algorithm [26]. After defining the concept of hidden Markov model and the main steps, it is possible to consider the issue of POS tagging of sentences in Uzbek using this model.

In the HMM above, the parts of speeches like NOUN, NUMERALS and VERBS are given as observable cases. But we are more interested in observing the sequence of words (hidden cases) of Uzbek sentences, mainly belonging to the parts of speech as NOUN and ADJECTIVE.

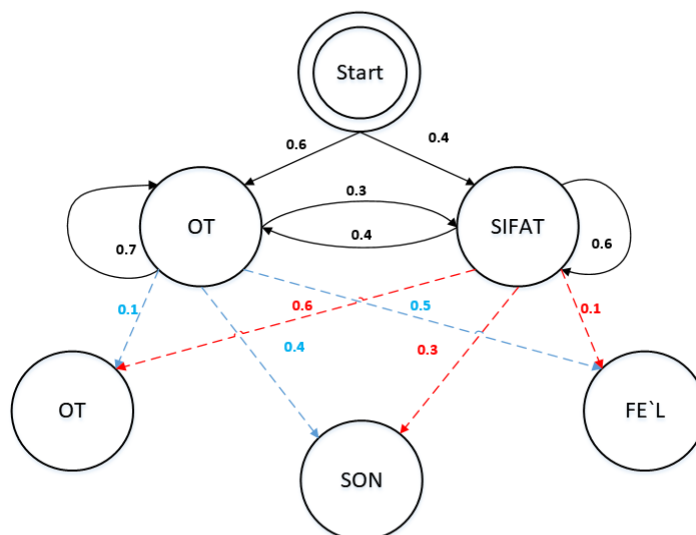


Figure 6. Prediction of POS using Hidden Markov Model (HMM).

B. Elov, Sh. Hamroyeva, O. Abdullayeva and M. Uzokova developed an alternative tagset based on the laws of the Uzbek language [27]. Table 1 below lists the Uzbek language POS tags in short form:

Table 2. List of Uzbek language POS tags (short version)

№	So'z turkumi	POS
1.	Ot	N
1.1.	Mavhum ot	NAbs
1.2.	Aniq ot	NCnc
1.3.	Atoqli ot	NP
1.4.	Turdosh ot	NC
1.5.	Sodda ot	ND
1.6.	Qo'shma ot	NCmp
1.7.	Juf ot	NCpl
1.8.	Takroriy ot	NRep
1.9.	Tub ot	ND0
1.10.	Yasama ot	ND1
2.	Sifat	JJ
2.1.	Sodda sifat	JJD
2.2.	Qo'shma sifat	JJCmp
2.3.	Juft sifat	JJCpl
2.4.	Takror sifat	JJRep
2.5.	Tub sifat	JJD0
2.6.	Yasama sifat	JJD1
3.	Fe'l	VB
3.1.	Mustaqil fe'l	VBI

3.2.	O'timli fe'l	VBTran (Transitive)
3.3.	O'timsiz fe'l	VBITran (Intransitive)
3.4.	Sodda fe'l	VBD
3.5.	Qo'shma fe'l	VBComp
3.6.	Juft fe'l	VBCpl
3.7.	Takror fe'l	VBRep
3.8.	Tub fe'l	VBD0
3.9.	Yasama fe'l	VBD1
3.10.	Ko'makchi fe'l	VBH
3.11.	Yetakchi fe'l	VBL
3.12.	To'liqsiz fe'l	VBNotF
4.	Son	NUM
4.1.	Sodda son	NUMD
4.2.	Murakkab son	NUMCmp
5.	Olmosh	P
5.1.	Kishilik olmosh	PP
5.2.	Ko'rsatish olmosh	PDem (Demosntrative)
5.3.	O'zlik olmosh	PRef (Reflexive)
5.4.	Gumon olmosh	PPred (Prediction)
5.5.	So'roq olmosh	PQues (Question)
5.6.	Sodda olmosh	PD
5.7.	Qo'shma olmosh	PCmp
5.8.	Juft olmosh	PCpl
5.9.	Takror olmosh	PREp
5.10.	Tub olmosh	PD0
5.11.	Yasama olmosh	PD1
6.	Ravish	RR
6.1.	Payt ravishi	RT
6.2.	O'rin ravishi	RL
6.3.	Holat ravishi	RCon (Condition)
6.4.	Miqdor-daraja ravishi	RMes (Measurment)
6.5.	Maqsad ravishi	RPur (Purpose)
6.6.	Sabab ravishi	RRs (Reason)
6.7.	Sodda ravish	RRD
6.8.	Qo'shma ravish	RRComp
6.9.	Juft ravish	RRCpl
6.10.	Takror ravish	RRRep
6.11.	Tub ravish	RRD0
6.12.	Yasama ravish	RRD1
7.	Bog'lovchi	C
7.1.	Sof bog'lovchi	C0
7.2.	Vazifadosh bog'lovchi	C1
7.3.	Teng bog'lovchi	CEq (Equeal)
7.4.	Ergashtiruvchi bog'lovchi	CS
8.	Ko'makchi	II
8.1.	Sof ko'makchi	II0
8.2.	Vazifadosh ko'makchi	II1
9.	Yuklama	Prt (Particle)
9.1.	So'z yuklama	PrtD
9.2.	Qo'shimchasimon yuklama	PrtComp
10.	Modal so'z	MD
11.	Undov so'z	UH
11.1.	His-hayajon undovlari	UHEm (Emotion)
11.2.	Buyruq-xitob undovlari	UHImp (Imperative)
12.	Taqlid so'zlar	IM (Imitative)

## Using HMM to develop POS Tagger

The words in this Uzbek language can be understood as observable cases (given to us in the data). POS tags that match words can be written as hidden states, so HMM can be used to evaluate POS tags. Note that we refer to observed states as "observations" and hidden states as "states". The Hidden Markov Model has the following components:

Table 3. Components of HMM

$Q = Q_1, Q_2, \dots, Q_n$	A group of N cases (Unnnoun)
$A = a_{11}, a_{12}, \dots, a_{n1} \dots a_{nn}$	is a transition matrix of probability, representing the probability of transition from each state $a_{ij} - i$ to another state $j$ .



	$\sum_{i=1}^n a_{ij} = 1, \quad \forall i$
$O = O_1, O_2, \dots, O_t$	$T$ is a sequence of observations ( $O$ ), all of which are taken from a special dictionary (source). $V = V_1, V_2, \dots, V_t$
$B = b_i(O_t)$	A sequence of observation of probabilities (called emission probabilities), all of which represent the probability that observation $O_t$ will occur from state $i$ .
$\pi = \pi_1, \pi_2, \dots, \pi_n$	The initial probability distribution for $S$ cases. $\pi_i$ means the probability that the Markov chain starts at a certain state $i$ . $\sum_{i=1}^n \pi_i = 1$

In that,

$Q$  is the set of possible labels;

$A$  - A matrix represents the probability that the current tag will be formed from previous tags, keeping the tag transition probability  $P(t_i|t_{i-1})$  Example: Calculation of  $A[\text{Verb}][O_t]$ :

$P(\text{Noun}|\text{Verb})$ : Count (Noun and Verb) / Count (Verb)

$O$  - the sequence of observation (for the words in the sentence);

$B$  -  $B$  is the emission probability representing the probability of  $P(w_i|t_i)$  that the given tag (supposing, a verb) is associated with a given word. For example, the outlier probability  $B[\text{Verb}][\text{boiler}]$  is calculated using the following formula:

$P(\text{pot}|\text{Verb})$ : Count (pot and Verb) / pot (Verb)

It should be noted that the values of the Count () function mentioned above are taken from the tagged corpus (data) of the Uzbek language to study the HMM model [16]. Matrices "A" and "B" in the HMM model for the sentence “Bu yoqdagi odamlar menga juda yoqdi” (“I really liked the people here”) look like this:

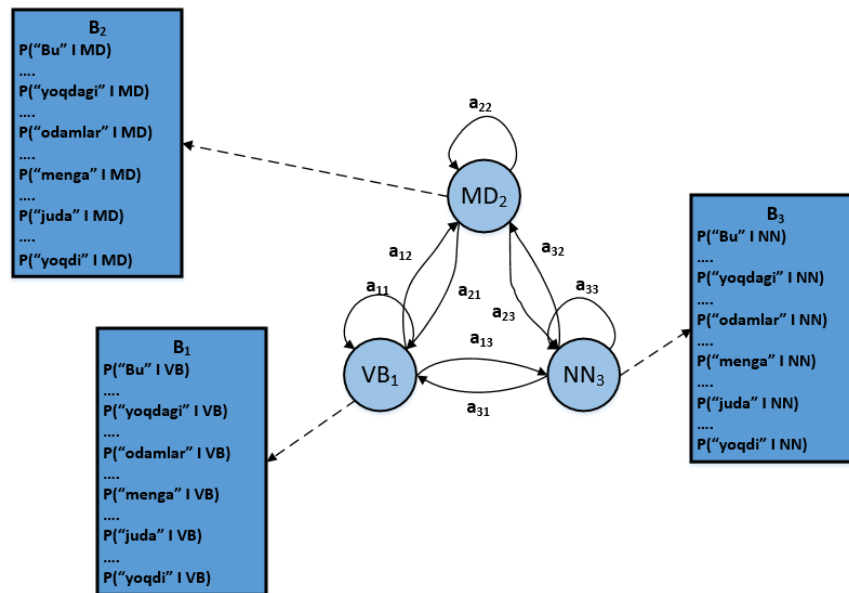


Figure 7. Transition and emission matrices in the HMM model

Here, the solid black lines in “A” represent the values of transition matrix, and the dotted black lines in "B" represent the emission matrix for a system with  $Q: \{MD, VB, NN\}$ .

Decoding using HMM

Suppose, an NMM be given, consisting of a transition and emission matrix and a sequence of observations  $O=O_1, O_2, \dots, O_t$  (words in corpus sentences). Given these values, we have to to determine the maximum possible sequence of states  $Q=Q_1, Q_2, \dots, Q_t$  (POS tags). In order to decode a sequence of tags using HMM, two main assumptions are made:

the probability of the appearance of the current word depends only on its own tag and does not depend on neighboring (3-gram) words and tags;

the probability of occurrence of a tag does not depend on the sequence of previous tags, but only on the previous tag (gram 2).

The pseudocode of the HMM algorithm is given below:

```

Hidden Markov Model Algorithm
Initialize:
σ ← k x N array
For s = 1 ... k: σ[1, s] ← π(s)Pr[O1|s]
X ← k x N array
Populate σ and X
For i = 2 ... N:
    
```

```

For s = 1 ... k:
xprev ← argmax {σ [i-1, x] Pr[x → s]}
                    x
X[i, s] ← xprev
σ[i, s] ← σ[i -1, xprev] Pr[x → s]Pr[Oi|s]
Reconstruct OptPath:
s ← argmax {σ[N, x]}
                    x
Optpath ← EmptyList
For j = N ... 1:
    Optpath ← s :: Optpath
    if j > 1: s ← X[j, s]
Return OptPath
    
```

Viterbi algorithm

The decoding process used for HMM is called Viterbi algorithm [26]. First, it is necessary to form a probability matrix called a grid. The columns in this matrix are the sequence of words in a sentence; lines: represent hidden states (all possible POS tags). The Viterbi grid, (Viterbi Algorithm) corresponding to the saying “Shirin nodir toshni o‘tga otdi” ( "Shirin threw the rare stone into the fire"), looks like this:

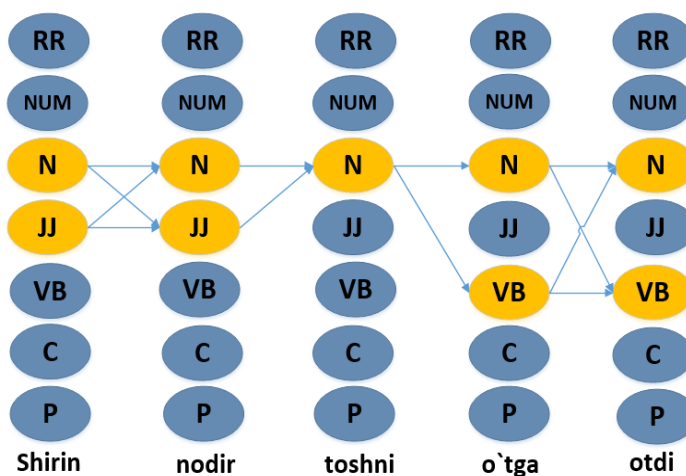


Figure 8. Viterbi grid/algorithm corresponding to this sentence

In the Viterbi grid/algorithm above, one can observe the columns corresponding to the words in the given sentence (Shirin nodir toshni o‘tga otdi) (Shirin threw the rare stone into the fire) and the rows representing all known POS tags (RR, NUM, N, JJ, VB, C, P). The data in this grid can be interpreted as follows:

Each cell (cell) of the grid is represented as  $V(t, j)$  (“t” represents a column and j represents a row, called the Viterbi path probability);

After the first t observations, the HMM calculates the probability of occurrence of state j (current POS tag) and determines/identifies the sequence of states with the highest probability;

The  $V(t, j)$  value is calculated based on the following formula:

$$V(t, j) = \max: V_{t-1} \cdot a(i, j) \cdot b(j, O_t)$$

Here:

$V_{t-1}$  – the probability of the Viterbi path corresponding to the previous steps.

$a(i, j)$  – the probability of transition from the previous state  $q_i$  to the current state  $q_j$  ;

$b(j, O_t)$  – the probability of observation state j taking into account of the current state of  $O_t$ .

Using the Viterbi algorithm, it is necessary to calculate the values of the transition matrix “A” and the emission matrix “B” of the HMM discussed above. In our example, using the bigram HMM model, the POS tags depend only on the previous tag. For the sentence “Shirin nodir toshni o‘tga otdi” (“Shirin threw the rare stone into the fire”), it is necessary to have the result in the following format:

Sweet/N; rare/JJ; stone/N; into the fire/N; shot/VB

Here, characters like N, JJ and VB are POS tags. To use HMM, it is necessary to form the necessary matrices calculated using the corpus of the Uzbek language (tables 4.1, 4.2) [28;29]:

Table 4.1. Statistical transition matrix (partial)

	N	JJ	P	RR	NUM	VB	C	PRT	MD	UH	IM	II
<S>	12	2	6	3	1	0	0	0	0	0	0	0
N	21	3	1	3	1	13	0	0	0	0	0	2
JJ	3	0	0	0	0	3	0	0	0	0	0	0
P	3	1	2	2	0	1	0	0	0	0	0	1
RR	3	1	1	1	0	2	0	0	0	0	0	0
NUM	2	0	0	0	0	0	0	0	0	0	0	0

VB	1	0	0	0	0	1	0	0	0	0	0	0	0
C	0	0	0	0	0	0	0	0	0	0	0	0	0
PRT	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	0	0	0	0	0	0	0	0	0	0	0	0	0
UH	0	0	0	0	0	0	0	0	0	0	0	0	0
IM	0	0	0	0	0	0	0	0	0	0	0	0	0
II	2	0	0	0	0	0	0	0	1	0	0	0	1

Table 4.2. A - transition matrix (partial)

	N	JJ	P	RR	NUM	VB	C	PRT	MD	UH	IM	II
<S>	0.2553	0.2857	0.6	0.34	0.5	0	0	0	0	0	0	0
N	0.4468	0.4286	0.1	0.34	0.5	0.65	0	0	0	0	0	0.5
JJ	0.0638	0	0	0	0	0.15	0	0	0	0	0	0
P	0.0638	0.1429	0.2	0.2222	0	0.05	0	0	0	0	0	0.25
RR	0.0638	0.1429	0.1	0.1111	0	0.1	0	0	0	0	0	0
NUM	0.0425	0	0	0	0	0	0	0	0	0	0	0
VB	0.0213	0	0	0	0	0.05	0	0	0	0	0	0
C	0	0	0	0	0	0	0	0	0	0	0	0
PRT	0	0	0	0	0	0	0	0	0	0	0	0
MD	0	0	0	0	0	0	0	0	0	0	0	0
UH	0	0	0	0	0	0	0	0	0	0	0	0
IM	0	0	0	0	0	0	0	0	0	0	0	0
II	0.0425	0	0	0	0	0	0	0	1	0	0	0.25

Table 5. B - emission matrix

	Shirin	nodir	toshni	o'tga	otdi
N	0.72	0.32	0.12	0.31	0.11
JJ	0.47	0.07	0	0	0
P	0	0	0	0	0
RR	0	0	0	0	0
VB	0	0	0	0.29	0.28
C	0	0	0	0	0
PRT	0	0	0	0	0
MD	0	0	0	0	0
UH	0	0	0	0	0
IM	0	0	0	0	0
II	0	0	0	0	0

There are 5 columns equivalent to our example. The first step is to determine the meanings of the word "Shirin". To do this, use P (POS tag | start) with the help of the transition matrix "A" (first row, initial\_probabilities).

$$V(1,1) = P(P | \text{Start}) * P(\text{'Shirin'} | P) = 0,6 * 0 = 0;$$

$$V(1,2) = P(C | \text{Start}) * P(\text{'Shirin'} | C) = 0 * 0 = 0;$$

$$V(1,3) = P(VB | \text{Start}) * P(\text{'Shirin'} | VB) = 0 * 0 = 0;$$

$$V(1,4) = P(JJ | \text{Start}) * P(\text{'Shirin'} | JJ) = 0.2857 * 0.47 = 0.1343;$$

$$V(1,5) = P(N | \text{Start}) * P(\text{'Shirin'} | N) = 0.2553 * 0.72 = 0.1838;$$

$$V(1,6) = P(NUM | \text{Start}) * P(\text{'Shirin'} | NUM) = 0.5 * 0 = 0;$$

$$V(1,7) = P(RR | \text{Start}) * P(\text{'Shirin'} | RR) = 0.34 * 0 = 0;$$

For the word "nodir" ("rare") we use the following formula:

$$V(t,j) = \max: V_{t-1} \cdot a(i,j) \cdot b(j, O_t)$$

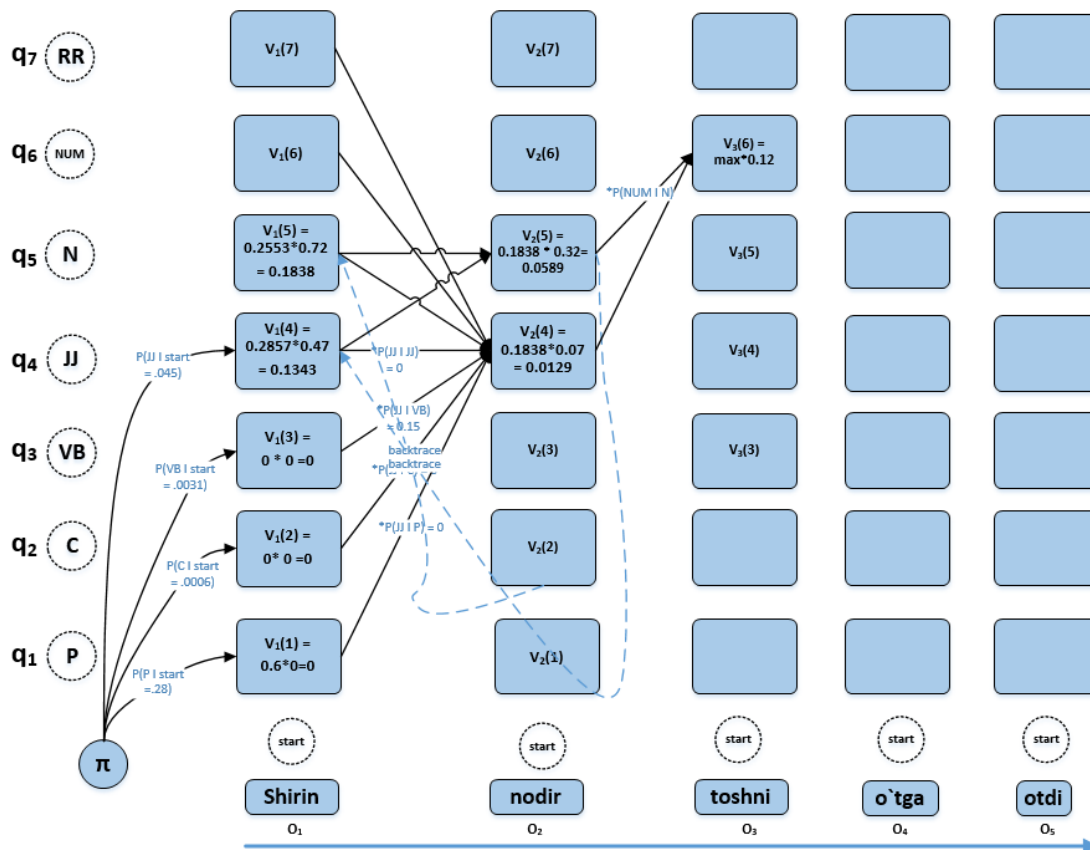


Figure 9. HMM model

However, the value of  $b(j, O_t)$  will have the same constant (invariant) for all calculations for that cell. So, to calculate value of  $max: V_{t-1} \cdot a(i, j) \cdot b(j, O_t)$  we have to multiply the  $V_{t-1} \cdot a(i, j)$  and  $b(j, O_t)$ . Here,

- i: previous tag;
- j: current tag.

Relying to the considerations above, it is necessary to calculate the value  $max: V_{t-1} \cdot a(i, j)$ , where j represents the current cell of the row (POS tag) in the column corresponding to the word "unique". Also, to avoid confusion, the value of  $V[j, t]$  can be interpreted as the value corresponding to the jth row and t-column in the Viterbi matrix.

Biroq  $b(j, O_t)$  qiymat ushbu katak uchun barcha hisoblar uchun doimiy bir xil qitmat (o'zgarmas)ga ega bo'ladi. Demak,  $max: V_{t-1} \cdot a(i, j) \cdot b(j, O_t)$  qiymatni hisoblash uchun  $V_{t-1} \cdot a(i, j)$  va  $b(j, O_t)$  qiymatni ko'paytirish lozim.

- Bu yerda
- i: oldingi teg;
- j: joriy teg.

Yuqoridagi mulohazalardan,  $max: V_{t-1} \cdot a(i, j)$  qiymatni hisoblash kerak bo'ladi. Bu yerda j "nodir" so'ziga mos ustunidagi joriy qator katakchasi (POS tegi)ni ifodalaydi. Shuningdek, chalkashmaslik uchun  $V[j, t]$  qiymatni Viterbi matritsasidagi j-satr va t-ustunga mos qiymat sifatida talqin qilinish mumkin.

Let's study  $j = 2$  (the case where POS is MD). To do this, we need to calculate the value of  $V(2,2)$ .  $max: V_1 = V(1,5) = 0.1838$

$$V(2,1) = 0; V(2,2) = 0; V(2,3) = 0; V(2,6) = 0; V(2,7) = 0;$$

$$V(2,4) = V(1,5) \cdot P(P | JJ) = 0.1838 \cdot 0.07 = 0.0129;$$

$$V(2,5) = V(1,5) \cdot P(P | N) = 0.1838 \cdot 0.32 = 0.0589;$$

It is necessary to calculate all values of  $V(i, j)$  according to the above method.

After all the cells of the matrix V are filled, we select the appropriate label for the column (word) to determine the maximum values in the grid. For example, N - POS is selected as a tag for the word "Shirin". And The Viterbi algorithm is given below:

Yuqorida keltirilgan usul bo'yicha barcha  $V(i, j)$  qiymatlarni hisoblash lozim.

Viterbi algorithm

function VITERBI (observations of len T, state-graph of len N) return best-path, path-prob

create a path probability matrix viterbi[N, T]

for each state s from 1 to N do

viterbi[s, 1] ←  $\pi_s \cdot bs(o_1)$

backpointer[s, 1] ← 0

for each time step t from 2 to T do

for each state s from 1 to N do

N

viterbi[s, t] ←  $max_{s'} viterbi[s', t-1] \cdot a_{s', s} \cdot bs(o_t)$

ishga tushurish bosqichi

$$s1=1$$

$$N$$

$$\text{backpointer}[s,1] \leftarrow \underset{s1=1}{\text{argmax}} \text{viterbi}[s1, t-1] * a_{s^1,s} * bs(o_t)$$

$$N$$

$$\text{bestpathprob} \leftarrow \underset{s=1}{\text{max}} \text{viterbi}[s, T] \quad \text{tugatish bosqichi}$$

$$N$$

$$\text{bestpathpointer} \leftarrow \underset{s=1}{\text{argmax}} \text{viterbi}[s, T] \quad \text{tugatish bosqichi}$$

$$\text{bestpath} \leftarrow \text{the path starting at state bestpathpointer, that follows backpointer[]} \text{ to states back in time}$$

$$\text{return bestpath, bestpathprob}$$

#### Summary

This article studied the problems of POS labeling in NLP using Hidden Markov Model and Markov Chains. POS tagging algorithms had been defined based on rules and stochastic POS tags. In addition, it was noted that the language corpus (data) should be automatically or manually POS-tagged for the POS tags of a given suggestion.

As an alternative approach to the frequency of words in a language corpus, context labels for individual words were cogitated, based on the n-gram approach to calculate the probability of occurrence of a sequence of labels. Using tag sequence probability and word frequency measurements the components of the hidden Markov model were described on the example of Uzbek lexical units. Moreover, calculations related to evident and latent states for calculating the necessary probabilities for POS tagging of Uzbek sentences using HMM were given with examples. The components of the hidden Markov model are described, using measurements of the probability of a sequence of tags and the frequency of words. The HMM matrix was decoded using the Viterbi algorithm, POS tagging of the Uzbek sentence was achieved, and the results were analyzed. Many NLP problems can be solved by executing POS tags using HMM and the Viterbi algorithm presented in this article.

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## PRINCIPLES AND METHODS OF TEACHING ENGLISH AS A FOREIGN LANGUAGE

### Abstract

This conceptual paper presents diverse approaches and strategies for preparing competent teachers who work with either English Language Learners (ELLs) or students who speak English as a Second Language (ESL). The pedagogical approaches discussed herein include practical and hands-on activities for teachers at any level. Bilingual learning improves ELL's cognitive development as well as their self-esteem. The paper outlines underlying principles for the best practices with an emphasis on ESL students and also to other learning situations and students. Teachers can modify their instructional methods to adjust ELL's learning needs. Specifically, even though the discussion is framed in the context of ESL students in U.S. classrooms, it is applicable to TEFL (Teaching English as a Foreign Language) environments in schools and other centers of learning.

**Key words:** English as Second Language (ESL), English Language Learner (ELL), Teaching English to Speakers of Other Languages (TESOL), bilingual learners, teaching strategies

**Introduction .** 1.1 Issues in Teaching English as a Second Language The increasingly diverse environment of today's classrooms provides a rich opportunity for teachers and students to engage in effective learning. With a growing number of English Language Learners worldwide, there is a critical need for general education and resource teachers to know how to effectively build and implement literacy programs that are inclusive of students' language and culture. Understanding that culture goes beyond the knowledge of ethnic attire, music, food, and language; it includes the total being, comprised of the totality of the student's background, heritage, ancestry, educational, political, and life. The importance of teaching ESL students is critical in the current climate with increasing accountability by way of student performance on standardized tests. ESL students are expected to be on grade level proficiency within three years and teachers are held accountable for their learning (Curtin, 2005).

There exist a variety of terms that have been used for non-native English speakers, ranging from LEP (Limited English Proficient), ESL students (English as a Second Language), Bilingual students and English Language Learners (ELL). For practical purposes, we use the term ESL students for a student whose mother tongue is not English. As educators, we understand that ESL students have to double their efforts in school, to not only learn new information but also learn the academic language of the school. Freeman and Freeman (2011, p.19) state, "ESLs face double the work of native English speakers. They must learn English, and they must learn academic content through English. In addition, they often live in neighborhoods where the schools are underfunded and are staffed by inexperienced teachers." On the same note, teachers of ESL students face double work of teaching core competencies enlisted in the curriculum to meet the benchmarks and teach English to non-native speakers. It is a double-whammy. While we realize that no two students are alike and that no two students have the same needs, there are commonalities among learners that help us approach our teaching in a more informed way. The paper proposes foundational principles and practices for teachers who work with ESL students in their classrooms.

### 1.2 School Culture and Educational Environment

It is important to consider how the culture of the school eases when a new ESL student enters into the classroom to create a sense of belonging. Using a framework of compare and contrast can be instructional and useful in learning about two cultures. There are commonalities and

differences in comparing different cultures. Reaching out to parents by using a few phrases in their native language while greeting them can instantly break down the social barriers between the teachers and the parents. Now with Google Translate, it can be easily done. Creating a ies.ccsenet.org International Education Studies Vol. 12, No. 7; 2019 50 welcoming climate for students new to the country and culture provides the first step in easing into a learning situation. Seating students next to another student who has a similar background can ease the jitters caused by an alien culture and language.

**Method.** This conceptual paper focuses on the description of pedagogical strategies stemming from a theoretical framework that has evolved out of second language learning research. Research on ESL/ELL strategies is based on the findings that building on learners' background by providing comprehensible input and multiple opportunities for interaction is the key to second language proficiency. These findings lead to the development of a set of strategies built on the framework of principles of learning the second language outlined below. Seven principles of second language learning have been identified as critical to successfully teaching ESL students.

- 1) Know your student and motivation to learn the second language
- 2) Create a welcoming classroom environment
- 3) Build Background Knowledge
- 4) Provide Comprehensible Input by building vocabulary
- 5) Include frequent opportunities for Interaction and Discussion
- 6) Use Multiple Modalities during instruction
- 7) Conduct ongoing review and assessment

These principles provide a basis for developing a broader theory for second language learning. Cummins (1980) discusses the context-embedded language and its effectiveness with ESL learners. For instance, repetition of classroom routines provides non-English speakers with meaningful language learning opportunities because the words and phrases that accompany such routines are constantly repeated within a concrete context. For instance, a word like 'lavatory' will become a part of their lexicon, if used by a teacher on a routine basis every time for a bathroom break. Using synonyms or rephrasing keywords differently reinforces meaning. Creating a low-stress environment necessary for students to feel ready to participate in a larger group setting

provides a less threatening environment for a student to take a risk. Established routines facilitate learning as students know what to expect and begin to thrive in that environment.

2.1 Know Your Student and Motivation to Learn the Second Language One of the most important things to do is to get to know your student you are sharing your classroom space and time with. Getting to know your student will go a long way in building a strong relationship and bonding with them. This knowledge will greatly help educators respond in an informed way as they work with their English language learners. It is one thing to read about English language learners and discuss theoretical models in the setting of a university classroom; it is another to work with the students directly and apply what teachers know. However, when teachers take the time to study each student carefully, they gain a new perspective on all their English learners. Knowing your student not only makes you a better teacher but makes the student a better learner. By knowing one learner, teachers can gain insight into commonalities among other learners that helps with effective teaching and learning. Using the Funds of Knowledge framework is a great place to start this process. Funds of knowledge are created by the out-of-school daily living experiences that students have in their families and communities. For instance, an ESL student may not be aware of the terminology used in mathematics in the classroom or textbook, such as ‘fractions’ or division but is aware of the concept in real-life. A teacher will incorporate real-life examples to incorporate such concepts in classroom instruction. Building connections with your students and their families aren’t always at the top of a teacher’s “to do” list, but it must be. Children with a strong home to school connections thrive at school and as preschool teachers; we can lay the foundation for a positive school experience for our students by making this a priority. Instead of a subject-centered, a student-centered classroom is more productive. Subject-oriented teachers tend to focus on learning the subject content, passing tests, doing worksheets rather than tuning in to their students. They usually engage in individual work rather than encouraging group work. Generally, novice teachers are unable to attempt more student-centered approaches because of discipline management issues. However, with prior instructional planning, one can overcome this issue. Differentiating instruction, by allowing students to choose how to display their own learning or how they want to address the tasks based on ability, provides for a student-centered approach. Research shows that motivation directly influences the proficiency levels of students in the target language (Wen, 1997). Motivation is considered one of the main determining factors in picking up a second language. When a teacher tries to know and learn about a student’s background, it makes a big difference. Student and family members come to see that they are valued by the school system when a teacher makes an attempt to say a phrase or just one word in the home language of the learner; it helps to break the ice. Just being able to say hello in another language is enough to make someone smile. A teacher’s attempt to make an effort to use your student’s language and a desire to connect with the other’s culture pays huge dividends for student learning and student achievement. Now with technology and Google translate, it has been made significantly easier to learn how to pronounce a word or a phrase in another language. A teacher is not expected to know multiple languages that various ESL learners speak. However, using a single word or a phrase in another language indicates teacher’s sensitivity and attitude towards speakers of other languages and that alone can make a huge difference in creating a student-friendly environment.

2.2 Create a Welcoming Classroom Environment An important step in helping ESL students succeed is building

their confidence and comfort level by making them feel welcome in the classroom. This pays great dividends in terms of academic success as they build positive relationships with their academic community, teacher, peer, paraprofessionals, resource teacher, and other classroom volunteers. Making the instructional classroom environment, welcoming and comfortable to students is critical in learning as it helps to build a relationship with ESL students. Let there be a sense of openness, students should perceive the teacher as caring and thoughtful that you care about them and want to be there for them. Some ways are to bring a student’s culture into the classroom by using visuals and pictures of student’s cultural tradition or festivals or foods with labels in both languages is a good start. Labeling items in the classroom in two or three languages benefits them visually. They come to see that their language, heritage, and culture is valued. It also allows for opportunities for them to share about their culture. Always be consistent and fair with all students. Grouping students with a respectable and trustworthy partner can help guide when the teacher is not available. This is beneficial not only for ESL student but also for the partner, as both are learning about each other’s culture and vocabulary, or when feasible, inviting a staff member from the school who speaks the student’s language to work with the student. Grouping or pairing students with friends that speak the same language greatly helps the ESL student in case they are not getting what the teacher says. Other students chime in to translate the assignment in the native language to assist them with directions. Technologies like Remind and Class Dojo all have the ability to translate material for teachers, and teachers can print, email, or text the information they need to send to their parents as necessary. Keeping instructions simple and clear is helpful. Posting the visual colorful class schedule in a prominent place in the room is helpful. Also, reviewing it daily as a set routine will reinforce it. Learn to say their name correctly. It makes a monumental difference. Students see that you not only respect their ideas, thoughts and knowledge but most of all their identity, who they are, represented by their name. Teachers can relate to their students by playing the music from the student’s culture during center time or transitional times or by displaying books from the country/culture of students in the classroom. Remember, students follow the tone set by the teacher in the classroom. Students observe not only the verbal directives and interactions but the non-verbal cues from the teacher. Finally, during formal or informal oral presentations or conversations, teachers may correct the content of what ESL students say, if necessary rather than how they say in terms of pronunciation or grammar. Constant interruptions or corrections will deter students from speaking up and sharing their ideas .

### 2.3 Building Background Knowledge

There is a virtual consensus that background knowledge is essential for reading comprehension. Effective teaching takes students from where they are and leads them to a higher level of understanding (Krashen, 1985; Vygotsky, 1978). All learners have prior knowledge, gained from schooling and life experiences and teachers can build on those experiences. Reading becomes especially difficult when children are not able to comprehend because they are not familiar with a topic or theme that is being taught. Activating prior knowledge and building new background knowledge for ESL students is a crucial component of literacy development. The more readers know about a topic, the easier it is to read a text, understand it, and retain the information. Previous studies have shown that background knowledge plays an enormous role in reading comprehension. When introducing a topic or new subject to students, research shows that if we discuss the topic and concepts prior to teaching it, students are better able to relate to the topic. Sometimes it is called,



domain-specific knowledge or topical knowledge. Without such prior knowledge, it becomes more difficult to construct meaning from the text for ESL. Since children come from varied backgrounds and cultures, through oral and written activities, teachers can draw out from students what they already know about the subject. Their understanding is tinted by a cultural filter they come from. Neuman et al. (n.d.) online mention that, "Even the most immediate oral language exchanges, like "What do you say?" to a young child who just received some Halloween candy, require some level of inferencing. From infancy on, oral language comprehension requires children to actively construct meaning by supplying missing knowledge and making inferences. This is an example of cultural specific usage of language requiring familiarity with Halloween and the distribution of candies to children. If you have a specific set of vocabulary words that you plan to teach, you can pre-assess students' familiarity with the words prior to teaching the lesson. Neuman et al. (n.d.) have used a basic chart that lists the word and options on a knowledge continuum. Students can fill it in prior to the lesson and after the lesson has been taught to check where they fall on the continuum.

1) Prepare students with the upcoming topic by relating it to their current experiences. For instance, while introducing a topic on photosynthesis, talk about how the food is made for us to eat. Discuss how food is prepared in different cultures represented by students in the class. Then connect it to how do plants make their own food to survive. They do it through a process of photosynthesis, where 'photo' means light and synthesis means to bring together. Thus, photosynthesis is the process by which plants prepare their own food using carbon dioxide and water in the presence of sunlight. Breaking the word into smaller units of meaning assists ESL learners with the understanding meaning of root words.

2) Use anticipation guides: An Anticipation Guide is a strategy that is used before reading to activate students' prior knowledge and build curiosity about a new topic. Before reading a selection, students respond to several statements that challenge or support their preconceived ideas about key concepts in the text. Then check for their understanding, after the topic has been presented in terms of how their thinking has been changed or confirmed based on the new information. For instance, for teaching a concept like photosynthesis to younger students, one can generate statements such as do plants need food? Can plants cook their own food without cooking pots and pans? Can plants make food without air? Will plants need sunlight to make their food?

2.4 Granting Obvious Input by Building Vocabulary  
An effective teacher considers the unique characteristics and cultural aspects of the ESL students. The teacher is aware of the student's needs and makes an effort to make her verbal communication more understandable based on the student's linguistic needs. Making the message understandable for students is referred to as Comprehensible Input. ESL students need to work on making meaning of what they are doing all the time. Increasing participation and engagement rates of ESL students is done by increasing comprehensible input. Clear enunciation and repetition, as well as, rephrasing concepts and words help tremendously if the communication is at students' proficiency level. If teachers find that the instructional text that they are using in the classroom is difficult for ESL students to follow, then they can use technologies like 'Rewordify.com', which provide free online service that improves reading, learning, and teaching by simplifying the complexity of the text. Insufficient background knowledge of the target culture may also hinder students in getting the meaning of the text. For instance, a text-passage on "Groundhog Day" will mean little to a student from another country and culture in the US without the

appropriate background knowledge. It is a popular tradition celebrated in the U.S. on February 2nd, based on the Pennsylvania Dutch superstition that if a groundhog emerging from its burrow on this [ies.ccsenet.org](http://ies.ccsenet.org) International Education Studies Vol. 12, No. 7; 2019 53 day sees its shadow, then winter will persist for 6 more weeks. This is part of cultural literacy and building prior knowledge before introducing the topic. Before reading or introducing a specific text to ESL students in the content areas, one needs to provide time and space to acclimate to the learning that they are expected to partake in. Primarily, students need to understand the vocabulary that will be utilized to comprehend and respond to the material found in the text, passage, book, or even just conversations that occur during their partner or group work. Further, students need to understand where they are expected to be going with the work, in other words, students need to understand the structure of the material presented, and how they can access the learning during the upcoming lesson. ESL students need goals that are tailored to them, and they need to be able to understand those goals. In summation, the lesson's foundations must be built in order to create a significant enough scaffold to support interactions and learning during the assignments. Some teachers pre-teach their students specific words that they think students will struggle with on the test, for instance, [navel].

The best ways to assist students during informal classroom tests is by reading test questions aloud, explaining definitions of words, or even acting out the text. This provides additional meaning to the learners and helps with the comprehension of the task. Some instructors give students a visual to go with the text, and they usually know the correct answer when they can see it.

Cognates are very helpful. Cognates are words in the English language (target language) that look and mean the same as a word in a student's first language. Usually, they sound similar in the two languages. For example, [gratitude] in English means the same as [gratitud] in Spanish. In a similar fashion, one can also bring students' awareness to false-cognates, such as [exit] and [exito]; in Spanish 'exito' means 'success'. Similarly, for the English word [soap], the Spanish word is [sopa] which means 'soup', thus the two words look and sound very close but they are semantically very different. These are classed as 'false friends' or false cognates. Students could compile a list of words in their reading journals that they believe to be cognates and false cognates. At the end of each reading session after a given week, they could spend five minutes checking with a partner in a Spanish language dictionary (if the focus is on Spanish cognates) to check meanings. Selected words can then be placed on a board in the classroom. Word wall is another effective strategy for building vocabulary as it encompasses speaking, listening, and reading skills, in order to further students' comprehension of the target vocabulary. A Word Wall is an interactive, ongoing display on the wall that shows words and/or parts of words, used to teach concepts, spelling, reading, writing skills. These words provide support and references for students during learning. One could begin by creating multiple word walls. At the beginning of the year, the classroom could simply have a cognates board, which students would fill in as a group during the first week. This activity promotes a learning community by helping students tap into their background knowledge around their current language mastery and can feel proud of their accomplishment. Over the course of the time, students could add many more cognates that they find, expanding further the list of words that they have in their growing receptive vocabularies. As teachers introduce content during their core subject classes, they could begin to add word walls for each of their subject areas, social studies, science, math, geography, as academic vocabulary wall.

For vocabulary growth, teachers can use different methods like displaying theme pictures or using handouts according to the students' levels. And these will grow up to academic level gradually. The learners should keep up to writing new vocabulary and learn. For this the students can use special journals to list the words there and they can be assigned new words every week which they can add.

**Results and Discussions.** With an ever-increasing number of ESL students, it is imperative that teachers or educators become aware of effective ESL teaching strategies to help students learn the target language. We have discussed strategies that address different learning styles via various modalities. First, modeling what students are expected to do when given a new task or a skill is greatly helpful to them. Modeling, rather than simply telling the students what to do, promotes stronger learning and higher self-confidence. Similarly, speaking slowly and clearly assists student comprehension. Providing wait time affords them an opportunity to think and to process before responding.

All instructions must be explicit and clear. Creating a low-stress environment is necessary for students to feel ready to participate in a large group settings; it also provides a less threatening environment that facilitate in risk-taking by the students. Established routines facilitate learning, as students know what to expect and begin to thrive in that environment. Learning another language is a need, not disability. With these principles in mind the teacher can play a great role in teaching target language an in students' success.

**Conclusion.** As the classrooms become manifold, educators need to consider the needs of ESL students by providing them the opportunities to learn and creating a shared learning environment. All discussed methods and steps will give a productivity in students' success if they are used right. As Samuel Natale said "Teachers teach someone something, in that order" we the educators always have concrete path of teaching anything.

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## OROL DENGIZI QURIGAN TUBI QOLDIQ DENGIZ BO'YI YARIM GEDRAMORF TUPROQLARNING SHO'RLANISH VA ISHQORLANISH XOSSALARINING O'ZGARISHI

Annotatsiya

Ushbu maqolada Orol dengizining qurigan tubi atrofida tarqalgan tuproqlarining sho'rlanish va ishqorlanish darajalari o'rganilgan va yoritilib berilgan. Jumladan, Umumiy ishqoriylik 0,012-0,075% atrofida, xlor ionlari 0,077-0,114%, sulfat ionlari 0,172-0,183% atrofida ekanligi aniqlangan. Kationlar bo'yicha ham analiz natijalari olingan va tahlil qilingan.

**Kalit so'zlar:** Sho'rlangan tuproqlar, gedramorf, umumiy ishqorlanish, anionlar miqdori, kationlar, degradatsiya, sho'rlanish darajalari.

**Kirish.** Orol dengizining yaqin o'tmishda tezlik bilan qurishi dengiz tubining katta maydoni ochilib qolishi va dengiz tubiga cho'kib qolgan ko'plab zararli tuzlarning yer yuzasiga chiqib qolishiga sabab bo'ldi. Yer yuzasiga chiqib qolgan tuzlarning katta qismi shamol ta'sirida migratsiya qilib unumdorlik xossalari yaxshi bo'lgan turli yerlarga kelib tushishi natijasida tuproqlarni sho'rlantirmoqda.

**Mavzuga oid adabiyotlar tahlili.** Orol dengizining qurishi tuproq eroziyasi va o'simlik qoplamining o'zgarishi aholining salomatligi va hayotiga jiddiy xavf tug'dirdi [17, 18, 19]. Bazi tadqiqotlar shuni ko'rsatdiki, suvning uzoq vaqt davomida kamayishi Orol dengizi qurigan tubida tuproq resurslarining doimiy ravishda yomonlashib borishiga olib keldi. Tuz, qum bo'ronlari va suv kelish hajmi qisqarishi, cho'llanishning kuchayishi 2019 yilgacha o'simliklar qoplamining 40% ni yo'q qildi [20, 21, 22, 23, 24]. Orol dengizining qurishi global iqlim o'zgarishi va 1960 yildan boshlab suv resurslaridan tartibsiz foydalanish, drenaj kollektorlarning yaxshi ishlamasligi va mintaqada sug'orma dexqonchilik faoliyatini kengayishi oqibatida shakllandi, natijada suv sathining pasayishi va tuz miqdorining ortishi vujudga keldi [5, 6, 10, 11], shuningdek, gidromorf jarayondan avtomorf jarayonga o'tish jarayoni tezlashdi, cho'llanish faollashdi. Orol dengizining qurishi natijasida ochilgan qumliklarda tuproq xosil bo'lish jarayoni boshlandi [12]. Orol dengizining keltirib chiqargan sho'rlanish muammosi Xorazm viloyati tuproqlarida ham uchraydi, ularni geoaxborot texnologiyalari asosida baholash qishloq xo'jaligiga ko'p imkoniyatlar yaratadi [13]. Orol dengizining qurishi Xorazm viloyatida sho'rlanishning ortishi va uni yuvishda suv sarfini ortishiga olib keldi [14]. Orol dengizi qurishi natijasida tuproqda suvda eruvchi tuzlar miqdori 0,4-0,5 g/l dan 71,3 g/l ko'rsatkichiga yetgan, tadqiqotlarni ko'rsatishicha tuproqda tuzlarning ortishi bilan mikroorganizmlarning miqdori kamayishi kuzatilgan [15]. Janubiy Orol dengizi atrofida o'simlik dunyosining kamayishi kuzatilgan, shu bois o'simlik dunyosini monitoring qilish va ularni ko'paytirish ekologik barqarorlikni ta'minlashga xizmat qiladi [16].

Tuproqning sho'rlanishi yerlarning degradatsiyasining asosiy turi bo'lib, o'tgan bir necha o'n yilliklar davomida juda muhim masala bo'lib kelmoqda [1, 2]. Dunyo miqyosida taxminan 1 milliard gektar tuproqlar turli xil tuzlar ta'sirida sho'rlanmoqda, bunday yerlarning aksariyati qurg'oqchil va yarim qurg'oqchil hududlarda uchraydi [3]. Orol dengizi

qurishi natijasida tuproqda suvda eruvchi tuzlar miqdori 04-05 g/l dan 71,3 g/l ko'rsatkichiga yetgan [4]. Orol dengizi fojiasi antropogen faollikka olib kelgan eng muhim omil ekanligini ta'kidladilar [5, 6, 7]. Oqimning qisqarishi asosan sug'orish bilan bog'liq bo'lishi natijasida Orol dengizi yuzasida sezilarli o'zgarishlar yuz bergan [8] Amudaryo va Sirdaryo daryolarida O'zbekistonda 52%, Turkmanistonda 20%, Tojikistonda 11%, Qozog'istonda 10% suv resurslari olingan va sug'orma dehqonchilik uchun ishlatilgan [9].

**Tadqiqot obekti va uslublari.** Tadqiqotlar Orol dengizining qurigan janubiy qismi (1-kesma), Mo'ynoq tumani, Shag'irli ovuli hududi tuproqlari.

Urganiladigan ikkinchi hudud (2-kesma) Orol dengizining qurigan janubiy qismi Mo'ynoq tumani, Aral ovuli hududidagi tuproqlari. Tuproq namunalari olish, saqlash, laboratoriya tajribalar o'tkazish GOST:17.4.3.01-83, suvli so'rim, pH-muhit GOST 26423-85 Davlatlararo standarti asosida bajarildi.

**Tadqiqot natijalari.** Tuproq tarkibidagi tuzlar miqdorini aniqlash orqali turli daraja va tipdagi tuzlar miqdorini bilish muhim hisoblanadi. Ma'lumki Orol dengizi tubi tuproqlarida tuzlarning to'planishi va sho'rlanish miqdorining oshishida asosiy sabablardan biri Orol dengiziga oqib kelib quyiladigan Amudaryo suvlari hisoblanadi. O'tgan asr davomida yerlarni kengaytirish va sho'rlangan tuproqlar holatini yaxshilash maqsadida sho'r yuvish, drenaj va kallektor zovurlar qazish ishlari jadallik bilan olib borilgan. Buning natijasida juda ko'plab yerlar o'zlashtirilgan. Ammo, suvda erigan turli xildagi tuzlarning katta miqdori sho'r yuvish orqali zovurlarga ajralib chiqqan va mana shu suvlar to'g'ridan to'g'ri Amudaryoga qo'shib yuborilgan. Bu jarayon uzoq yillar qaytarilishi oqibatida daryo suvi sho'rlanib tarkibida suvda erigan tuzlar miqdori oshib boravergan. Orol dengiziga qo'shib turgan suvlarning 80-90% Amudaryo suvlarini tashkil qilgan. Bu esa o'z navbatida Orol dengizining vaqtlar o'tib sekinlik bilan tuzlar ko'payishiga sabab bo'lgan. Orol dengizining vaqtlar o'tishi bilan dengiz suvining ortga chekinishi natijasida suv ostidagi ko'plab zararli moddalar yer ustiga chiqib qolgan. Shu jumladan, turli miqdordagi tuzlar ham yuzaga chiqib qolgan. Ko'plab adabiyotlardan ma'lumki Amudaryo deltasida tuzlar tarkibining ko'p qismini xlorid sulfatli tuzlar hosil qiladi.

Tuproqlarning sho'rlanish holatini aniqlash juda muhim hisoblanadi. Shu munosabatdan biz ham tajriba maydonimiz tuproqlarining minerallashganlik miqdorini

aniqlash maqsadida tuproq kesmasi qazib turli morfologik xossa xususiyatlariga qarab qatlamlarga ajratib namunalar olindi. Olingan namunalar laboratoriya sharoitida davlat

standartlaridan o'tgan uslublardan foydalanib suvli so'rimlar orqali aniqlab tahlil qilindi (1-jadval).

1-jadval

## Tadqiqot hudud tuproqlarining suvda oson eruvchi tuzlar miqdori, % hisobida sho'rlanish tipi va darajasi

Kesma, №	Qatlam qalinligi, sm	Quruq qoldiq	C O <sub>3</sub>	HCO <sub>3</sub>	Cl <sup>-</sup>	SO <sub>4</sub> <sup>-</sup>	Ca <sup>++</sup>	Mg <sup>++</sup>	Na <sup>+</sup>	Sho'rlanish		
										Tipi	Darajasi	
1	Mo'ynoq tumani, Shag'irli ovuli hududidagi tuproqlar											
	0-10	0,498	-	0,01	0,114	0,183	0,025	0,008	0,081	x.s	kuchsiz sho'rlangan	
	10-25	0,415	-	0,012	0,077	0,172	0,022	0,012	0,059	x.s	kuchsiz sho'rlangan	
	25-60	0,257	-	0,011	0,029	0,127	0,024	0,018	0,015	x.s	kuchsiz sho'rlangan	
	60-85	0,182	-	0,007	0,018	0,093	0,036	0,007	0,003	s	sho'rlanmag an	
	85-110	0,297	-	0,016	0,035	0,146	0,042	0,021	0,007	x.s	kuchsiz sho'rlangan	
	110-145	0,173	-	0,012	0,024	0,074	0,021	0,006	0,014	x.s	sho'rlanmag an	
	145-170	0,145	-	0,014	0,014	0,063	0,018	0,005	0,010	x.s	sho'rlanmag an	
170-210	0,126	-	0,007	0,008	0,049	0,016	0,003	0,005	s	sho'rlanmag an		
2	Mo'ynoq tumani, Aral ovuli hududidagi tuproqlar											
	0 - 24	0,513	-	0,021	0,123	0,087	0,135	0,054	0,054	x.s	kuchsiz sho'rlangan	
	24 - 70	0,624	-	0,026	0,074	0,154	0,147	0,048	0,083	x	kuchsiz sho'rlangan	
	70 - 110	1,109	-	0,075	0,197	0,263	0,193	0,045	0,153	x.s	O'rtacha sho'rlangan	
110 - 160	0,727	-	0,034	0,148	0,142	0,168	0,052	0,127	x.s	kuchsiz sho'rlangan		

Olingan namunalarni tahlil qiladigan bo'lsak unga ko'ra, Mo'ynoq tumani shag'irli ovuli orol dengizi qurigan tubi 1-kesma tuproqlarida 0-10 sm qatlamda umumiy quruq qoldiq miqdori 0,498% ni tashkil etdi. Umumiy ishqoriylik bo'yicha HCO<sub>3</sub> miqdori 0,012%, nisbiy ishqoriylik kesma bo'yicha CO<sub>3</sub> hech qaysi qatlamda aniqlanmadi miqdori. Ushbu qatlamda tarqalgan anionlardan Cl<sup>-</sup> 0,077%, SO<sub>4</sub><sup>-</sup> 0,172% ni tashkil qildi. Kationlar miqdori bo'yicha, Ca<sup>++</sup> 0,022%, Mg<sup>++</sup> 0,012% va Na<sup>+</sup> 0,059% da ekanligi aniqlandi. Sho'rlanish darajasi kuchsiz sho'rlangan va sho'rlanish tipiga ko'ra xlor va sulfat anionlari ustunlik qilib xlor sulfatli (x.s) tipdagiligi aniqlandi.

Keyingi 10-25 sm qatlamda umumiy quruq qoldiq miqdori 0,415% ni tashkil etdi. Umumiy ishqoriylik bo'yicha HCO<sub>3</sub> miqdori 0,01% ni tashkil etdi. Ushbu qatlada tarqalgan anionlardan Cl<sup>-</sup> 0,114%, SO<sub>4</sub><sup>-</sup> 0,183% ni tashkil qildi. Kationlar miqdori bo'yicha, Ca<sup>++</sup> 0,025%, Mg<sup>++</sup> 0,008% va Na<sup>+</sup> 0,081% da ekanligi aniqlandi. Sho'rlanish darajasi kuchsiz sho'rlangan va sho'rlanish tipiga ko'ra xlor va sulfat anionlari ustunlik qilib xlor sulfatli (x.s) tipdagiligi kuzatildi. Qatlam o'zgarishi bo'yicha 25-60 sm da umumiy quruq qoldiq miqdori 0,257 ni tashkil etdi. Umumiy ishqoriylik bo'yicha HCO<sub>3</sub> miqdori 0,011% ni tashkil etdi. Ushbu qatlada tarqalgan anionlardan Cl<sup>-</sup> 0,029%, SO<sub>4</sub><sup>-</sup> 0,127% ni tashkil qildi. Kationlar miqdori bo'yicha, Ca<sup>++</sup> 0,024%, Mg<sup>++</sup> 0,018% va Na<sup>+</sup> 0,015% da ekanligi aniqlandi. Sho'rlanish darajasi kuchsiz sho'rlangan va sho'rlanish tipiga ko'ra xlor va sulfat anionlari ustunlik qilib xlor sulfatli (x.s) tipdagiligi aniqlandi. Qolgan qatlamlar bo'yicha kation va anionlar

miqdori o'zgarishi 60-210 sm larda turlicha natija olingan. Unga ko'ra, Anionlar bo'yicha umumiy ishqoriylik HCO<sub>3</sub> 0,007-0,007%, Cl<sup>-</sup> 0,008-0,035%, SO<sub>4</sub><sup>-</sup> 0,074-0,146% oralig'ida tebrandi. Kationlar miqdori Ca<sup>++</sup> 0,036-0,016%, Mg<sup>++</sup> 0,021-0,003% va Na<sup>+</sup> 0,003-0,014% orasida farqlandi. Sho'rlanish darajasi 60-85 va 110-210 sm qatlamlarda sho'rlanmagan ekanligi va sho'rlanish tipiga ko'ra 60-85 hamda 170-210 sm larda sulfatli tipda ekanligi ma'lum bo'ldi. Qolgan qatlamlarda xlor sulfatli (x.s) tip ustunlik qilganlik kuzatildi.

Tadqiqot maydon 2-kesmasi Mo'ynoq tumani, Aral ovuli tuproqlari minerallashtirish holati bo'yicha tahlil qilganda, dastlabki 0-24 sm qatlamdagi quruq qoldiq 1-kesmadagi 0-210 sm qatlamdan yuqori ekanligi aniqlanib 0,513-1,109% oralig'ida tebrandi. Anionlar bo'yicha tarqalishi, umumiy ishqoriylik HCO<sub>3</sub> 0,021-0,075%, Cl<sup>-</sup> 0,074-0,197%, SO<sub>4</sub><sup>-</sup> 0,087-0,263% oralig'ida tebrandi. Kationlar miqdori Ca<sup>++</sup> 0,135-0,193%, Mg<sup>++</sup> 0,045-0,054% va Na<sup>+</sup> 0,054-0,153% orasida farqlandi. Bu qatlamlarda sho'rlanish darajasi 1-kesma tuproqlaridan farq qilib, 70 - 110 sm qatlamda ortacha sho'rlangan bo'lib, qolgan qatlamlarda kuchsiz sho'rlangandir. Sho'rlanish tipiga ko'ra 24 - 70 sm qatlamda xlorli (x) tipda ekanligi va qolgan qatlamlarda xlor sulfatli (x.s) tip ustunlik qilganligi ma'lum bo'ldi. Mo'ynoq tumani Orol dengizining qurigan tubidagi ilmiy izlanishlar olib borilayotgan maydon tuproqlarining singdirish sig'imi va asoslar ko'rsatkichlari yuqoridagi suvli so'rim natijalari asosida hisoblanib chiqildi (2-jadval).

## Tadqiqot hudud tuproqlarining singdirish sig'imi va asoslar yig'indisi

Kesma, №	Qatlam qalinligi, sm	Ca <sup>++</sup>	Mg <sup>++</sup>	K <sup>+</sup>	Na <sup>+</sup>	Singdirilgan asoslar yig'indisi,mg/ekv	Ca <sup>+</sup>	Mg <sup>++</sup>	K <sup>+</sup>	Na <sup>+</sup>
		mg/ekv								
1	Mo'ynoq tumani, Shag'irli ovuli hududidagi tuproqlar									
	0-10	1,225	0,66	0,69	3,52	6,10	20,09	10,79	11,35	57,76
	10-25	1,12	0,99	0,50	2,56	5,17	21,66	19,08	9,74	49,52
	25-60	1,2	1,48	0,13	0,64	3,45	34,83	42,97	3,65	18,55
	60-85	1,8	0,58	0,02	0,12	2,52	71,39	22,83	0,95	4,83
	85-110	2,105	1,73	0,06	0,30	4,20	50,17	41,16	1,43	7,25
	110-145	1,05	0,49	0,12	0,61	2,27	46,22	21,72	5,27	26,79
	145-170	0,9	0,41	0,08	0,42	1,81	49,71	22,71	4,53	23,05
170-210	0,8	0,25	0,04	0,21	1,30	61,71	19,03	3,16	16,10	
2	Mo'ynoq tumani, Aral ovuli hududidagi tuproqlar									
	0 - 24	6,75	4,44	0,78	1,57	13,54	49,86	32,80	5,78	11,56
	24 - 70	7,35	3,95	1,20	2,41	14,91	49,31	26,48	8,07	16,14
	70 - 110	8,4	4,28	1,84	3,68	18,20	46,16	23,50	10,11	20,23
	110 - 160	9,65	3,70	2,22	4,43	20,00	48,24	18,50	11,09	22,17

Tuproqlarda singdirilgan asoslar yig'indisi 1-kesma yuqori qatlamlarda 100 gr tuproqda 2,52-6,10 mg/ekv orasida o'zgarib turganligi aniqlandi. O'rta va quyi qatlamlarda 1,30-420 mg/ekv miqdorida tebranib turdi. Singdirilgan kationlardan kaltsiy va magniy asosiy o'rin egallab, kaltsiy miqdori 20,09-71,39% miqdorda o'zgarganligi aniqlandi. Natriy kationi bo'yicha 4,83-57,76% orasida o'ynab o'zgardi. Magniy va Kaliy kationlari esa nisbatan kam bo'lib, magniy 10,79-41,16% va kaliy 0,95-11,35% orasida tebranib o'zgardi.

Tuproqlarda singdirilgan asoslar yig'indisi 2-kesma qatlamlarda 100 gr tuproqda 13,54-20,00 mg/ekv orasida o'zgarib turganligi aniqlandi. Singdirilgan kationlardan kaltsiy va natriy asosiy o'rin egallab, kaltsiy miqdori 46,16-49,86% miqdorda o'zgarganligi aniqlandi. magniy kationi bo'yicha

18,50-32,80% orasida o'ynab o'zgardi. Natriy va Kaliy kationlari esa nisbatan kam bo'lib, kaliy 5,78-11,09% va natriy 11,56-22,17% orasida tebranib o'zgardi.

O'simlik o'sish va rivojlanishida hamda oziq elementlarni o'zlashtirishda ayniqsa tuproqdagi oziq elementlarning harakatlanishi, qo'llanilgan o'g'itlarning samaradorligini oshirishda pH muhiti muhim omil hisoblanadi. pH muhitini aniqlashda oddiy suvda va KCl eritmasida aniqlanadi. Oddiy disstellangan suvda aniqlanganda ayni vaqttdagi tuproq pH muhitini namoyon qiladi, KCl eritmasidagi ko'rilgan miqdori maksimal pH muhit holati nechchi qiymatgacha borishini namoyon qiladi. Tadqiqot hudud tuproqlarning pH muhiti aniqlanib ko'rildi (3-jadval).

## Tadqiqot hudud tuproqlarning pH muhit qiymati

Ko'rsatgich	Qatlam qalinligi						
	0-10	10-25	25-85	85-110	110-145	145-170	170-210
Mo'ynoq tumani, Shag'irli ovuli hududidagi tuproqlar							
H <sub>2</sub> O	7.55	7.35	7.66	7.65	7.76	7.60	7.81
KCl	8.16	8.05	8.23	8.23	8.27	8.20	8.32
Mo'ynoq tumani, Aral ovuli hududidagi tuproqlar							
	0 - 24	24 - 70	70 - 110	110 - 160			
H <sub>2</sub> O	7.69	7.78	7.89	7.73			
KCl	8.28	8.33	8.37	8.22			

Olingan namunalarni tahlil qiladigan bo'lsak unga ko'ra, Mo'ynoq tumani shag'irli ovuli orol dengizi qurigan tubi 1-kesma tuproqlarida pH muhiti H<sub>2</sub>O da ko'rilganda 7.35-7.81 qiymati orasida tebranib o'zgarib turdi. KCl eritmasida ko'rilganda 8.05-8.32 orasida o'zgarib turganligi aniqlandi. Tadqiqot hududning 2 kesmasi Mo'ynoq tumani

Innovatsion Vazirlik hududi, Aral ovuli tuproqlari ham pH muhit qiymati analiz qilindi. Unga ko'ra pH muhit H<sub>2</sub>O da ko'rilgandagi qiymati 7.69-7.89 o'rtasida o'zgarib turdi. Bundan tashqari KCl eritmasidagi miqdori 8.22-8.37 ni tashkil etdi.

**Xulosa va takliflar.** Xulosa qilib aytganda, Mo'ynoq tumani, Shag'irli ovuli hududidagi tuproqlar suvli so'rim analizi ma'lumotlariga ko'ra hudud tuproqlari kuchsiz darajada sho'rlangan bo'lib asosan xloridli va xlorid sulfatli hamda ayrim pastki qatlamlarda sulfatli sho'rlanish tipi ustunlik qiladi. Quruq qoldiq miqdori unchalik yuqori ko'rsatgichlarni namoyon etmadi.

Mo'ynoq tumani, Aral ovuli hududidagi tuproqlar suvli surim analiz natijalariga ko'ra tuproqlarda kuchsiz va

o'rtacha darajada sho'rlangan bo'lib asosan xlorid va xlorid sulfatli tuzlar tipi ustunlik qiladi.

Tadqiqot hudud tuproqlarning pH muhit qiymati birinchi kesmadagi pH muhiti yuqori qatlamlarda ishqoriylik darajasi bo'yicha ishqoriylikka yaqin ekanligi va pastki qatlamlarda kuchsiz ishqoriy ekanligi aniqlandi. Ikkinchi kesma qatlamlarida kuchsiz ishqoriy darajadagi muhit ekanligi ma'lum bo'ldi.

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## ABU NASR FOROBIYNING MUSIQANING O'ZIGA XOS JIHATLARI HAQIDA FIKRLARI

Annotatsiya

Mazkur maqolada Abu Nasr Forobiyning musiqa ilmiga oid fikrlari tahlil qilingan. Shuningdek, alloma tomonidan musiqa asboblarining inson madaniy rivojlanishidagi ahamiyati yoritilgan.

**Kalit so'zlar:** "Musiqa haqidagi buyuk kitob", "Ikkinchi muallim", musiqa, musiqa amaliyoti, musiqa nazariyasi

Abu Nasr Forobiy O'rta va O'rta Sharq mamlakatlari-da musiqa fanining asoschilaridan biridir. U o'z davrining ko'zga ko'ringan namoyandalardan biri, fanning turli sohalariga hissa qo'shgan olimdir. Buyuk qomusiy olim U yashagan davrda arab dunyosida adabiyot va musiqa ravnaq topdi, shuning uchun ularni ilmiy jihatdan o'rganish zarurati paydo bo'lganligini ko'ramiz. Bu ehtiyojni qondirgan olimlardan biri va yagonasi Abu Nasr Forobiydir.

A.Kobesov o'z asarida yunon musiqasi ibtidolarini jamlagan, musiqa fanini yangi davrga mos rivojlantirgan: al-Qandiy, Forobiy, Abu Ali ibn Sino. Ular orasida musiqa nazariyasi rivojida Forobiyning o'rni alohida. Ko'pgina manbalarda alloma turli cholg'u asboblarini mahorat bilan ijro etgani, ajoyib qo'shiqlar kuylagani aytiladi. Uning musiqiy kompozitsiyalari zamondoshlari orasida ham mashhur bo'lgan. U O'rta Osiyo, Eron va ko'plab arab mamlakatlari madaniyatidan yaxshi xabardor edi. Umrining so'nggi yillarida Halabda bo'lgan Sayful-daula Hamdamid san'atga katta ahamiyat bergan. Hozirdanoq Forobiyning musiqiy qobiliyati va ijro mahorati haqida turli rivoyatlar aytila boshlangan. Masalan, Damashqda Sayful-daula uyushtirgan yig'ilishda Forobiy o'zining har tomonlama bilimi bilan hammani lol qoldirdi. Uchrashuvdan so'ng rahbar musiqachilarni musiqa haqida suhbatga jalb qiladi. Shunda Abu Nasr Forobiy ham o'z bilimlarini baham ko'rganini ko'rgan Sayful-daula hayron bo'lib, undan g'ijjak chalishni so'raydi.

Forobiy bir kuni vazir Sohib Abbodni qabul qilish uchun Reyga kelganida, u juda ochiq kiyingan ediki, uni hech kim tanimasdi. Anchadan beri kutgan Forobiy sumkasidan tayoq olib, g'ijjakka o'xshagan cholg'u asbobini chiqarib, turli ohanglarni chala boshladi. Abu Nasr Forobiy lo'li ko'ylagiga shunday yozadi: "Al-Forobiy sizning oldingizga keldi". Keyin vazir barcha musiqachilarni yig'ib, g'ijjakka yozilgan adaidani qidiradi. Egasini topolmay, "Baxtning sirini topsang, uning yo'qolganini bilasan", deydi.

"O'rta asr mutafakkirlarini inson tabiati muammolari qiziqtirgan. Al-Forobiy o'rta asr Sharqida falsafiy antropologiya sohasidagi eng yorqin shaxs edi. Boshqa mutafakkirlar singari u ham insonning mavjudligiga, uning dunyodagi o'rniga yuzlandi. Al-Forobiy asarlarida insonning biologik va ijtimoiy tabiati, axloqiy-estetik qadriyatlarini, insonning jamiyatdagi o'rni va hokazolalar haqida so'z boradi. Ontologik pozitsiyadan kelib chiqqan holda, mutafakkir shaxsni subyekt-obyekt munosabatlari tizimining eng yuqori bo'g'ini deb hisoblaydi"<sup>1</sup>.

Ayrim ma'lumotlarga ko'ra, uning musiqiy qo'shiqlari bugungi kunda Eron, Iroq, Turkiya va boshqa Sharq mamlakatlarida ijro etiladi. Uning o'zi yasagan qonun, ud, qipchoq degan cholg'u asboblari bo'lgan. Forobiy musiqa nazariyasiga oid bir qancha asarlar yozgan: "Musiqa haqidagi buyuk kitob", "Musiqa tahlili", "Ritmlar tasnifi". Bundan tashqari, "Fanlarning kelib chiqishi", "Fanlar ensiklopediyasi"

nomli asarlarida musiqa fani ham tahliliga bag'ishlangan alohida boblar mavjud.

Forobiyning jahonga mashhur "Musiqa haqidagi buyuk kitob" asari bir qancha olimlarning risolalari to'plamidir, degan fikrlar ham mavjud. U mazkur kitobi yozgan so'zboshisida qadimgi va hozirgi musiqa olimlarining fikrlariga qo'shila olmasligini yozadi. Shunday qilib, Forobiy antik musiqa fanining paydo bo'lishi va rivojlanish jarayonini inkor etmasdan, ular, ya'ni qadimgi zamonaviy fanlarning kamchiliklarini ko'rsatadi.

Abu Nasr Forobiy mazkur kitobi mazmunini ta'riflar ekan, biz o'zimizga kerak bo'lgan usulni boshqa usul deb hisoblamaganimizni ta'kidlaydi. Risolaning keyingi mazmuni musiqiy-nazariy tizim taqdimotini tushuntirishga qaratilgan bo'lib, bu uning asosiy usullari rivojlanishini ham ko'rsatadi. O'rta asrlar ilmiy an'alariga ko'ra, bu muammo bu yerda bilim so'rovi sifatida shakllantirilgan. Uning mazmun-mohiyati, yo'li va maqsadi olimning dunyoqarashini chuqur egallashiga xizmat qiladi, muhokamasi esa ilmiy-uslubiy nuqtai nazardan kelib chiqadi. Alloma kognitiv va uslubiy fanlar masalalarini chuqur o'rgangan birinchi arab-musulmon faylasuflaridan biridir.

"Musiqa haqidagi buyuk kitobi" asari eng keng tarqalgan asarlardan biridir. Muallif kirish qismida asarning asosiy ichki ma'nosini musiqa fanining uslubiy muammosi tarzida ko'rib chiqadi, uning turli tematik yo'nalishlarini birlashtiradi, jamlaydi. U mavzuga bo'lgan ehtiyojni insonning bilish faoliyatini tavsiflovchi tushuncha va ma'lumotlarni hamda ularning semantik bo'linishlarini tushunish orqali tushuntiradi. Nazariy o'rganishda eng muhim savolni tushuntirishda musiqa san'ati haqidagi bilimlar alohida ma'noga ega. Shunday qilib, muallif o'z talqinida musiqa nazariyasini o'rganishdagi uslubiy tamoyillarini mantiqiy tahlil qilish va gnoseologiyani asosiy falsafiy ontologiya tushunchalari bilan bog'lash orqali tushuntiradi.

Shu munosabat bilan musiqa faniga ikkita asar bag'ishlagan. Birinchisi musiqa fanining asoslariga, ikkinchisi, antik davr mualliflari qarashlariga berilgan mulohazaga bag'ishlangan. Forobiyning birinchi kitobi ikki qismdan iborat: fanga kirish va fanning o'zi. Kirishning o'zi ikki qismga bo'lingan, asosiy qismi uchta bobdan va har bir bob ikki bobdan iborat. Umuman olganda, kitob 12 bobdan iborat.

Forobiy yozgan ikkinchi kitobi bizgacha yetib kelmagan. "Buyuk musiqa kitobi"ning "Musiqa san'atiga kirish" bo'limi alohida risola sifatida yozilgan. Ayrim yevropalik olimlar, xususan, Kozegerten, Land, Tripodo "Bu Forobiyning ikkinchi kitobi bo'lsa kerak", deb sharhlaydilar. Tadqiqotchilarning fikricha, "Buyuk musiqa kitobi" somoniy-lar amiri Mansur ibn Nuhning iltimosiga ko'ra yozilgan "Ikkinchi ta'limot" (At-Talim as-Soniy) qomusiy asarining bir qismidir. «Ikkinchi ta'limot»da Aristotel falsafasiga oid mulohazalar mavjud. Bu asari uchun Forobiyga hayotligida "Ikkinchi muallim" unvoni berilgan. Qolaversa, musiqa

nazariyasiga oid bunday muhim asar zarurligidan ilmiy tajriba guvohlik beradi. Musiqa fanining manbalari qadimgi meros bilan chambarchas bog'liq.

Forobiy faqat zamonaviy musiqa amaliyotiga tayanmagan. U o'z asarlarini So'g', Xuroson, arab mamlakatlari, hindlar, rimliklar, yunonlar va boshqa shu kabi xalqlarning qadimiy musiqa madaniyatiga katta e'tibor qaratgan holda yozgan. U qadimgi nazariyotchilar - Pifagorchilar, Aristotel, Ptolemey, Aristoksenlarga murojaat qiladi, musulmonlardan oldingi an'analar, musiqa turlari va shakllari haqida gapiradi.

Mutafakkir, shubhasiz, musiqa nazariyasida qadimgi yunon olimlari asarlariga tayanadi. Ammo Forobiy bu mualliflar fikrlariga tanqidiy nazar bilan qaraydi, mantiqiy o'rganadi, ularni fanning yangi yutuqlari asosida qayta tahlil qiladi, ularning to'g'ri va noto'g'ri tomonlarini alohida ta'kidlaydi. Shuning uchun ham alloma bu sohada yunonlardan ancha oldinda edi. Masalan, qadimgi yunon olimlari cholg'u asboblari o'rganishni ham boshlamaganlar. Forobiy esa cholg'u asboblari o'rganishni noldan boshlagan, matematika va fizika fanlarini shu qadar yaxshi bilganki, natijada musiqa nazariyasidagi xatolarni aniq topib, tuzatgan. "Men nafaqat musiqa ilmining qadrdlovchisiman, balki musiqa san'atining ham qadrdchisiman, shuning uchun men qadimgi yunonlardan ko'ra ko'proq ish qilish imkoniga ega bo'ldim", deb yozadi Abu Nasr Forobiy.

Olimning musiqa haqidagi quyidagi xulosalariga e'tibor qaratamiz: "Musiqa ilmiga kirsak, bu fan kuyning turlari, nimadan tuzilganligi, nima uchun yaratilganligi, qanday tartibda bo'lishi kerakligini o'rganadi. Ular chuqur so'riladi va kuchliroq ta'sir qiladi. Musiqa haqida gapirganda, biz ikkita fanni tushunamiz:

- 1) musiqa amaliyoti;
- 2) musiqa nazariyasi;

Musiqiy amaliyotning vazifasi tabiiy yoki sun'iy asboblardan kelib chiqqan va quloq bilan idrok etiladigan ohang turlarini izlashdan iborat.

Tabiiy asboblari - tomoq, kichik til va tomoqdagi boshqa organlar, keyinroq, sun'iy asboblari - masalan, nay va boshqalar.

Amaliyotchi musiqachi kuylarni, ularning ohanglarini, umuman, musiqa asboblariidan chiqadigan barcha tovushlarni biladi.

"Buyuk musiqa kitobi" o'ziga xos shaklga ega, mantiqiy ketma-ketlikda yozilgan, ixcham va mazmunan teran qomusiy asardir. Bu asar nafaqat Sharqda, balki jahon miqyosida qimmatli sanaladi. Bu asar asosida Ibn Sino va uning zamondoshlari, Darvesh Ali Buxoriy, Safiuddin Jurjoniy kabi ko'plab olimlar o'zlarining musiqiy asarlarini yaratdilar. Ibn Sinoning asosiy musiqa asari — musiqa fanlari to'plami "Buyuk musiqa kitobi" asosida yozilgan. Yirik musiqa nazariyotchilari Safiuddin Urmaviy, Abdulqodir Maragiy, Abdurahmon Jomiy, Vojid Alixonlar "Matla al-ulum va majma al-funun" asarini yozishda Forobiy ijodiga tayanganlar.

Forobiyning "Ilmlar tasnifi" asari XI asrda rohib Guldisal tomonidan lotin tiliga tarjima qilingan, Yevropada mashhur bo'lgan. Aytish mumkinki, Forobiyning musiqiy nazariy ijodiga qiziqishning katta to'liqini XIX asrda boshlangan. Ko'pgina sharqshunos olimlar uning musiqa sohasida yozilgan asarlariga katta ahamiyat berganlar. Masalan, Vilotoning arab musiqasida (1826) Forobiya ishoralarni Kosegarten, Land, Salvador-Daniyel kabi olimlar asarlarida ko'rish mumkin.

1974 yilda Leyden shahrida "Buyuk musiqa kitobi" boblarining tarjimasi "Arab musiqasi" nomi ostida nashr etildi. Shuningdek, Forobiy musiqasi Rossiyada mashhur edi. P.P.Sokalskiy musiqa nazariyasining umumiy evolyutsiyasiga e'tibor qaratdi.

XX asrda Yevropada Forobiyning musiqiy asarlarini o'rganish uchun maxsus tadqiqotlar olib boriladi.

1930 yilda Rudolf Yerlanj birinchi to'liq musiqa kitobini fransuz tiliga tarjima qildi va nashr etdi.

Sobiq Ittifoq olimlari orasida Forobiyning musiqiy merosini V.M. Belyayev, I. Radjabova, T. Vizgo, D. Rashidova, A.Jumayev kabi olimlar o'rgangan. Olimning musiqiy-nazariy yondashuvi fan, falsafa va matematika sohalarida faoliyat yuritayotganlar, xususan, A.K.Kobesov, O.Matyobov, A.X.Qosimjonov ijodida o'z o'rnini topdi.

Abu Nasr Forobiyning cholg'u asboblari haqida bag'ishlangan asarlari o'z davrining cholg'u asboblari chuqur o'rgangani bilan ahamiyatlidir. Ular: puflama asboblari: nay, hushtak, qipchoq, torlar ud, chang, rubob, shahrud, dutor, qo'miz, tanbur, kanun, zarbli asboblari: nog'ora, tiybl, doira va boshqalar. U yozgan ba'zi cholg'u asboblari hozir yo'q.

Al-Forobiy qadimiy cholg'u asboblari haqida paydo bo'lishini tabiat tovushi va uning jonlanishi bilan bog'laydi. Masalan, qum shovqini, g'orlarda shamolning uvillashi, qamishlarning shitirlashi va hokazo. Puflama cholg'uning nomi shamolning esgan ovozi tufayli tug'ilgan. Urma cholg'u asboblari asosan yog'och, teri va suyakdan yasalgan. Shox va qamishdan tovush chiqarish puflama asboblarning boshlanishi edi. Tovushning baland yoki yumshoqligiga, shuningdek, yashirin xarakteriga qarab hayotda turlicha rivojlangan. Forobiy: "Urush va janglarda foydalanilgan; raqslar, to'ylar, ziyofatlar va sevgi qo'shiqlari uchun ishlatiladigan asboblari bo'ladi" - deb yozgan. Shamanlar tomonidan janglarda, ovda va jodugarlikda puflama asboblarning qattiq ovozi va zarbli asboblarning ovozi kuchli ishlatilgan. Ba'zi shamol va torli cholg'u asboblari sozandalar qushlar sayrashini, hayvonlar ovozi va tabiat tovushlarini, shuningdek, xonandaning qo'shig'ini mahorat bilan takrorlay olgan.

Abu Nasr Forobiyning aytishicha, asosan, vokal musiqa o'rta asrlarda rivojlangan. Xonandalar zarbli cholg'u torlari jo'rligida kuylagan. Cholg'u asboblari oddiy bo'lgani uchun ularning chalish imkoniyatlari cheklangan edi, shuning uchun bu asboblari xonandaning ming yo'nalishdagi qo'shiqlariga jo'r bo'lishga mos kelmas edi. Alloma inson ovozi eng mukammal va tabiiy cholg'u deb bilgan, boshqa barcha qadimgi cholg'u asboblari nomukammal deb hisoblagan, ularni cholg'uning sun'iy turlariga bog'lagan.

Olim arfa aslida kamon ekanligini yozadi. Dastlab, unga faqat ikkita ip bog'langan, keyin esa o'n uchtagacha aksado beruvchi tana va quloqlar o'rnatildi. Donishmandning yozishicha, qadimgi arfaning boshi va tanasi oqqush tasviriga o'xshagan, uning ovozi esa oqqush qichqirishiga o'xshaydi. Abu Nasr Forobiy torli arfaga o'xshash cholg'uning diapazonini kengaytirish uchun torlar sonini ko'paytirishni zarur, deb topdi.

Abu Nasr Forobiy barcha zarbli asboblarni ikki turga ajratadi:

- a) har bir torda faqat bitta tovush chiqaradiganlar - arfa, qonun;
- b) bo'yniga torlarni bosib, tovush chiqaradiganlar - ud, dutor, tanbur.

Olim ikkinchi turdagi cholg'u asboblari haqida shunday izoh beradi: "... ma'lum bir qismni barmoq bilan bosish orqali barcha kerakli notalarni olishimiz mumkin..." Tanbur besh qismdan iborat bo'lgan. Asbobdan keladigan ikkita oraliq tovushni yoqimli va yoqimsizga ajratadi. Bundan tashqari, olim asbob dizaynining yaxshi ovoz chiqishiga ta'siri, korpus, pastki va yuqori qopqoqlarning xususiyatlari haqida qimmatli ma'lumotlarni aytadi. "O'z tabiatiga, tuzilishiga ko'ra, deb tushuntiradi olim, cholg'u tanasi tugmachalarni bosganda chiqadigan notalarni moslashtirib ovoz chiqaradi..."

Yuqorida tilga olingan ko'plab tadqiqotlarga qaramay, Forobiyning musiqiy merosini tushinishda ko'plab muammolar saqlanib qolmoqda. Uning turli sohalaridagi



musiqiy-nazariy asarlarini to'g'ri talqin va tarjima qilish maqsadida eng muhimlarini sanab o'tish lozim: nazariya va musiqiy estetika; musiqa ritmini, janrlarini, shakllarini, musiqa organologiyasini to'liq tushunish uchun maxsus tadqiqotlar olib borish zarur.

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