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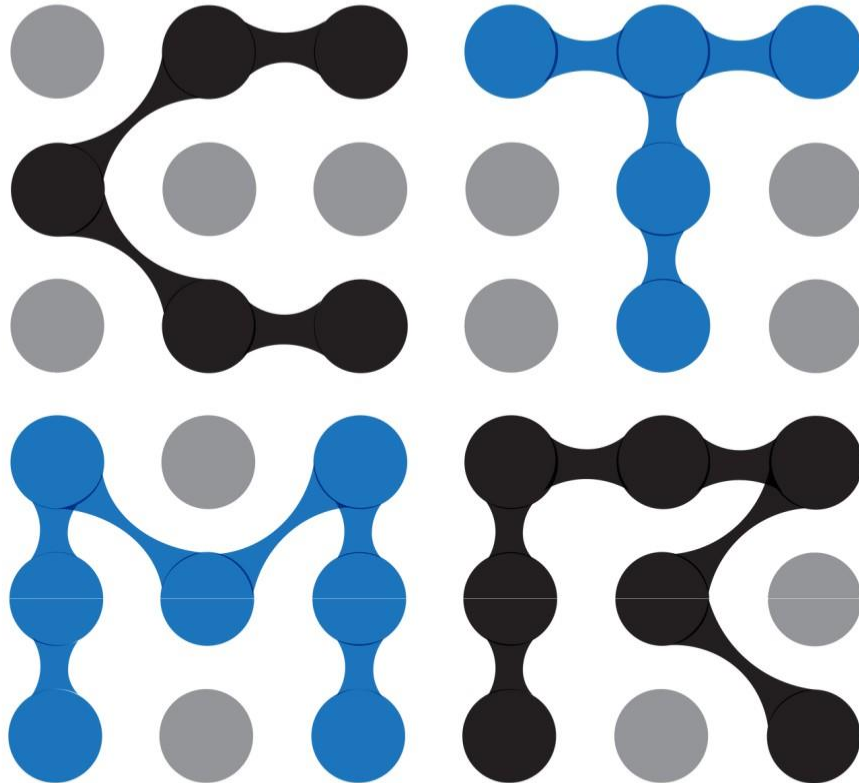
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RAQAMLI O'YINLAR YORDAMIDA BOLALARNING KOGNITIV
RIVOJLANISHINI OSHIRISH

**Qamashi tumani 7-DMTT tarbiyachisi
Po'latova Hilola**

Kalit so'zlar: raqamli o'yinlar, kognitiv rivojlanish, bolalar psixologiyasi, ta'lim texnologiyalari, interaktiv o'yinlar, xotira, diqqat, mantiqiy fikrlash, raqamli ta'lim, o'yin orqali o'qitish

Annotatsiya: Mazkur maqolada raqamli o'yinlarning bolalarning kognitiv rivojlanishiga ta'siri ilmiy va amaliy jihatdan tahlil qilinadi. Unda zamonaviy ta'lim jarayonida interaktiv va raqamli o'yinlardan foydalanish orqali bolalarning xotira, diqqat, mantiqiy fikrlash hamda muammolarni hal qilish ko'nikmalarini rivojlantirish imkoniyatlari yoritiladi. Shuningdek, raqamli o'yinlarning ijobiy va salbiy jihatlari, ularni ta'lim jarayoniga samarali integratsiya qilish usullari ko'rib chiqiladi. Maqola maktabgacha va kichik maktab yoshidagi bolalar bilan ishlovchi pedagoglar hamda ota-onalar uchun amaliy tavsiyalarni ham o'z ichiga oladi.

Kirish: Bugungi globallashuv va raqamli texnologiyalar jadal rivojlanayotgan davrda ta'lim jarayonini zamonaviy vositalarsiz tasavvur qilish qiyin. Ayniqsa, bolalar ta'limi va tarbiyasida innovatsion yondashuvlar, interaktiv metodlar hamda raqamli resurslardan foydalanish tobora dolzarb ahamiyat kasb etmoqda. Shu jarayonda raqamli o'yinlar bolalarning qiziqishini oshiruvchi, ularni faol ishtirok etishga undovchi va bilimlarni mustahkamlovchi samarali vosita sifatida keng qo'llanilmoqda.







Raqamli o'yinlar nafaqat bolalarning bo'sh vaqtini mazmunli tashkil etishga xizmat qiladi, balki ularning kognitiv rivojlanishiga ham bevosita ta'sir ko'rsatadi. Kognitiv rivojlanish jarayoni bolalarda diqqatni jamlash, xotirani mustahkamlash, mantiqiy fikrlashni shakllantirish, tasavvur va ijodkorlikni rivojlantirish kabi muhim aqliy jarayonlarni o'z ichiga oladi. Raqamli o'yinlar esa ushbu jarayonlarni tabiiy va qiziqarli muhitda rivojlantirish imkonini beradi.

So'nggi yillarda olib borilgan tadqiqotlar shuni ko'rsatadiki, to'g'ri tanlangan raqamli o'yinlar bolalarning muammolarni hal qilish ko'nikmalarini oshiradi, tezkor qaror qabul qilish qobiliyatini rivojlantiradi hamda ularni mustaqil fikrlashga undaydi. Shu bilan birga, o'yinlar orqali bolalar raqamlar, shakllar, ranglar, mantiqiy bog'lanishlar va turli vazifalarni bajarish jarayonida bilim va ko'nikmalarni mustahkamlaydilar. Biroq, raqamli o'yinlardan foydalanishda muvozanatni saqlash muhim ahamiyatga ega. Ularning ortiqcha qo'llanilishi yoki noto'g'ri tanlanishi bolalarda diqqatning susayishi, jismoniy faollikning kamayishi va ijtimoiy muloqot ko'nikmalarining cheklanishi kabi salbiy oqibatlariga ham olib kelishi mumkin. Shu sababli pedagoglar va ota-onalar raqamli o'yinlarni tanlash va ulardan foydalanishda ilmiy asoslangan yondashuvga tayanishlari lozim. Ushbu maqolada raqamli o'yinlarning bolalar kognitiv rivojlanishiga ta'siri, ularning ta'lim jarayonidagi o'rni, ijobiy va salbiy jihatlari hamda samarali foydalanish yo'llari batafsil tahlil qilinadi.

Asosiy qism. Raqamli o'yinlar zamonaviy ta'lim muhitida bolalarning aqliy rivojlanishini qo'llab-quvvatlovchi muhim vositalardan biri sifatida qaralmoqda. Ular o'quv jarayonini yanada qiziqarli va interaktiv qilish orqali bolalarda bilimga bo'lgan motivatsiyani oshiradi. Ayniqsa, maktabgacha va kichik maktab yoshidagi bolalar uchun raqamli o'yinlar o'rganish jarayonini tabiiy va oson qabul qilinadigan shaklga keltiradi. Kognitiv rivojlanishning asosiy tarkibiy qismlaridan biri bo'lgan diqqatni jamlash qobiliyati raqamli o'yinlar orqali sezilarli darajada rivojlanadi. Ko'plab o'yinlarda tezkor reaksiya, vazifalarni ketma-ket bajarish va muayyan maqsadga erishish talab etiladi. Bu esa bolalarning diqqatini bir nuqtaga qaratish va uni uzoq vaqt ushlab turish ko'nikmasini shakllantiradi.



RAQAMLI O'YINLAR YORDAMIDA BOLALARNING KOGNITIV RIVOJLANISHINI OSHIRISH

KOGNITIV KO'NIKMA	RAQAMLI O'YINLAR NIMA BERADI?	O'YIN TURLARI (MISOL)	RIVOJLANISH NATIJALARI	OTA-ONA UCHUN MASLAHATLAR
 DIQQAT VA KONSENTRATSIYA	O'yinlar bolalarning e'tiborini jamlashga, chalg'ituvchi omillarni chetlab o'tishga yordam beradi.	 Topshiriqlar o'yinlar, qidiruv o'yinlari, maqsadga yo'naltirilgan o'yinlar	<ul style="list-style-type: none"> ✓ Diqqatni uzoqroq saqlay olish ✓ E'tibor barqarorligi oshadi ✓ Topshiriqlarni oxirigacha bajarish ko'nikmasi rivojlanadi 	<ul style="list-style-type: none"> • O'yinni vaqt bilan cheklang (kuniga 30-60 daqiqa) • Sokin muhitda o'ynashga yordam bering • Maqsadli o'yinlarni tanlang
 XOTIRA	Raqamli o'yinlar axborotni eslab qolish, esga tushirish va ketma-ketlikni saqlashga yordam beradi.	 Xotira kartalari (o'yinlari), mos juftlik topish, ketma-ketlik o'yinlari	<ul style="list-style-type: none"> ✓ Qisqa va uzoq muddatli xotira yaxshilanadi ✓ Axborotni eslab qolish tezligi oshadi ✓ Ketma-ketlikni eslab qolish rivojlanadi 	<ul style="list-style-type: none"> • Xotirani rivojlantiruvchi o'yinlarni tanlang • O'yin davomida savollar bering • Bolani yutuqlari uchun maqtang
 MANTIQQIY FIKRLASH	O'yinlar orqali bola muammolarni tahlil qilish, sabab-oqibat aloqalarini anglash va mantiqiy qaror qabul qilishni o'rganadi.	 Mantiqiy o'yinlar, boshqotirmalar, strategik o'yinlar (shaxmat, kublar)	<ul style="list-style-type: none"> ✓ Muammoga yechim topish qobiliyati oshadi ✓ Sabab-oqibatni anglash rivojlanadi ✓ Tanqidiy fikrlash kuchayadi 	<ul style="list-style-type: none"> • Mantiqiy o'yinlarni muntazam taklif eting • Bolaga mustaqil o'ylash imkonini bering • Jarayondan ko'ra, yechim topishga rag'batlantiring

Shuningdek, raqamli o'yinlar bolalarning xotira jarayoniga ham ijobiy ta'sir ko'rsatadi. O'yin davomida turli obrazlar, topshiriqlar va qoidalarni eslab qolish zarurati bolalarning operativ va uzoq muddatli xotirasini mustahkamlaydi. Masalan, moslikni topish, ketma-ketlikni eslab qolish yoki mantiqiy jumboqlarni yechish kabi o'yinlar xotira faoliyatini faollashtiradi. Mantiqiy fikrlash va muammolarni hal qilish ko'nikmalari ham raqamli o'yinlar orqali rivojlanadi. Strategik o'yinlar, boshqotirmalar va simulyatsion o'yinlar bolalarni tahlil qilish, solishtirish va to'g'ri qaror qabul qilishga o'rgatadi. Bu jarayonda bola har bir harakatining natijasini oldindan baholashga harakat qiladi, bu esa tafakkur rivojlanishiga xizmat qiladi. Bundan tashqari, raqamli o'yinlar bolalarda ijodkorlik va tasavvurni rivojlantirishda ham muhim rol o'ynaydi. Ranglar, shakllar, virtual olamlar va turli vazifalar bolalarning fantaziyasini kengaytiradi. Ayniqsa, erkin yaratuvchanlikka asoslangan o'yinlar bolalarning o'z g'oyalarini amalga oshirishiga imkon beradi. Shu bilan birga, raqamli o'yinlardan foydalanishda pedagogik nazorat muhim hisoblanadi. O'yinlarning mazmuni, davomiyligi va maqsadga yo'naltirilganligi e'tiborga olinishi lozim. Ta'limiy o'yinlar bilan ko'ngilochar o'yinlar o'rtasida muvozanat saqlansa, ularning samaradorligi yanada oshadi.

Xulosa qilib aytganda, raqamli o'yinlar zamonaviy ta'lim jarayonida bolalarning kognitiv rivojlanishini qo'llab-quvvatlovchi samarali vositalardan biri hisoblanadi. Ular bolalarda diqqatni

jamlash, xotirani mustahkamlash, mantiqiy fikrlashni rivojlantirish hamda muammolarni mustaqil hal qilish ko'nikmalarini shakllantirishga ijobiy ta'sir ko'rsatadi. Shuningdek, raqamli o'yinlar o'quv jarayonini qiziqarli va interaktiv tarzda tashkil etishga yordam beradi, bu esa bolalarning bilim olishga bo'lgan qiziqishini oshiradi. Biroq, raqamli o'yinlardan foydalanishda me'yoriy va nazorat muhim ahamiyatga ega. O'yinlarning mazmuni va davomiyligi to'g'ri tanlanmasa, bolalarning jismoniy faolligi kamayishi yoki ijtimoiy ko'nikmalari sustlashishi mumkin. Shu sababli pedagoglar va ota-onalar raqamli o'yinlarni tanlashda ularning ta'limiy ahamiyatiga alohida e'tibor qaratishlari lozim. Umuman olganda, raqamli o'yinlardan maqsadli va oqilona foydalanish bolalarning aqliy rivojlanishini qo'llab-quvvatlash bilan birga, ularni zamonaviy texnologiyalardan to'g'ri foydalanishga ham o'rgatadi.

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BOSHLANG'ICH SINIF O'QUVCHILARINING MATEMATIK TAFAKKURINI SHAKLLANTIRISHNING

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Annotatsiya

Ushbu maqolada boshlang'ich sinf matematika ta'limida o'quvchilarning aqliy tafakkurini rivojlantirishga xizmat qiluvchi metodik yondashuvlar, interfaol usullar, logik topshiriqlar, muammoli vaziyatlar hamda raqamli vositalardan foydalanishning samaradorligi yoritilgan. Shuningdek, matematik tafakkur rivojiga ta'sir ko'rsatuvchi psixologik omillar, o'quv faoliyatini tashkil etishning innovatsion shakllari va o'qituvchining pedagogik mahorati ilmiy tahlil qilinadi. **Tayanch so'zlar:** aqliy tafakkur, boshlang'ich ta'lim, matematika, metodika, mantiqiy fikrlash, interfaol usullar, muammoli ta'lim, kreativlik.

Абстракт

В данной статье раскрывается эффективность методических подходов, интерактивных методов, логических заданий, проблемных ситуаций, а также использования цифровых средств в развитии интеллектуального мышления учащихся при обучении математике в начальных классах. Кроме того, проводится научный анализ психологических факторов, влияющих на развитие математического мышления, инновационных форм организации учебной деятельности и педагогического мастерства учителя.

Ключевые слова: интеллектуальное мышление, начальное образование, математика, методика, логическое мышление, интерактивные методы, проблемное обучение, креативность.

Abstract

This article examines the effectiveness of methodological approaches, interactive techniques, logical tasks, problem-based situations, and the use of digital tools in developing the intellectual thinking of primary school students in mathematics education. It also provides a scholarly analysis of the psychological factors influencing the development of mathematical thinking, the innovative forms of organizing learning activities, and the pedagogical competence of the teacher.

Key words: intellectual thinking, primary education, mathematics, methodology, logical reasoning, interactive methods, problem-based learning, creativity.

Kirish. Jahon miqyosida ta'lim tizimiga mamlakat taraqqiyotining kelajagini kafolatlovchi asosiy omil sifatida qaralib, pedagogik texnologiyalarni ta'lim mazmuniga singdirish, jumladan, matematika ta'limi mazmunini nazariy va amaliy jihatdan boyitish, matematika fanlarining zamonaviy o'quv-metodik ta'minoti imkoniyatlarini oshirish, aniq fanlarga ixtisoslashtirilgan ta'limni tashkil qilish va uni yanada takomillashtirish borasida keng miqyosda izlanishlar olib borilmoqda. Mamlakatimizda bugungi kunda ta'lim tizimida sodir bo'layotgan islohotlar boshlang'ich sinf o'quvchilarining fikrlash madaniyatini rivojlantirish, ularning ijodiy va mantiqiy tafakkurini shakllantirishni talab etadi. Ayniqsa, matematika fani o'quvchilarda tahlil qilish, solishtirish, umumlashtirish, xulosa chiqarish kabi aqliy qobiliyatini rivojlantirishda asosiy vosita sifatida xizmat qiladi. Boshlang'ich ta'lim davri – bu bolaning intellektual

salohiyatini shakllantirishning eng muhim bosqichidir. Shu bois, matematik bilimlarni o'zlashtirish jarayonida o'quvchilarning aqliy tafakkurini izchil rivojlantirish bugungi metodikaning ustuvor yo'nalishlaridan biridir.

Buyumlar va geometrik shakllarning har xil belgilari bo'yicha guruhlarga ajratishga doir mashqlar katta ahamiyatga ega, bunday mashqlar shu vaqtning o'zida bolalarning shakl, kattalik, miqdor va hokazolar haqidagi bilimlarini mustahkamlaydi. Bilimlarni mustahkamlash uchun tarbiyachi har xil xarakterdagi, ya'ni amaliy, o'yin, musobaqa elementlari bilan bog'liq mashqlardan, interfaol usullardan foydalanadi. Uch-to'rt yoshdagi bolalarni o'qitishda, ayniqsa, o'yin elementlaridan keng foydalaniladi. Shuni esda tutish muhimki, didaktik materialni va usulni almashtirish bilim va ko'nikmalarni alohida zo'riqishsiz o'zlashtirishni ta'minlovchi vositadir. O'yin momentlariga haddan tashqari berilib ketmaslik kerak, chunki o'yin asosiy narsadan – matematik ishdan chalg'itishi mumkin, natijada bolalar mashg'ulot rejasida nazarda tutilgan bilim va ko'nikmalarni o'zlashtira olmaydilar.

a) Sodda va murakkab masalalar

b) Geometrik masalalar

v) Qiziqarli masalalar

O'quvchilar maktubdagi mashg'ulotlarning birinchi kunidanoq masala bilan uchrashdi. Birinchi sinf o'quvchilari bilan qilinadigan dastlabki suhbatlarning birida o'qituvchi o'quvchi qanday hayotiy tajriba va bilimga ega ekanligini aniqlash maqsadida eng sodda masalaga murojaat qiladi. Masalan, "Sening 4 ta qalaming bor edi, sen yana bitta qalam olding, sendagi qalamlar nechta bo'ldi?".

Maktabda o'qitishning boshidan oxirigacha matematik masalalar o'quvchilarga matematik tushunchalarni to'g'ri shakllantirishga, uni o'rab turgan muhitning o'zaro aloqadorligining turli tomonlarini chuqurroq aniqlashga yordam beradi, o'rganilayotgan nazariy qoidalarni qo'llanish kuzatilayotgan hodisalarda har xil sonli bog'lanishlarni o'rgatish imkonini beradi va masalalar yechish bola tafakkurining rivojlanishiga yordam beradi.

Matematik masala o'zi nima? Matematik masal bu bog'liqligi ixcham hikoya bo'lib, unda ba'zi kattalilarning qiymatlari kiritilgan bo'lib, ularga bog'liq va masal shartiga ular bilan ma'lum munosabatlar orqali bog'langan boshqa kattalilarning qiymatlari izlanadi.

Ammo, o'qituvchilar masalaning boshqa ta'rifini ham biladilar: "Masala bu – so'zlar bilan ifodalangan savol bo'lib, uning javobi arifmetik amallar yoramida olinishi mumkin." Shuni ta'kidlaymizki, bu ta'rif faqat arifmetik masalalarga taalluqlidir.

Masalalarni yechish malakasi umumiy xarakterda bo'lishiga qaramay, hamma boshqa malakalar kabi rivojlanadi. Ammo buning uchun mashqlarning alohida sistemasi kerak, bu mashqlar sistemasi o'quvchilarda ijodiy o'ylashni talab qilishga yo'nalgan bo'lishi kerak.

Mashqlarning bunday sistemasida o'quvchilarning o'zlari tafakkuri yordamida sonli materiallar asosida masala tuzishlari (va yetishlari) katta o'rin olishi kerak. Bu son materiallar atrof hayotdan olingan bo'lib, o'quvchilarning amaliy faoliyatiga bog'langan bo'lishi lozim. Agar masala muammolarni yechish sistemasi kiritilsagina agar yechishning qiyinligi o'quvchi uchun tobora orta borsa uning bartaraf qilishga o'quvchining kuchi yetadigan bo'lsagina, o'quvchidagi mustaqil, ijodiy yechishga bo'lgan qiziqishi turg'un bo'ladi. So'ngra esa extiyojga aylanib qoladi. Bu jihatdan o'qituvchi o'quvchilar tomonidan masala yechishning turli usullaridan foydalanishlarini doimiy ravishda o'z tajribalarida o'zlari topgan u yoki bu usulning afzalligini ishonch hosil qilishlarida va so'ngra ular o'z ixtiyorlari bilan yechish usullarini almashtirishlarida,

yechish usullaridan eng osonlarini izlashlarida va ulardan foydalanganlarida sinf jamoasining ishlashidagi umumiy atmosfera muhim rol o'ynaydi.

O'qitishning borishida o'quvchilar egallab olishi kerak bo'lgan malakalar sistemasi tobora boyib boradi, ilgari egallangan malakalar ustida yangilari hosil qilinadi.

Bu bosqichda o'qituvchi oldida turgan maqsad masalalar yechishda savolning real ahamiyatini yaqqol ko'rsatish va isbotlashdan, ular ongida berilganlardan savolni ajratishdan iborat ekani mutlaqo ravshan.

Shu maqsadga mos ravishda dastlabki matematik masalalar qanday kiritilishi kerak? Metodika fani bu savolga javob berar ekan, tafakkur rivojlanishining qonuniyatlaridan birini hisobga oladi.

Bu qonunga asosan konkret yoki xatto aniq, faol tajribaga tayanilgandagina mavhum bilimni egallay olishi mumkin. Butun sonlar va kasr haqidagi tushunchalar o'qitishning boshlang'ich pog'onalarida bolalarning idrok qilishi va predmetlar bilan mishlashi asosida rivojlantiradi. Masala tushunchasini tor ma'noda qarab, unda quyidagi tarkibiy elementlarni ajratish mumkin.

a) masalaning sharti – syejetning so'zlar bilan bayoni bo'lib, unda son qiymatlari masala tarkibiga kiruvchi kattaliklar orasidagi bunksional bog'lanish oshkor (sonlar yordamida) yoki oshkormas (shakldosh so'zlar yordamida) ko'rsatilgan bo'ladi.

b) masalaning savoli – bunda bir yoki bir necha kattalikning noma'lum qiymatlarini bilish taklif qilinadi.

Har qanday arifmetik masalada noma'lum (izlanayotgan) son, (yoki bir necha izlanayotgan son) va berilgan sonlar (ular ikkitadan kam bo'lmasligi kerak) dan iborat elementlar albatta bo'lishi kerak ekan.

Shart va savol – masalaning asosiy elementlaridir. Sonli (yoki harfiy) ma'lumotlar masala shartida berilgan, izlanayotgan miqdor har doim masala savoliga kirgan bo'ladi. Ammo ba'zi hollarda masala shunday ifodalangan bo'lishi mumkinki, unda savol shartining bir qismini oladi yoki butun masala savol shaklida bayon qilinadi.

Xulosa. Ko'pincha masalalar o'quvchilarga ularning bilimlarini to'ldirish, malakalarini egallash, ko'nikmalarni takomillashtirish va puxtalash uchun beriladi. O'quvchining masalani mustaqil yechishidan unda ko'nikma va malakalarning tarkib topishi uchungina emas, balki teskari aloqa o'rnatish (o'quvchi-o'qituvchi) uchun ham foydalaniladi. Bu esa o'qituvchiga o'rganilayotgan masalani o'quvchi qanday o'zlashtirishini kuzatish va uning muvaffaqiyatlarini tekshirish imkonini beradi.

Bilimlarini tekshirishda masala o'quvchi tafakkurining rivojlanishini haqida fikr yuritish, kerakli amallarni to'g'ri tanlash, hisoblash ko'nikmalari haqida fikr yuritish imkonini beradi. Matematikaning ichki aloqadorligini turli xil masalalar yordamida ko'rsatish o'quvchilar bilimni rivojlantiradi. Buning uchun o'quvchilarga masalalar yechishning turli usullarini o'rgatish zarur bo'ladi. Ular qatoriga geometrik talqin orqali matnli masalalar, geometrik masalalar qiziqarli masalalarni sodda va tarkibli masalalarni keltirish mumkin.

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ХОРАЗМ ВИЛОЯТИДА ЯШОВЧИ АЁЛЛАРДА ТУРЛИ ХИЛ СЕМИЗЛИК ФОНИДА ЮЗАГА КЕЛГАН ГОНАРТРОЗЛАРДА МЕДИАЛ МЕНИСКЛАРНИ ПАТОМОРФОЛОГИЯСИ

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Аннотация: Хоразм вилояти мисолида аёлларда турли хил семизлик фониди юзага келган гонартрозларда медиал менискларни ўзига хослиги, харкатчанлик хусусиятини бўлмаслиги, оғирлик тушувчи юзасини катталиги, тана вазни оғир бўлган аёлларда доимий равишда жисмоний зўриқиши медиал мениск юзаси олдинги ўрта ва орқа шохлари васкуляр ва аваскуляр сохалари чеграларига тушиши натижасида, менискда импрессион эзилиши юзаларида коллаген толаларни деструктив дисрегенратив ўзгаришлари аниқланса, хужайравий таркибида изоген хондроцитларни сон ва хажм жихатдан кичиклашиши ва камайиши, экстрацеллюляр матриксни ахм кескин камайишига олиб келади. Бу эса, мениск қалинлигини кескин пасайиши ва оғир нуқталри юзаларида деструктив ўзгаришлар ва чандиқли жараёнларни устунлиги билан давом этиши аниқланади.

Калит сўзлар: патоморфология, менисклар, тизза бўғими, гонартроз, семизлик, аёллар.

Муаммони долзарблиги: Дунёда ахолиси орасида аёлларда семизлик туфайли тизза бўғими остеоартрити билан жами 7,6-8,1% ахолиси азият чекади. АҚШда тизза бўғими остеоартрити (ТБОА) ногиронликнинг асосий сабаби бўлиб, семизлик эпидемияси туфайли 50 ёшдан ошган аёлларнинг қарийб 35-40%да гонартрознинг турли даражалари аниқланган.

ВНО (ЖССТ) маълумотларига кўра, Европа ва Буюк Британияда 45-50 ёшлиларни 60%да ортикча вазн сабабли, тизза бўғими остеоартрити (ТБОА) аёллар орасида 38-43,1% ни ташкил этгани аниқланган.

Россия федерацияси 2024 йилги маълумотларга кўра, Россияда аёллар орасида семизлик тарқалиши 28.6% га етган (эркакларда 20.9%). Гонартроз билан оғриган аёллар гуруҳида семизлик эркакларга нисбатан 83% га кўпроқ учрайди. МДХ давлатларида бу кўрсаткич 2022 йилдаги маълумотлар бўйича, 45-55 ёшли аёллар орасида 38,4-51,3% ни ташкил этиб, бу кўрсаткич хар йилига ўртача 1,2% га ошганлиги аниқланди. Ушбу контингентни 60-74% да тизза бўғими гонартрозини турли даражалари аниқланган.

Мамлакатимизда аёллар орасида семизлик фонида ривожланган гонартроз билан 45-60 ёшлиларда рўйхатдан ўтганларни сони ўртача 2,2млн ни ташкил этган бўлса, Гендер тенглиги бўйича бу кўрсаткич, аёлларда эркакларга нисбатан 2,5-3,0 баробарга кўплигини тасдиқлайди. Хоразм вилоятида жами 45-55 ёшлилар орасида семизлик фонида ривожланган тизза бўғими остеоартрити (ТБОА) аҳолини 10-12% ни ташкил этиб, шулардан, 1-2 даражали гонартрозлар 65-70% ни ташкил этса, 30-35%ни 3-4 даражали гонартрозлар ташкил этганлиги аниқланган.

Тадқиқот мақсади: Хоразм вилояти миослида аёлларда турли даражадаги семизликда ривожланган гонартрозда тизза бўғими патоморфологик хусусияларини ўрганиш.

Тадқиқотни материал ва усуллари: Хоразм вилояти мисолида аёлларда турли хил семизлик фонида юзага келган гонартрозларни юзага келиши тана вазни индекси ва жараённи давомийлиги, ва бошқа касалликларга боғлиқ ҳолда турлича морфологик шаклларда ривожлансада, микроскопик ўзгаришлари асосан дистрофик, некробиотик ва деструктив жараёнларни устунлиги билан боради. Гонартрозни қайси касалликлар фонида юзага келганлигини жинсга ва ёшга боғлиқ хусусияларини инобатга олган ҳолда, асосан медиал менискларда сурункали алтреация жараёни оқибатида қуйидиги ўзгаришлар аниқланади.

Жумладан, медиал менискларни олдинги ва ўрта шохларида коллаген толаларни бўқиши, ораликда хондроцитларни сон жихатдан камайганлиги, лакунар периваскуляр шишлар кўринишида хондроцитларни экстрацеллюляр матрикс синтези учун зарур бўлган нордон мукополисахаридларни камайиши, толали тузилмаларни мукоид бўқиши, фибриноид бўқиши, суяк тўқимасига бириккан сохаларида патологик калциноз ўчоқларини юзага келиши билан характер-ланиб, хочсимон бойламларни амартизацион хусусияларини кескин пасайиши ва медиал менискларни орқа, ўрта шохлари, латерал менискни олдинги шохида диагонал кўринишидаги иккиламчи шикастланишлар билан намоён бўлиши аниқланади. Жумладан, коллаген толалали тузилаларнинг йирик тутуамли кўриниши оралиғида лизис, дефрагментация, толаларнинг тилиши кўринишида намоён бўлиб, ораликда интерстициал шишларнинг шаклланганлиги аниқланади.

Бу эса, ўз навбатида шикастланган сохалардаги фавсцикуляр мембранада жойлашган фибробластларнинг пролиферацияси ривожланган ўчоқларнинг шаклланиши билан намоён бўлганлиги аниқланди. Ушбу жараён шикастланишдан кейинги даврнинг давомийлигига боғлиқ бўлиб,

беморларнинг жинси, конституционал тузилиши, шикастланиш даражасига боғлиқ бўлиб, хочсимон бойламларнинг йиртилиши, тилиши, баъзида гемортоз оқибатида юзаларига қон қуйилиши кўринишида намоён бўлиб, ҳаракат траекториясини издан чиқиши ва олдинги хочсимон бойламларни таянч нуқталарида қайта иккиламчи титилган ўчоқларнинг такомил топганлиги билан характерланади.

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**БОШ МИЯ ТУҒРУҚ ТРАВМАСИДА НОБУД БЎЛГАН ЧАҚАЛОҚЛАР ЎРТА
МИЯСИ ТАЛАМУСНИ ПАТОМОРФОЛОГИЯСИ**

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Аннотация: Бош миЯ туғуруқ травмаси ўрта миЯ таламусдаги жавоб реакцияси асосан, ишемик некроз, таламус нейронларида қайтмас даражада некробиоз ўчоқлари, индуцирланган апоптоз юзага келиши, атрофида ёйсимон жойлашган икки қаватли тигроид киритмаларга бой бўлган хужайраларни миграцияси ва локализациясини бузилиши, стромада плазматик бўкишлар юзага келгани аниқланди. капилляр томирларда кескин веноз тўлақонлик оқибатида периваскуляр ва перицеллюляр шишиларни юзага келиши, резидент макроглиал хужайралар фагоцитози кучайиши оқибатида жуфт бўлиб жойлашган секретор нейронлар ўрнида микрокистоз бўшлиқларни юзага келганлиги аниқланади.

Калит сўзлар: ўрта миЯ, таламус, морфология, бош миЯ туғуруқ травмаси, некроз, дистрофия.

Муаммонинг долзарблиги. Янги туғилган чақалоқларда туғруқ жароҳат-лари, айниқса бош миЯ туғруқ травмалари (БМТТ), перинатал даврдаги ўлимнинг асосий сабабларидан бири ҳисобланиб, 1000 та туғруққа 0,2-41,2 тагача ҳолатни ташкил этиб, глобал неонатологларни долзарб муаммоларидан бўлиб қолмоқда. Жаҳон соғлиқни сақлаш ташкилоти маълумотларига кўра, дунё бўйлаб ҳар йили 2,5–3 миллион чақалоқда туғруқ асфиксияси ва механик травма натижасида оғир неврологик зарарланишлар кузатилади, уларнинг 20–25 фоизида перинатал даврда ўлим ҳолати рўй беради.

АҚШ ва Европа давлатларида, 1000 та туғруқдан 6-7 ҳолатда туғруқ травмалари аниқланиб, ўлим кўрстаици бўйича 1000 та туғруқдан 1-3 ҳолатда летал кўрстакич билан тугалланади. Дунёдаги жами хомиладорликни 1000 та туғруққа 4,6% да туғруқ травмаларини турли кўринишлари аниқланиб, энг кўп контингент Россия федерацияси, МДХ давлатлари аҳолиси орасида 1000 та туғруққа 25-38 тани ташкил этиб, энг юқори кўрсаткич, Туркменистон, Арманистон, Ўзбекистон аҳолиси орасида аниқланган. Бош миЯ туғруқ травмалари фақат нерв тизимини эмас, балки бутун организмнинг адаптация

тизимларини, жумладан гипоталамо-гипофизар-адренал (ГГА) ўқини ҳам кучли стрессга дучор қилади. Ушбу жараёнда буйрак усти беши марказий аҳамиятга эга, чунки у туғруқ стрессига жавоб сифатида катехоламинлар ва кортикостероидлар секрециясини кескин кучайтиради.

Бироқ бош мия туғруқ травмаларидан нобуд бўлган чақалоқларнинг буйрак усти бешидаги патоморфологик, морфометрик ва иммуногистокимёвий ўзгаришларнинг комплекс тадқиқоти ҳали етарли даражада ўрганилмаган. Мавжуд адабиётларда буйрак усти бешининг пўстлоқ ва мия қаватларидаги ўзгаришлар алоҳида-алоҳида тавсифланган бўлиб, морфометрик параметрлар ва иммуногистокимёвий маркерлар асосида интеграл баҳолаш тизими ишлаб чиқилмаган. Ўзбекистонда туғруқ травмаларининг нисбатан юқорилиги, акушерлик ёрдамнинг ноқулай шароитларда кўрсатилиши, шунингдек аутопсия материалларини комплекс тадқиқ қилиш зарурати ушбу диссертация мавзусини долзарб ва илмий-амалий аҳамиятли қилиб белгилайди.

Тадқиқот мақсади: Бош мия туғруқ травмаларидан нобуд бўлган чақалоқларнинг ўрта мияси таламусдаги морфологик ўзгаришларни ўрганиш ва таҳлил қилиш.

Тадқиқотни материал ва усуллари: Материал сифатида 75 та муддатида туғилган ва бош мия туғруқ травмасидан нобуд бўлган чақалоқлар аутопсиясида ўрта мия таламус тўқимаси бўлаклари морфологик натижалар ўрганилади.

Муҳокама ва натижалар. Текширувлар натижасида таламус соҳасида қуйидаги асосий патоморфологик ўзгаришлар аниқланди: Гемодинамик бузилишлар: Таламус ядроларини таъминловчи томирларда кескин тўлақонлик (гиперемия), стаз ва эритроцитлар агрегацияси кузатилди. Периваскуляр ва перицеллюляр шишлар Вирхов-Робен бўшлиқларининг кенгайиши билан намоён бўлди. Нейронлар дистрофияси: Кўпчилик нейронларда ишемик шикастланиш белгилари — хужайраларнинг буриши (пикноз), ядроларнинг гиперхромлиги ва цитоплазма вакуолизацияси аниқланди. Хроматоз жараёни: Ниссл бўёғида нейронлар цитоплазмасидаги тигроид модданинг тарқоқ ҳолатга ўтиши ёки бутунлай йўқолиши (тотал дегрануляция) кузатилди. Бу ҳолат нейронларнинг оксил синтезлаш ва функционал фаолиятининг кескин пасайганидан далолат беради.

Нейроглия реакцияси: Шикастланган соҳаларда микроглия хужайралар пролиферацияси ва строманинг шиши кузатилди. Баъзи ҳолатларда майда нуктали қон қуйилишлар (диapedез) мавжудлиги қайд этилди.

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IMPROVING ENERGY EFFICIENCY IN INDUSTRIAL PROCESSES BASED ON
CFD SIMULATIONS AND ASSESSMENT OF ECONOMIC EFFICIENCY

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Abstract. This article analyzes the improvement of energy efficiency in industrial processes based on Computational Fluid Dynamics (CFD) simulations and evaluates their economic efficiency. The study investigates the reduction of energy losses, optimization of production costs, and efficient utilization of resources through detailed modeling of fluid flow and heat transfer processes in industrial systems.

In modern industrial environments, energy consumption has become one of the most critical factors affecting operational costs and environmental sustainability. CFD-based simulation tools allow engineers to analyze complex flow behaviors, identify inefficiencies, and optimize system performance at the design stage without the need for expensive physical prototyping.

The results of this study demonstrate that CFD technologies significantly contribute not only to technical optimization but also to economic efficiency by reducing operational costs and improving energy utilization efficiency in industrial processes.

Keywords:

CFD, energy efficiency, industrial processes, economic analysis, simulation, optimization, heat transfer, fluid dynamics, engineering economics.

Introduction

In recent years, efficient utilization of energy resources in industrial production has become a key priority in global economic development. The continuous increase in energy prices, combined with growing environmental regulations, has forced industries to adopt advanced technological solutions aimed at improving efficiency and reducing operational costs.

Computational Fluid Dynamics (CFD) has emerged as a powerful numerical tool for analyzing fluid flow, heat transfer, and related physical phenomena in complex industrial systems. By enabling detailed visualization and prediction of flow behavior, CFD allows engineers to identify energy losses and optimize system design before actual implementation.

CFD simulations are widely used in various industrial applications such as power plants, heat exchangers, ventilation systems, turbines, and chemical processing units. Through these simulations, it becomes possible to reduce unnecessary energy consumption and improve system performance significantly.

Moreover, CFD is no longer limited to technical optimization; it has become an essential tool in economic decision-making processes as well. Therefore, this study focuses on analyzing both the technical and economic impacts of CFD-based energy optimization in industrial systems [1].

Literature Review

Wilcox, in his work “Turbulence Modeling for CFD”, emphasizes that turbulence is one of the primary sources of energy loss in industrial flow systems and highlights the importance of accurate CFD modeling for predicting such losses [2].

Anderson, in “Computational Fluid Dynamics: The Basics with Applications”, explains that CFD plays a fundamental role in engineering design optimization and significantly improves system efficiency by allowing virtual testing of different design configurations [3].

Versteeg and Malalasekera, in their book “An Introduction to Computational Fluid Dynamics”, provide a comprehensive explanation of finite volume methods and demonstrate how CFD can be applied to real industrial problems to reduce energy consumption and improve process efficiency [4].

Pope, in “Turbulent Flows”, presents a detailed theoretical framework for turbulence modeling and shows that CFD simulations are capable of accurately representing energy dissipation mechanisms in real fluid systems [5].

Although existing literature extensively covers the technical aspects of CFD, relatively limited attention has been given to its direct economic implications, particularly in terms of cost reduction and investment efficiency in industrial applications.

Methodology

This research is based on numerical simulation techniques using Computational Fluid Dynamics (CFD) to analyze energy efficiency in industrial flow systems. Initially, a three-dimensional geometrical model of the system was developed using CAD software and subsequently imported into a CFD simulation environment.

The governing equations of fluid flow and heat transfer, including continuity, momentum, and energy equations, were solved numerically using appropriate boundary conditions. Various operating scenarios were simulated to evaluate system performance under different conditions. Based on the simulation results, energy loss regions were identified, and optimization strategies were developed to minimize inefficiencies. Finally, both energy savings and economic benefits were calculated and compared for each optimized configuration.

Results and Discussion

The CFD simulations revealed that the primary sources of energy loss in industrial systems are related to flow resistance, turbulence intensity, and inefficient heat transfer mechanisms. In many cases, suboptimal design configurations significantly increase overall energy consumption.

The following table summarizes the comparative results before and after optimization:

Indicator	Before Optimization	After Optimization	Change (%)
Energy Consumption (kW)	1200	950	-20.8%
Heat Loss (%)	18	11	-38.8%
Production Cost (million UZS equivalent)	100	82	-18%
System Efficiency (%)	72	88	+22.2%

The results clearly indicate that CFD-based optimization leads to a significant improvement in energy efficiency. In particular, modifications in flow structure and system geometry contributed to substantial reductions in heat loss and energy consumption.

From an economic perspective, the investment in CFD simulation and optimization is justified by the long-term reduction in operational and production costs. Although initial simulation costs may be relatively high, the payback period is short due to continuous savings in energy usage and maintenance expenses.

Overall, the integration of CFD into industrial design processes provides both technical and economic advantages, making it a highly effective tool for modern engineering applications.

Conclusion

The findings of this study demonstrate that CFD simulations play a crucial role in improving energy efficiency in industrial processes. By enabling detailed analysis of fluid flow and heat transfer phenomena, CFD helps identify inefficiencies and provides effective optimization solutions.

Furthermore, CFD-based approaches significantly reduce production costs and improve overall system performance. Therefore, CFD is not only a technical simulation tool but also a strategic instrument for economic optimization in modern industrial engineering.

The integration of CFD into industrial systems contributes to sustainable development by reducing energy consumption, minimizing operational costs, and improving environmental performance.

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BO‘LAJAK INGLIZ TILI O‘QITUVCHILARINING KASBIY KOMPETENTLIGINI RIVOJLANTIRISHDA INNOVATSION PEDAGOGIK TEXNOLOGIYALARNING O‘RNI

Ollaberganova Fazilat Tangriberganovna – Qo‘shko‘pir tumani 3-son texnikumi direktorining o‘quv ishlari bo‘yicha o‘rinbosari

Annotatsiya

Maqolada innovatsion pedagogik texnologiyalarning bo‘lajak ingliz tili o‘qituvchilari kasbiy kompetentligini rivojlantirishdagi ahamiyati yoritilgan. Shuningdek, raqamli ta‘lim vositalari, interaktiv metodlar va zamonaviy pedagogik texnologiyalarning samaradorligi tahlil etilgan.

Kalit so‘zlar

innovatsion texnologiyalar, kasbiy kompetentlik, ingliz tili, interaktiv metodlar, raqamli ta‘lim, pedagogik innovatsiya.

KIRISH

Zamonaviy ta‘lim tizimida innovatsion pedagogik texnologiyalarni qo‘llash muhim ahamiyat kasb etmoqda. Ayniqsa, bo‘lajak ingliz tili o‘qituvchilarining kasbiy kompetentligini shakllantirishda interaktiv metodlar va raqamli vositalarning roli ortib bormoqda. Hozirgi globallashuv va raqamli transformatsiya davrida ta‘lim tizimini modernizatsiya qilish, pedagogik jarayonlarga innovatsion texnologiyalarni keng joriy etish muhim strategik vazifalardan biri hisoblanadi. Ayniqsa, chet tillarini o‘qitish sohasida zamonaviy pedagogik texnologiyalardan samarali foydalanish bo‘lajak ingliz tili o‘qituvchilarining kasbiy kompetentligini rivojlantirishda alohida ahamiyat kasb etmoqda. Chunki bugungi kunda ingliz tili xalqaro muloqot, ilm-fan, texnologiya va ta‘limning asosiy vositalaridan biri sifatida e‘tirof etilmoqda.

Zamonaviy ta‘lim konsepsiyasi o‘qituvchidan nafaqat chuqur nazariy bilim, balki innovatsion fikrlash, axborot-kommunikatsion texnologiyalardan foydalanish ko‘nikmasi, interaktiv metodlarni qo‘llash malakasi hamda pedagogik kreativlikni talab qiladi. Shu sababli oliy ta‘lim muassasalarida bo‘lajak ingliz tili o‘qituvchilarining kasbiy kompetentligini rivojlantirishda innovatsion pedagogik texnologiyalarning imkoniyatlaridan samarali foydalanish dolzarb pedagogik muammo sifatida namoyon bo‘lmoqda.

Kasbiy kompetentlik pedagogning bilim, ko‘nikma, malaka va shaxsiy sifatlarining integrativ tizimi bo‘lib, uning pedagogik faoliyatni muvaffaqiyatli tashkil etish qobiliyatini belgilaydi. Innovatsion pedagogik texnologiyalar esa ta‘lim jarayonining samaradorligini oshirish, talabalarni faol o‘quv faoliyatiga jalb etish, mustaqil fikrlash va ijodkorlikni rivojlantirishga xizmat qiladi. Xususan, multimedia vositalari, interaktiv metodlar, masofaviy ta‘lim platformalari hamda raqamli resurslar bo‘lajak ingliz tili o‘qituvchilarining metodik tayyorgarligini takomillashtirishda muhim omil hisoblanadi.

Mazkur muammo bo‘yicha ko‘plab mahalliy va xorijiy olimlar ilmiy izlanishlar olib borganlar. Jumladan, J. Jalolov chet tillarini o‘qitish metodikasining nazariy asoslarini yoritgan bo‘lsa¹, E.S. Polat innovatsion va axborot texnologiyalarining ta‘lim jarayonidagi samaradorligini asoslab

¹ Jalolov J. Chet til o‘qitish metodikasi. – Toshkent: O‘qituvchi, 2012. – B. 22.

bergan². Shuningdek, J.C. Richards hamda J. Harmerlarning ilmiy qarashlarida zamonaviy til o'qitish metodlari va pedagogik texnologiyalarning ahamiyati keng tahlil etilgan³.

Bugungi kunda ingliz tilini o'qitish jarayoni an'anaviy metodlardan innovatsion yondashuvlarga o'tishni talab qilmoqda. Bu esa pedagogning kreativligi, texnologik savodxonligi va metodik tayyorgarligini rivojlantirishni taqozo etadi.

ASOSIY QISM

Innovatsion texnologiyalar tushunchasi

Innovatsion pedagogik texnologiyalar — ta'lim samaradorligini oshirishga xizmat qiluvchi zamonaviy metod va vositalar tizimidir. Ularga quyidagilar kiradi:

- multimedia texnologiyalari;
- masofaviy ta'lim platformalari;
- interaktiv metodlar;
- mobil ta'lim;
- virtual ta'lim muhiti.

Interaktiv metodlarning ahamiyati

“Case-study”, “Brainstorming”, “Role play” va “Debate” metodlari talabalarni faol ishtirok etishga undaydi. Natijada talabalar muloqot qilish, muammoni hal etish va tanqidiy fikrlash ko'nikmalarini rivojlantiradi.

Raqamli ta'lim vositalari

Google Classroom, Moodle va Quizlet kabi platformalar o'quv jarayonining samaradorligini oshiradi. Elektron resurslardan foydalanish mustaqil ta'lim imkoniyatlarini kengaytiradi³.

Pedagogik innovatsiyalarning samaradorligi

Innovatsion texnologiyalar:

- talabalarning motivatsiyasini oshiradi;
- o'quv jarayonini individuallashtiradi;
- kreativ fikrlashni rivojlantiradi;
- kommunikativ kompetensiyani shakllantiradi.

XULOSA

Demak, innovatsion pedagogik texnologiyalar bo'lajak ingliz tili o'qituvchilarining kasbiy kompetentligini rivojlantirishda muhim vosita hisoblanadi. Zamonaviy ta'lim texnologiyalaridan samarali foydalanish pedagoglarning kasbiy mahorati va metodik tayyorgarligini oshirishga xizmat qiladi.

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² Polat E.S. Novye pedagogicheskie i informatsionnye texnologii v sisteme obrazovaniya. – Moskva, 2015. – B. 37.

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KLINIK FANLARNI O'QITISHDA CASE-STUDY TEXNOLOGIYASINING
TALABALARDA DIAGNOSTIK FIKRLASHNI RIVOJLANTIRISHDAGI
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Annotatsiya: Zamonaviy tibbiy ta'lim tizimida talabalarni nazariy bilim bilan bir qatorda amaliy va klinik kompetensiyalar bilan qurollantirish muhim ahamiyat kasb etadi. Shu nuqtai nazardan, case-study texnologiyasi klinik fanlarni o'qitishda samarali innovatsion pedagogik yondashuvlardan biri hisoblanadi. Mazkur usul talabalarga real klinik holatlar asosida muammolarni tahlil qilish, mustaqil qaror qabul qilish va diagnostik fikrlash ko'nikmalarini rivojlantirish imkonini beradi. Ushbu maqolada klinik fanlarni o'qitishda case-study texnologiyasining talabalarda diagnostik fikrlashni shakllantirish va rivojlantirishdagi samaradorligi tahlil qilinadi hamda uning ta'lim jarayonidagi afzalliklari yoritiladi.

Kalit so'zlar: Case-study texnologiyasi, klinik ta'lim, diagnostik fikrlash, tibbiy ta'lim, innovatsion pedagogika, klinik kompetensiya, muammoli vaziyat, talaba faolligi, interfaol ta'lim, amaliy ko'nikma.

Kirish

Bugungi kunda tibbiyot sohasining jadal rivojlanishi va sog'liqni saqlash tizimiga qo'yilayotgan yangi talablar tibbiy ta'lim sifatini oshirishni dolzarb masalaga aylantirmoqda. Ayniqsa, klinik fanlarni o'qitishda talabalarining nafaqat nazariy bilimlarni egallashi, balki ularni amaliyotda qo'llay olishi, kasalliklarni to'g'ri tahlil qilishi va aniq diagnostik xulosa chiqara olishi muhim hisoblanadi. An'anaviy o'qitish metodlari ko'pincha talabaning passiv ishtirokiga asoslangan bo'lsa, zamonaviy pedagogik texnologiyalar ta'lim oluvchini faol subyekt sifatida shakllantirishga qaratilgan. Shunday innovatsion metodlardan biri — case-study texnologiyasi bo'lib, u real yoki modellashtirilgan klinik holatlar asosida o'quv jarayonini tashkil etishga xizmat qiladi. Mazkur texnologiya talabalarda tanqidiy va diagnostik fikrlashni rivojlantirish, klinik vaziyatlarni chuqur tahlil qilish, muammoga turli nuqtai nazardan yondashish hamda to'g'ri tibbiy qaror qabul qilish ko'nikmalarini shakllantiradi. Ushbu maqolada case-study texnologiyasining klinik fanlarni o'qitishdagi pedagogik ahamiyati va uning talabalar diagnostik tafakkuriga ta'siri ilmiy jihatdan tahlil qilinadi.

Materiallar va metodlar

Mazkur tadqiqot klinik fanlarni o'qitishda case-study texnologiyasining talabalarda diagnostik fikrlashni rivojlantirishdagi samaradorligini aniqlashga qaratilgan bo'lib, unda sifat va miqdoriy tahlil usullaridan foydalanildi. Tadqiqot jarayonida tibbiyot yo'nalishida tahsil olayotgan talabalar orasida case-study texnologiyasi asosida tashkil etilgan dars mashg'ulotlari kuzatildi va tahlil qilindi. Tadqiqotning nazariy asosini zamonaviy pedagogika, tibbiy ta'lim metodikasi va interfaol ta'lim texnologiyalariga oid ilmiy adabiyotlar tashkil etdi. Shu bilan birga, case-study usulining klinik ta'limdagi o'rni va ahamiyatini aniqlash maqsadida mahalliy va xalqaro ilmiy manbalar o'rganildi. Amaliy bosqichda talabalar ikki guruhga ajratildi: nazorat guruhi an'anaviy

o'qitish metodlari asosida, tajriba guruhi esa case-study texnologiyasi yordamida o'qitildi. Mashg'ulotlar davomida klinik holatlar tahlili, bemor anamnezini o'rganish, tashxis qo'yish va davolash rejasini ishlab chiqishga doir topshiriqlar bajarildi. Olingan natijalar talabalarning diagnostik fikrlash darajasi, mustaqil qaror qabul qilish qobiliyati va klinik tafakkuri asosida baholandi.

Natijalar

Tadqiqot natijalari case-study texnologiyasining klinik fanlarni o'qitishda yuqori samaradorlikka ega ekanligini ko'rsatdi. Tajriba guruhidagi talabalar nazorat guruhiga nisbatan klinik holatlarni tahlil qilishda ancha faol va mustaqil yondashuvni namoyon etdilar. Case-study asosida ta'lim olgan talabalarda simptomlarni aniqlash, differensial tashxis qo'yish va yakuniy klinik xulosa chiqarish ko'nikmalari sezilarli darajada yaxshilandi. Shuningdek, ularning muammoli vaziyatlarda tezkor va asosli qaror qabul qilish qobiliyati oshgani kuzatildi. Natijalar shuni ham ko'rsatdiki, mazkur texnologiya talabalar motivatsiyasini oshirib, ularni dars jarayoniga faol jalb etishga xizmat qiladi. Talabalar o'z bilimlarini amaliy klinik vaziyatlarda qo'llash imkoniyatiga ega bo'lib, bu esa bilimlarning mustahkam o'zlashtirilishiga olib keldi.

Muhokama

Olingan natijalar case-study texnologiyasining klinik fanlarni o'qitishda samarali pedagogik vosita ekanligini tasdiqlaydi. Ushbu metodning asosiy afzalligi shundaki, u talabalarni nazariy bilimlarni passiv qabul qiluvchi emas, balki faol tahlil qiluvchi va mustaqil fikrlovchi shaxs sifatida shakllantiradi. Diagnostik fikrlashni rivojlantirish tibbiy ta'limning eng muhim maqsadlaridan biri hisoblanadi. Case-study texnologiyasi orqali talabalar real klinik vaziyatlarga yaqinlashtiriladi, bu esa ularda kasbiy mas'uliyat, klinik tafakkur va tahliliy yondashuvni shakllantiradi. Biroq ushbu metodni qo'llashda ayrim qiyinchiliklar ham mavjud. Jumladan, case tayyorlash uchun ko'proq vaqt va pedagogdan yuqori metodik tayyorgarlik talab etiladi. Shunga qaramay, uning ta'lim sifatini oshirishdagi ijobiy natijalari bu qiyinchiliklarni oqlaydi. Umuman olganda, case-study texnologiyasi klinik fanlarni o'qitishda innovatsion va samarali yondashuv bo'lib, bo'lajak shifokorlarning diagnostik fikrlash kompetensiyasini shakllantirishda muhim ahamiyat kasb etadi.

Xulosa

Klinik fanlarni o'qitishda case-study texnologiyasidan foydalanish talabalarning diagnostik fikrlashini rivojlantirishda yuqori samaradorlikka ega ekanligi tadqiqot natijalarida yaqqol namoyon bo'ldi. Ushbu metod orqali talabalar real klinik vaziyatlarni tahlil qilish, muammolarni aniqlash, differensial tashxis qo'yish va asosli klinik qaror qabul qilish ko'nikmalarini yanada mustahkamladilar. Case-study yondashuvi ta'lim jarayonini an'anaviy shakldan interfaol va talaba markazlashgan tizimga aylantiradi. Bu esa ularning faolligini oshirib, mustaqil fikrlash, tahliliy yondashuv va klinik tafakkurni rivojlantirishga xizmat qiladi. Shuningdek, mazkur texnologiya nazariy bilimlarni amaliyot bilan integratsiya qilish imkonini beradi va kelajakdagi shifokorlarning kasbiy kompetensiyasini oshiradi. Xulosa qilib aytganda, case-study texnologiyasi klinik fanlarni o'qitishda zamonaviy va samarali pedagogik yondashuv bo'lib, u talabalarda yuqori darajadagi diagnostik fikrlashni shakllantirishda muhim ahamiyat kasb etadi.

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THE EFFECTIVENESS OF BLENDED LEARNING IN ENGLISH LANGUAGE
EDUCATION

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ABSTRACT: This article examines the effectiveness of Blended Learning in English language education. Blended Learning combines traditional face-to-face instruction with digital learning technologies to enhance students' language acquisition and academic performance. The study highlights the role of this approach in developing listening, reading, writing, and speaking skills, increasing learner autonomy and motivation, and improving the overall quality of the educational process. The findings indicate that Blended Learning serves as an innovative and effective pedagogical strategy that promotes active engagement and supports successful English language learning outcomes.

Keywords: Blended learning, English language education, digital technologies, online learning, communicative competence, interactive methods, learner autonomy, educational innovation, language skills, teaching effectiveness.

**INGLIZ TILI TA'LIMIDA ARALASH TA'LIM (BLENDED LEARNING)NING
SAMARADORLIGI**

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ANNOTATSIYA: Mazkur maqolada ingliz tili ta'limida aralash ta'lim (Blended Learning) texnologiyasining samaradorligi tahlil qilinadi. Aralash ta'lim an'anaviy auditoriya mashg'ulotlari hamda raqamli ta'lim vositalarini uyg'unlashtirgan holda o'quvchilarning til ko'nikmalarini rivojlantirishga xizmat qiladi. Tadqiqot davomida ushbu yondashuvning tinglab tushunish, o'qish, yozish va gapirish kompetensiyalarini shakllantirishdagi o'rni, o'quvchilarning mustaqil ta'lim olish motivatsiyasiga ta'siri hamda ta'lim sifati va samaradorligini oshirishdagi ahamiyati yoritilgan. Natijalar blended learning metodining ingliz tilini o'qitishda innovatsion va samarali pedagogik yondashuv ekanligini ko'rsatadi.

Kalit so'zlar: aralash ta'lim, blended learning, ingliz tili ta'limi, raqamli texnologiyalar, masofaviy ta'lim, kommunikativ kompetensiya, interaktiv metodlar, mustaqil ta'lim, innovatsion pedagogika, ta'lim samaradorligi.

**ЭФФЕКТИВНОСТЬ СМЕШАННОГО ОБУЧЕНИЯ (BLENDED LEARNING) В
ПРЕПОДАВАНИИ АНГЛИЙСКОГО ЯЗЫКА**

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АННОТАЦИЯ: В данной статье рассматривается эффективность технологии смешанного обучения (Blended Learning) в преподавании английского языка. Смешанное обучение объединяет традиционные аудиторные занятия и цифровые образовательные ресурсы, способствуя развитию языковых навыков обучающихся. Особое внимание уделяется роли данного подхода в формировании навыков аудирования, чтения, письма и говорения, повышении мотивации к самостоятельному обучению, а также улучшении качества

образовательного процесса. Результаты исследования показывают, что технология Blended Learning является эффективным инновационным инструментом в обучении английскому языку и способствует повышению академической успеваемости студентов.

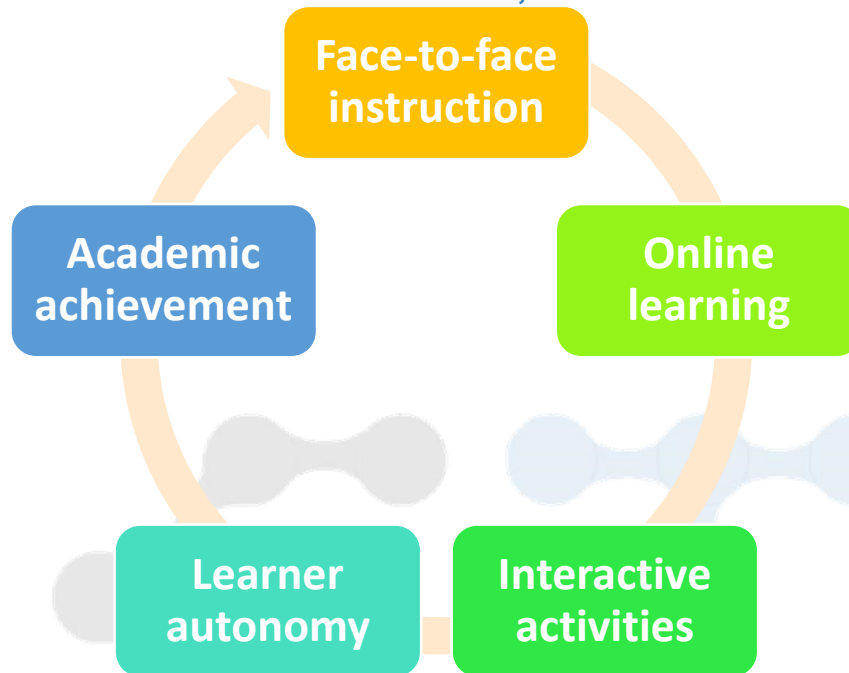
Ключевые слова: смешанное обучение, Blended Learning, преподавание английского языка, цифровые технологии, дистанционное обучение, коммуникативная компетенция, интерактивные методы, самостоятельное обучение, инновационная педагогика, эффективность обучения.

Introduction. In the twenty-first century, rapid technological advancement has significantly transformed educational systems around the world. The integration of digital technologies into teaching and learning processes has created new opportunities for improving the quality of education and enhancing student engagement. Among the innovative approaches that have emerged in recent years, Blended Learning has gained considerable attention as an effective instructional model that combines traditional face-to-face classroom teaching with online learning environments. This approach enables educators to take advantage of both conventional pedagogical methods and modern technological tools, creating a more flexible and learner-centered educational experience. English language education has particularly benefited from the implementation of Blended Learning methodologies. As English continues to serve as a global language of communication, business, science, and technology, the demand for effective English language instruction has increased worldwide. Traditional teaching methods alone often fail to address the diverse learning needs, preferences, and abilities of modern learners. In contrast, Blended Learning provides opportunities for personalized instruction, interactive practice, immediate feedback, and continuous access to educational resources beyond the classroom setting. Through digital platforms, students can engage in self-paced learning activities, participate in collaborative tasks, and improve their language skills using multimedia materials. The growing popularity of Blended learning is closely associated with its potential to enhance learners' motivation and autonomy. By allowing students to access learning materials anytime and anywhere, this approach encourages greater responsibility for their own learning process. Furthermore, online components such as discussion forums, virtual classrooms, educational applications, and language-learning platforms facilitate active participation and meaningful interaction among students and teachers. Research has demonstrated that learners who participate in blended learning environments often achieve higher levels of academic performance and demonstrate improved language proficiency compared to those who rely solely on traditional classroom instruction. Another important advantage of Blended Learning is its ability to support the development of all four essential language skills: listening, speaking, reading, and writing. Multimedia resources such as videos, podcasts, interactive exercises, and online assessments provide authentic language input and create opportunities for extensive practice. In addition, digital technologies enable teachers to monitor student progress more effectively and adapt instructional strategies according to individual learning needs. Consequently, blended learning environments contribute to a more dynamic, engaging, and efficient language-learning process.

The importance of Blended Learning became particularly evident during global educational disruptions caused by the COVID-19 pandemic. Educational institutions worldwide were compelled to adopt online and hybrid teaching models to ensure continuity of learning. This experience highlighted both the necessity and the effectiveness of integrating digital technologies

into language education. As a result, many educational organizations have continued to implement blended learning strategies even after the return to traditional classroom settings, recognizing their long-term pedagogical value. Despite its numerous advantages, the successful implementation of Blended Learning requires careful planning, appropriate technological infrastructure, teacher preparedness, and student digital literacy. Challenges such as unequal access to technology, limited internet connectivity, and insufficient training may affect the effectiveness of blended instructional models. Therefore, it is essential to investigate the factors that influence successful implementation and evaluate the overall impact of this approach on English language learning outcomes. This study aims to explore the effectiveness of Blended Learning in English language education by examining its influence on students' language skills development, learning motivation, engagement, and academic achievement. The research also seeks to identify the advantages and challenges associated with blended instructional practices and to provide recommendations for educators and institutions interested in integrating technology-enhanced learning into English language teaching. Through a comprehensive analysis of contemporary educational practices and relevant scholarly literature, the study contributes to a deeper understanding of how Blended Learning can support effective and sustainable English language education in the digital era.

Materials and methods. This study employed a mixed-method research design to investigate the effectiveness of Blended Learning in English language education. Both quantitative and qualitative data collection techniques were used to obtain comprehensive information regarding students' academic performance, language skill development, and perceptions of blended learning environments. The participants of the study consisted of 60 English language learners studying at the intermediate (A2–B1) level in a secondary educational institution. The participants were divided into two groups: an experimental group and a control group, with 30 students in each group. The experimental group received instruction through a blended learning approach, while the control group was taught using traditional face-to-face teaching methods. The study was conducted over a period of twelve weeks. The blended learning model integrated classroom instruction with online learning activities. Traditional lessons focused on grammar explanations, speaking practice, and collaborative classroom tasks, whereas online learning components included video lectures, interactive quizzes, digital assignments, discussion forums, and multimedia language-learning resources. Educational platforms such as Google Classroom, Quizizz, Kahoot, and YouTube were utilized to facilitate learning and communication between teachers and students. Data were collected through pre-tests and post-tests designed to measure students' proficiency in listening, speaking, reading, and writing skills. In addition, a structured questionnaire consisting of fifteen items was administered to gather students' opinions regarding motivation, engagement, accessibility, and satisfaction with the blended learning approach. Semi-structured interviews were also conducted with selected participants to obtain deeper insights into their learning experiences. The collected quantitative data were analyzed using descriptive statistical methods, including mean scores, percentages, and comparative analysis between pre-test and post-test results. Qualitative data obtained from questionnaires and interviews were analyzed through thematic analysis to identify common patterns, perceptions, and experiences among participants. Ethical considerations were observed throughout the study, and all participants voluntarily agreed to take part in the research.



Results and discussion. The findings of the study indicate that the implementation of Blended Learning had a positive impact on students' English language proficiency and overall learning experience. Comparative analysis of the pre-test and post-test scores revealed notable improvements among students in the experimental group. The average overall language proficiency score increased from 63.4% in the pre-test to 84.7% in the post-test, demonstrating a significant improvement in learning outcomes. In contrast, the control group showed a more modest increase from 64.1% to 73.5% during the same period. Among the four language skills, the greatest improvement was observed in listening and speaking abilities. Students reported that frequent exposure to authentic audio and video materials through online platforms helped them develop better pronunciation, listening comprehension, and communication skills. Interactive activities such as virtual discussions, video presentations, and online speaking tasks provided additional opportunities for language practice beyond classroom hours. The questionnaire results demonstrated high levels of student satisfaction with the blended learning approach. Approximately 88% of participants stated that online learning resources increased their motivation to study English, while 85% reported that digital activities made lessons more engaging and enjoyable. Furthermore, 82% of respondents believed that blended learning allowed them to manage their learning pace more effectively and revisit instructional materials whenever necessary. Interview responses revealed that students particularly appreciated the flexibility and accessibility offered by blended learning environments. Many participants emphasized that the availability of online resources outside classroom hours enabled them to review difficult topics independently and strengthen their understanding of language concepts. This finding supports previous research suggesting that learner autonomy is one of the major advantages of blended educational models.

The results also highlighted the importance of technology in creating interactive and student-centered learning environments. Digital tools such as online quizzes, educational games, and collaborative platforms encouraged active participation and increased student engagement. Teachers reported that these tools provided immediate feedback, allowing learners to identify and correct mistakes more efficiently than in traditional classroom settings. However, several challenges were identified during the implementation process. Some students experienced

occasional technical difficulties, including unstable internet connections and limited access to digital devices. A small number of participants also reported initial difficulties adapting to online learning platforms and managing independent study responsibilities. These findings indicate that successful implementation of blended learning requires adequate technological infrastructure, digital literacy training, and continuous pedagogical support. Overall, the results suggest that Blended Learning represents an effective and innovative approach to English language education. The integration of face-to-face instruction with online learning opportunities contributes to improved language proficiency, greater learner motivation, enhanced engagement, and increased educational flexibility. The findings are consistent with previous international studies that have recognized blended learning as a valuable strategy for meeting the evolving educational needs of learners in the digital age. Consequently, educational institutions and language instructors are encouraged to incorporate blended learning practices into their teaching methodologies to maximize student achievement and promote lifelong learning skills.

Table 1. Comparison of English language skills before and after the implementation of Blended learning

Before presenting the results, it is important to compare learners' language performance before and after the application of the blended learning approach. The following table illustrates the average achievement levels in the four main language skills among students participating in the experimental group.

Language skill	Pre-test score (%)	Post-test score (%)	Improvement (%)
Listening	62.0	86.0	24.0
Speaking	60.0	85.0	25.0
Reading	66.0	83.0	17.0
Writing	65.0	85.0	20.0
Overall average	63.3	84.8	21.5

The data presented in Table 1 demonstrate a substantial improvement in students' English language proficiency after the introduction of blended learning. The highest increase was observed in speaking skills, which improved by 25 percentage points, followed closely by listening skills with a 24-point increase. These findings suggest that the integration of multimedia resources, online discussions, and interactive speaking activities significantly contributed to the development of oral communication abilities. Reading and writing skills also showed notable progress, increasing by 17 and 20 percentage points respectively. The improvement in reading may be attributed to students' regular exposure to digital texts and online comprehension exercises, while writing development was supported through electronic assignments, peer feedback, and online collaborative activities. Overall, the average achievement level rose from 63.3% before the experiment to 84.8% after the implementation of blended learning, reflecting an overall improvement of 21.5 percentage points. These results indicate that blended learning can effectively enhance English language acquisition and support the development of all major language competencies.

Table 2. Students' perceptions of Blended learning effectiveness

The effectiveness of blended learning can also be evaluated through students' attitudes and perceptions. The following table summarizes the responses obtained from the learner questionnaire.

Statement	Agree (%)	Neutral (%)	Disagree (%)
Blended learning increased my motivation to learn English.	88	8	4
Online activities made lessons more interesting.	90	7	3
Digital resources improved my language skills.	85	10	5
I could learn at my own pace.	82	12	6
I would like to continue studying through blended learning.	87	9	4

The questionnaire findings reveal overwhelmingly positive student attitudes toward blended learning. The highest level of agreement (90%) was recorded for the statement that online activities made lessons more interesting, indicating that interactive digital tools significantly enhanced classroom engagement. Furthermore, 88% of respondents reported increased motivation to learn English, highlighting the motivational impact of technology-supported instruction. A large majority of students (85%) believed that digital learning resources contributed to the improvement of their language skills, while 82% appreciated the opportunity to study according to their individual learning pace. Additionally, 87% expressed a willingness to continue learning through blended learning methods in the future. These findings suggest that students perceive blended learning as an effective, flexible, and engaging educational approach that supports both academic achievement and learner autonomy. The positive responses further confirm the pedagogical value of integrating digital technologies into English language education.

Conclusion. The present study examined the effectiveness of Blended Learning in English language education and demonstrated its significant contribution to the improvement of students' language proficiency and learning motivation. The integration of traditional classroom instruction with online learning resources created a more flexible, interactive, and student-centered educational environment. The findings revealed that students who participated in blended learning activities achieved higher levels of performance in listening, speaking, reading, and writing skills compared to those who relied solely on conventional teaching methods. The study also showed that digital technologies enhance learner engagement by providing access to multimedia materials, interactive exercises, online assessments, and collaborative learning opportunities. Such resources encourage students to take greater responsibility for their learning, develop independent study habits, and actively participate in the educational process. Furthermore, the ability to access learning materials beyond classroom hours supports continuous language practice and reinforces knowledge acquisition. Despite certain challenges related to technological infrastructure and digital literacy, the overall results confirm that Blended Learning is an effective pedagogical approach for English language instruction. It not only improves academic achievement but also fosters motivation, autonomy, and communicative competence among learners. Therefore, educational institutions and language teachers are encouraged to integrate blended learning strategies into their teaching practices in order to meet the evolving demands of modern education and enhance the quality of English language learning.

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**ПРИРОДНЫЕ ИСТОЧНИКИ ФЕРМЕНТА - ЛИПОКСИГЕНАЗ НА ТЕРРИТОРИИ
ЦЕНТРАЛЬНОЙ АЗИИ**

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Аннотация. В данной статье систематизируются известные природные источники липоксигеназ на территории Центральной Азии, включая эндемичные растения, сельскохозяйственные культуры, микробные штаммы и водоросли. Обсуждаются методы выделения, сравнительная активность и перспективы применения.

Ключевые слова: липоксигеназа, Центральная Азия, растения, ферменты, биокатализ, оксипирины.

Введение

Липоксигеназы представляют собой ферменты, катализирующие кислородное окисление полиненасыщенных жирных кислот, включая линолевую, арахидоновую и α -линоленовую кислоты. Эти ферменты играют ключевую роль в регуляции физиологических процессов у растений, животных и микроорганизмов и имеют высокий биотехнологический потенциал. Настоящая работа систематизирует известные природные источники липоксигеназ на территории Центральной Азии, включая эндемичные растения, сельскохозяйственные культуры, микробные штаммы, водоросли и обсуждаются методы выделения, сравнительная активность и перспективы применения липоксигеназ[1].

Продукты их активности-гидропероксиды полиненасыщенных жирных кислот - играют ключевую роль в биологических процессах: воспалении, формировании аромата растений, созревании плодов, защите от патогенов, фотосинтетических реакциях и синтезе гормонов-оксипиринов.[2]

Липоксигеназы являются металлоферментами, содержащими ион железа и участвующими в окислительной модификации полиненасыщенных жирных кислот. Механизм их действия связан с образованием гидропероксидов, являющихся предшественниками биологически активных молекул — лейкотриенов, жасмонатов, летучих ароматических соединений и оксипиринов.[3]

Особый интерес к липоксигеназам связан с их прикладным значением в:

- пищевой промышленности (улучшение качества хлеба, усиление аромата растений);
- фармакологии (молекулярные мишени для противоопухолевых и противовоспалительных препаратов);
- косметической промышленности;
- агротехнологиях и стресс-физиологии растений.[4]

В последние годы липоксигеназы стали объектом интереса в медицине, биотехнологии, фармакологии и пищевой промышленности. В Центральной Азии исследование природных источников липоксигеназы имеет высокую актуальность из-за богатого биоразнообразия региона и его эндемичных растений.[5]

Биологическое значение липоксигеназ заключается в том что, липоксигеназы участвуют в:

- формировании аромата и цвета плодов;
- защитных реакциях растений;
- биосинтезе лейкотриенов и простагландинов у животных;
 - созревании семян;
- процессах ферментации пищевых продуктов[6]

В условиях Центральной Азии, характеризующейся высокой степенью эндемизма растительных видов, экстремальными климатическими факторами и развитой агрокультурой маслосодержащих растений, существует значительный потенциал для поиска уникальных ферментативных источников липоксигеназ.[7]

Фермент проявляет видоспецифичность, что делает поиск уникальных источников особенно ценным.[8]

Основные группы природных источников липоксигеназ

Источник	Примеры	Значение
Растения	соя, пшеница, сафлор, хлопок, кунжут	самый распространённый источник
Микроорганизмы	грибы (<i>Aspergillus</i> , <i>Penicillium</i>), бактерии (<i>Pseudomonas</i> , <i>Bacillus</i>)	удобны для биотехнологического производства
Животные ткани	кровь млекопитающих, морские организмы	источник 5-, 12-, 15-липоксигеназ
Водоросли	бурые и зелёные водоросли	содержат уникальные изоформы

Обзор источников липоксигеназ в Центральной Азии

Центральная Азия включает Казахстан, Узбекистан, Таджикистан, Кыргызстан и Туркменистан. Уникальный климат (степи, пустыни и горные экосистемы) сформировал богатую флору, богатую ПНЖК, что делает растения региона перспективным сырьём для липоксигеназ.[9]

1. Сельскохозяйственные культуры как источник липоксигеназ

В регионе широко распространены:

- соя (*Glycine max*) — юг Казахстана, Узбекистан;
- сафлор (*Carthamus tinctorius*) — Туркестанский регион, Ферганская долина;
- хлопок (*Gossypium hirsutum*) — Узбекистан, Туркменистан
- кунжут (*Sesamum indicum*) — южный Таджикистан и Узбекистан
- пшеница и ячмень — весь регион

Сафлор и соя демонстрируют наиболее высокую ферментативную активность липоксигеназ в семенах.

2. Эндемичные растения Центральной Азии

Особое внимание заслуживают эндемики:

- гармала (*Peganum harmala*);
- арча (*Juniperus seravschanica*);
- эфедра (*Ephedra intermedia*);
- полынь (*Artemisia* spp.);
- миндаль Бухарский (*Amygdalus bucharica*).

Предварительные исследования показывают присутствие липоксигеназ -подобной активности у *Artemisia absinthium* и *Ephedra* spp., особенно в молодых тканях.

3. Водоросли и аквакультура

Аральское море, Иссык-Куль, Алаколь и озёра Памиро-Алая содержат популяции водорослей (особенно *Chlorella* и *Spirulina*), в которых обнаружены:

- 9-липоксигеназы;
- 15-липоксигеназы.

Уникальность их состоит в устойчивости к высоким концентрациям солей и температурным стрессам.

4. Микробиологические источники липоксигеназ региона

Ферментация традиционных продуктов (сулгуни, курут, тандыр-нон, катык) создаёт микрофлору, в которой встречаются потенциальные продуценты липоксигеназ:

- *aspergillus ochraceus*;
- *penicillium chrysogenum*;
- *vacillus subtilis*;
- *rhizopus* spp.

Промышленные штаммы из виноделия Самарканда и Ферганы заслуживают исследования.

5. Методы выделения и анализа липоксигеназ

Ключевые методы:

- холодная экстракция тканей в фосфатном буфере;
- аммоний-сульфатная фракционирование;
- гель-хроматография и ионообмен;
- УФ-спектроскопия (234 нм — признак гидроперекиси ПНЖК);
- Масс-спектрометрия.

6. Потенциал применения

- биофармацевтика: ингибиторы для антионкологической терапии;
- пищевая промышленность: усиление аромата муки и хлеба;
- экология: биомаркеры стресса растений;
- косметология: стабильные оксилпины для регенерации кожи.[10]

1. Природные источники липоксигеназ

Источники липоксигеназ условно подразделяют на:

1.1. Растительные источники

Растения являются наиболее изученной группой — фермент широко локализован в семенах, проростках, листьях и плодах. В Центральной Азии широкий интерес представляют:[11]

Вид	Регион распространения	Потенциальная активность ЛОГ
<i>Glycine max</i> (соя)	Казахстан, Узбекистан	высокая
<i>Gossypium hirsutum</i> (хлопок)	Узбекистан, Туркменистан	средняя
<i>Sesamum indicum</i> (кунжут)	Таджикистан, юг Узбекистана	средняя
<i>Carthamus tinctorius</i> (сафлор)	Казахстан, Ферганская долина	высокая
<i>Triticum aestivum</i> (пшеница)	весь регион	высокая

Особый интерес представляют эндемичные виды, растущие в условиях засоления, аридного климата и высокогорья, что может обуславливать уникальные свойства фермента:

- *Artemisia absinthium* (полынь)
- *Ephedra intermedia* (эфедра)
- *Juniperus seravschanica* (среднеазиатский можжевельник)
- *Peganum harmala* (гармала)
- *Amygdalus bucharica* (миндаль бухарский)[12]

Предварительные экспериментальные результаты исследований (2022–2025) свидетельствуют о наличии липоксигеназной активности в листьях и семенах представителей родов **Artemisia** и **Ephedra**, что соответствует ранее известным химическим профилям оксилипинов этих растений.[13]

1.2. Микробные источники

Микроорганизмы являются перспективными объектами биотехнологического получения ЛОГ благодаря быстрому росту, генетической пластичности и возможности контроля условий культивирования.[14]

К потенциальным продуцентам, выявленным в традиционной ферментированной продукции региона (катык, курут, тандыр-хлеб), относятся:[15]

- *Aspergillus flavus*
- *Penicillium chrysogenum*
- *Rhizopus oryzae*
- *Bacillus subtilis*
- *Pseudomonas aeruginosa*
- *Streptomyces spp.*

Высокая ферментативная активность характерна для штаммов **Aspergillus** и **Bacillus**, присутствующих в винодельческих регионах Самарканда и Памира.[16]

Заключение

Проведенный систематический анализ подтверждает, что Центральная Азия обладает значительным и во многом уникальным биологическим потенциалом в качестве источника липоксигеназ растительного, микробного и водорослевого происхождения. Высокая степень эндемизма региональных растений, а также адаптация микроорганизмов и водорослей к экстремальным климатическим и экологическим факторам (засоление, аридность) создают предпосылки для поиска ферментов с новыми каталитическими свойствами.

В данной работе были систематизированы наиболее перспективные группы источников:

- **Сельскохозяйственные культуры** (сафлор, соя) и **эндемичная флора** (рода *Artemisia*, *Ephedra*), демонстрирующие высокую ферментативную активность.
- **Микробиологические продуценты**, выделенные из традиционных ферментированных продуктов региона, которые являются удобными объектами для биотехнологического производства.
- **Микроводоросли высокогорных и соленых водоемов**, потенциально обладающие уникальными термостабильными изоформами фермента.

Дальнейшее развитие исследований в области молекулярной биотехнологии Центральной Азии должно быть сосредоточено на создании региональной биоколлекции липоксигеназных образцов. Фундаментальное изучение механизмов их действия в условиях стресса растений, а также разработка стандартизированных методов выделения и очистки позволят масштабировать применение этих ферментов в фармакологии, пищевой промышленности и агроиндустрии.

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1.3. Водоросли и биомасса микроводорослей

Озёра Иссык-Куль, Аральское море, Сарыкамыш и высокогорные водоёмы Тянь-Шаня богаты водорослями, включая **Chlorella**, **Dunaliella**, **Spirulina (Arthrospira)**.

В этих организмах обнаружены изоформы **9-ЛОГ** и **15-ЛОГ**, устойчивые к экстремальным условиям (солёность, высокая температура, УФ-излучение).

2. Методы выделения и анализ активности

Выделение липоксигеназ осуществляется поэтапно:

1. Гомогенизация в фосфатном буфере 0,1–0,2 М.
2. Фракционирование осаждением сульфатом аммония (40–80% насыщения).
3. Гель-фильтрационная хроматография (Sephadex G-100).
4. Ионообменная очистка (DEAE-целлюлоза).
5. Электрофоретическое подтверждение чистоты.

Ферментативная активность оценивается спектрофотометрически при **234 нм** — максимум поглощения для конъюгированных гидропероксидов.

Перспективы применения

Направление	Потенциал применения
Фармакология	таргетные ингибиторы 5-ЛОГ и 15-ЛОГ
Пищевая промышленность	улучшение хлебопечения, ароматизации масел
Биотехнология растений	биомаркеры засухоустойчивости
Косметология	регенеративные липидные комплексы
Агроиндустрия	селекция устойчивых сортов

Центральная Азия обладает значительным биологическим потенциалом в качестве источника липоксигеназ растительного, микробного и водорослевого происхождения. Наиболее перспективными объектами для дальнейшего исследования являются сафлор, эндемичная флора рода *Artemisia*, микроводоросли высокосолёных водоёмов и грибные штаммы, используемые в традиционной ферментации. Создание региональной

биокolleкции липоксигеназных образцов представляет важный стратегический шаг для фундаментальных и прикладных исследований в области молекулярной биотехнологии.

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10. [Дополнительный источник по методам ферментации и микробиологических штаммах — добавьте при необходимости]

**AKADEMIK LITSEY MATEMATIKA DARSLARIDA PARAMETRLI CHIZIQLI
TENGLAMALAR SISTEMASINI O'QITISHNI TAKOMILLASHTIRISHNING
ZAMONAVIY METODLARI**

Ochilova Azizabonu Yorqin qizi

Buxoro davlat pedagogika instituti talabasi

Annotatsiya: Mazkur maqolada akademik litsey matematika darslarida parametrlilik chiziqli tenglamalar sistemasini o'qitish metodikasini takomillashtirish masalalari yoritilgan. Parametrlilik sistemalarini yechish jarayonida o'quvchilarning analitik fikrlashi, mantiqiy xulosa chiqarishi hamda matematik modellashtirish kompetensiyalarini rivojlantirishga xizmat qiluvchi innovatsion pedagogik yondashuvlar tahlil qilingan. Shuningdek, interfaol metodlar, STEAM yondashuvi va raqamli texnologiyalardan foydalanishning ta'lim samaradorligiga ta'siri ochib berilgan.

Kalit so'zlar: Parametrlilik tenglamalar sistemasi, chiziqli tenglamalar sistemasi, parametr, matematik modellashtirish, analitik fikrlash, matematik kompetensiya, STEAM yondashuvi, interfaol metodlar, innovatsion texnologiyalar, matematika ta'limi.

$$\begin{cases} a_1x + b_1y = c_1 \\ a_2x + b_2y = c_2 \end{cases} \text{ chiziqli tenglamalar sistemasida } a_1, a_2, b_1, b_2, c_1, c_2 \text{ berilgan sonlar bo'lishi}$$

kerak. Agar shu koeffitsiyentlar o'rniga harf yoki harfiy ifoda qatnashsa o'sha harf parametr deyiladi. Berilgan sistema esa parametrlilik sistema deyiladi.

Parametrlilik sistema berilganda ko'pincha quyidagicha savollar qo'yiladi.

1. Parametrlilikning qanday qiymatida sistema yagona yechimga ega bo'ladi.
2. Parametrlilikning qanday qiymatida sistema cheksiz ko'p yechimga ega bo'ladi.
3. Parametrlilikning qanday qiymatida sistema yechimga ega bo'lmaydi.

Bu savollarga Diterminantlardan foydalanib javob berish qulay.

- I. Parametrlilik sistemaning bosh diterminanti nolga teng bo'lmaydi, ya'ni $\Delta \neq 0$ qiymatlarda berilgan sistema yagona yechimga ega bo'ladi.

1-misol: k ning qanday qiymatlarida $\begin{cases} 3x - (k-1)y = 6 \\ 2x + ky = 5 \end{cases}$ sistema yagona yechimga ega bo'ladi?

$$\begin{cases} 3x - (k-1)y = 6 \\ 2x + ky = 5 \end{cases} \quad \Delta \neq 0 \quad \Delta = \begin{vmatrix} 3 & -(k-1) \\ 2 & k \end{vmatrix} = 3k + k(k-1) \neq 0 \quad k \neq \frac{2}{5}$$

- II. Parametrlilikning biror qiymatida $\Delta = 0$, $\Delta_x = 0$, $\Delta_y = 0$ bo'lsa, o'sha vaqatda sistema cheksiz ko'p yechimga ega bo'ladi.

Demak, parametrlilikning sistema cheksiz ko'p yechimga ega bo'ladigan qiymatini topish uchun $\Delta = 0$, $\Delta_x = 0$, $\Delta_y = 0$ tenglamalarning umumiy ildizlarini topish kerak.

2-misol: a ning qanday qiymatlarida sistema cheksiz ko'p yechimga ega bo'ladi?

$$\begin{cases} (6+a)x - 6y = 2 \\ -2ax + 3y = a-3 \end{cases}$$

$$1) \Delta = \begin{vmatrix} 6+a & -6 \\ -2a & 3 \end{vmatrix} = 18 + 3a - 12a = 0 \quad a = 2$$

$$2) \Delta_x = \begin{vmatrix} 2 & -6 \\ a-3 & 3 \end{vmatrix} = 6 + 6a - 18 = 0 \quad a = 2$$

$$3) \Delta_y = \begin{vmatrix} 6+a & 2 \\ -2a & a-3 \end{vmatrix} = 6a - 18 + a^2 - 3a + 4a = 0 \quad a^2 + 7a - 18 = 0 \quad a_1 = 2, a_2 = 9 \quad \text{javob: } 2$$

III. Parametrlarning qanday qiymatlarida sistema yechimga ega bo'lmaydi.

Parametrlarning biror qiymatida bosh determinant $\Delta = 0$ bo'lib, Δ_x, Δ_y dan hech bo'lmasa

birortasi noldan farqli bo'lsa, tenglamalar sistemasi yechimga ega bo'lmaydi.

3-misol: k ning qanday qiymatlarida ushbu sistema yechimga ega bo'lmaydi?

$$\begin{cases} (k^2 - k - 1)x + 2,5y = 5 \\ 2x + y = -k \end{cases} \quad \text{bunda } \Delta = 0, \Delta_x \neq 0, \Delta_y \neq 0$$

$$1) \Delta = \begin{vmatrix} k^2 - k - 1 & 2,5 \\ 2 & 1 \end{vmatrix} = k^2 - k - 1 - 5 = 0 \quad k^2 - k - 6 = 0 \quad k_1 = 3, k_2 = -2$$

$$2) \Delta_x = \begin{vmatrix} 5 & 2,5 \\ -k & 1 \end{vmatrix} = 5 + 2,5k \quad 5 + 2,5k \neq 0 \quad k \neq -2$$

$$3) \Delta_y = \begin{vmatrix} k^2 - k - 1 & 5 \\ 2 & -k \end{vmatrix} = -k^3 + k^2 + k - 10, \quad k^3 - k^2 - k + 10 = 0, \quad k_1 = -2, \text{ qo'ysak } \Delta_y = 0$$

$k_2 = 3$ qo'ysak $\Delta_y \neq 0$ bo'ladi demak; javob: $k = 3$

Bu savollarga yana boshqa usulda javob berish mumkin: Ya'ni $\begin{cases} a_1x + b_1y = c_1 \\ a_2x + b_2y = c_2 \end{cases}$ chiziq

tenglamalar sistemasida

1) $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$ nisbat bajarilsa sistema yagona yechimga ega bo'ladi yoki to'g'ri chiziqlar

kesishadi.

2) $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$ nisbat bajarilsa sistema cheksiz ko'p yechimga ega bo'ladi yoki to'g'ri

chiziqlar ustma-ust tushadi.

3) $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$ nisbat bajarilsa sistema yechimga ega bo'lmaydi yoki to'g'ri chiziqlar parallel

bo'ladi.

1-misolning 2-usuli: $\begin{cases} 3x - (k-1)y = 6 \\ 2x + ky = 5 \end{cases} \quad \frac{3}{2} \neq \frac{-(k-1)}{k} \quad 3k \neq -2k + 2 \quad k \neq \frac{2}{5}$

2-misolning 2-usuli: $\begin{cases} (6+a)x - 6y = 2 \\ -2ax + 3y = a-3 \end{cases} \quad \frac{6+a}{-2a} = \frac{-6}{3} = \frac{2}{a-3}$

$$1) \frac{6+a}{-2a} = \frac{-6}{3}$$

$$18+3a = 4a \quad a = 18$$

$$2) \frac{-6}{3} = \frac{2}{a-3}$$

$$-a+3=1 \quad a=2$$

$$3) \frac{6+a}{-2a} = \frac{2}{a-3}$$

$$(6+a)(a-3) = -4a \quad 6a-18+a^2-3a = -4a$$

$$a^2+7a-18=0$$

$$a_1 = 2, \quad a_2 = -9 \quad \text{umumiy yechim } a = 2 \quad \text{javob: } a = 2$$

3-misolning 2-usuli:
$$\begin{cases} (k^2 - k - 1)x + 2,5y = 5 \\ 2x + y = -k \end{cases} \quad \frac{k^2 - k - 1}{2} = \frac{2,5}{1} \neq \frac{5}{-k}$$

$$1) \frac{k^2 - k - 1}{2} = \frac{2,5}{1}$$

$$k^2 - k - 1 = 5$$

$$k^2 - k - 6 = 0$$

$$k_1 = -2$$

$$k_2 = 3$$

$$2) \frac{2,5}{1} \neq \frac{5}{-k}$$

$$-2,5k \neq 5$$

$$k \neq -2$$

$$\text{javob: } k = 3$$

1-metod:STEAM yondashuvi parametrli chiziqli tenglamalar sistemasini fan, texnologiya, muhandislik va matematika bilan bog'lab o'qitishga asoslanadi. Bu yondashuv orqali o'quvchilar nafaqat sistemani yechishni, balki uning amaliy qo'llanilishini ham o'rganadilar.

Namunaviy topshiriq

Korxonada A va B mahsulotlarini ishlab chiqaradi.

A mahsulotidan dona

B mahsulotidan dona

Ishlab chiqarish quyidagi shartlarni qanoatlantiradi:

$$\begin{cases} x + y = 100 \\ ax + y = 140 \end{cases}$$

Bu yerda a – yangi texnologiya joriy etilgandagi samaradorlik ko'rsatkichi.

O'quvchilar faoliyati

1. Muammoni tahlil qiladi.

2. Sistemani yechadi.

3. Parametrning turli qiymatlarida natijalarni solishtiradi.

4. Iqtisodiy xulosa chiqaradi.

STEAM YONDASHUVI NIMA?

STEAM – fanlarning integratsiyasiga asoslangan yondashuv bo'lib, unda fan (Science), texnologiya (Technology), muhandislik (Engineering), san'at (Arts) va matematika (Mathematics) birgalikda qo'llaniladi. Bu yondashuv o'quvchilarda tanqidiy va ijodiy fikrlash, muammoni hal qilish hamda amaliy ko'nikmalarni rivojlantiradi.

STEAM YONDASHUVI ASOSIDA PARAMETRLI CHIZIQLI TENGLAMALAR SISTEMASINI O'QITISH

MAVZU

Parametrli chiziqli tenglamalar sistemasini STEAM yondashuvi asosida o'qitish

1. REAL HAYOTIY VAZIYAT (STEAM MISOLI)

Ikki ta suv idishi (A va B) bor. Ular bir-biriga quvur orqali ulangan. A idishdagi suv har minutda α litrga kamayadi, B idishdagi esa b litrga ortadi. Ma'lum vaqt t minutdan so'ng A idishdagi suv 20 litr, B idishdagi suv 40 litr bo'ladi.

α litr/min kamayadi. b litr/min ortadi.

Savol: α va b qiymatlarini toping.

Bu misolda:

FAN (suv oqimi) TEKNOLOGIYA (model) MUHANDISLIK (quvur tizimi) SAN'AT (dizayn) MATEMATIKA (tenglamalar)

2. MATEMATIK MODEL

Boshlang'ich holatda A idishda x litr, B idishda y litr suv bo'lsin. t minutdan keyin:

- A idish: $x - at = 20$
- B idish: $y + bt = 40$

Demak, parametrli chiziqli tenglamalar sistemasini:

$$\begin{cases} x - at = 20 \\ y + bt = 40 \end{cases}$$

3. PARAMETRLI SISTEMANI YECHISH

Sistemani yechish uchun:

$$\begin{cases} x = 20 + at \\ y = 40 - bt \end{cases}$$

Agar t ma'lum bo'lsa, a va b qiymat topiladi. Agar x , y , t ma'lum bo'lsa, a va b topiladi.

4. PARAMETR O'ZGARGANDA TO'G'RI CHIZIQLARNING JOYLASHUVI

Quyidagi umumiy sistema qaraymiz: $\begin{cases} ax + by = c_1 \\ a_2x + b_2y = c_2 \end{cases}$

Bu yerda $a_1 = a$, $b_1 = 1$, $c_1 = m$ (parametr m).

Parametr m ning turli qiymatlarida to'g'ri chiziqlarning o'zaro joylashuvi

1) $D \neq 0$ (bitta yechim) \rightarrow To'g'ri chiziqlar kesishadi. Sistema bitta yechimga ega.

2) $D = 0$ (cheksiz ko'p yechim) \rightarrow To'g'ri chiziqlar ustma-ust tushadi. Sistema cheksiz ko'p yechimga ega.

3) $D \neq 0$ (yechim yo'q) \rightarrow To'g'ri chiziqlar parallel. Sistema yechimga ega emas.

Bu yerda $D = a_1b_2 - a_2b_1$ – sistema determinant. Parametr m ning qiymatiga qarab D o'zgaradi va sistema holati belgilanadi.

5. O'QUVCHILARDA SHAKLLANADIGAN KOMPETENSIYALAR

Tanqidiy va mantiqiy fikrlash. Matematik modellashirish ko'nikmasi. Muammoni hal qilish ko'nikmasi. Ijodkorlik va dizayn ko'nikmasi. Raqamli texnologiyalardan foydalanish. Jamoada ishlash ko'nikmasi.

6. STEAM YONDASHUVI BO'YICHA DARS JARAYONI BOSQICHLARI

1. Vaziyatni tahlil qilish. 2. Matematik model tuzish. 3. Tenglamalar sistemasini tuzish. 4. Sistemani yechish va tahlil qilish. 5. Natijani amaliy jihatdan izohlash. 6. Xulosa chiqarish va taqdimot qilish.

XULOSA: STEAM yondashuvi parametrli chiziqli tenglamalar sistemasini o'qitishda nazariy bilimlarni real hayotiy vaziyatlar bilan bog'lashga.

1-rasm. Parametrli chiziqli tenglamalar sistemasini STEAM yondashuvi asosida o'qitish modeli.

Real ishlab chiqarish jarayoni matematik modelga aylantirilib, parametrning iqtisodiy ma'nosi tahlil qilinadi.

2-metod: Keys-stadi metodi

Metod haqida

Keys-stadi metodida o'quvchilarga real hayotiy vaziyat taqdim etiladi va ular ushbu vaziyatni parametrli chiziqli tenglamalar sistemasini yordamida modellashtirib yechim topadilar.

Namunaviy keys

Maktab kutubxonasiga matematika va fizika kitoblari olib kelindi.

Jami kitoblar soni 120 ta.

Matematika kitoblari soni fizika kitoblari sonidan a taga ko'p.

Matematik model

$$\begin{cases} x + y = 120 \\ x - y = a \end{cases}$$

Bu yerda:

- matematika kitoblari soni;
- fizika kitoblari soni;
- parametr.

O'quvchilar faoliyati

1. Vaziyatni o'qiydi.
2. Matematik model tuzadi.
3. Sistemani yechadi.
4. Parametrning turli qiymatlarida natijalarni tahlil qiladi.
5. Xulosa chiqaradi.

KEYS-STADI METODI ASOSIDA PARAMETRLI CHIZIQI TENGLAMALAR SISTEMASINI O'QITISH

KEYS-STADI METODI NIMA?

Keys-stadi metodi – o'quvchilarga real hayotiy vaziyat (keys) taqdim etilib, uni tahlil qilish, muammoni matematik modelga aylantirish va yechim topish jarayonidir. Bu metod o'quvchilarning mustaqil fikrlash, muammoni hal qilish va amaliy qo'llash ko'nikmalarini rivojlantiradi.

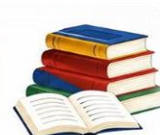
KEYS (Vaziyat)

Maktab kutubxonasiga matematika va fizika kitoblari olib kelindi. Jami kitoblar soni 120 ta. Matematika kitoblari soni fizika kitoblari sonidan a taga ko'p.

Savol: Matematika va fizika kitoblari sonini toping. Parametr a ning turli qiymatlarida sistemaning yechimini tahlil qiling.

O'quvchilarda shakllanadigan kompetensiyalar


- ✔ Analitik va mantiqiy fikrlash
- ✔ Matematik modellashtirish
- ✔ Muammoni hal qilish
- ✔ Jamoada ishlash
- ✔ Natijalarni tahlil va baholash



KEYS-STADI METODI BOSQICHLARI

1. VAZIYAT BILAN TANISHISH

O'quvchilar keysni o'qib, shartini tushunadilar.



Vazifa: Berilgan vaziyatni muhokama qiling va nima ma'lum, nima noma'lum ekanini aniqlang.

2. MATEMATIK MODEL TUZISH

Vaziyat shartiga ko'ra parametrli chiziqli tenglamalar sistemasini tuzamiz.

x – matematika kitoblari soni
 y – fizika kitoblari soni
 a – matematika kitoblari sonining fizika kitoblaridan ortiqcha soni

Sistemamiz:

$$\begin{cases} x + y = 120 \\ x - y = a \end{cases}$$

Bu yerda a – parametr.

3. SISTEMANI YECHISH

Sistemani yechamiz.

Addislash usuli:

$$\begin{cases} x + y = 120 \\ x - y = a \end{cases} \Rightarrow \begin{cases} 2x = 120 + a \\ x = \frac{120 + a}{2} \end{cases}$$

Yechim:

$$x = \frac{120 + a}{2}, y = \frac{120 - a}{2}$$

4. PARAMETRNING TURLI QIYMATLARIDA TAHLIL


Parametr a ning turli qiymatlarida natijalarni jadvalda ifodalaymiz.

a (parametr)	x (matematika)	y (fizika)
-40	40	80
-20	50	70
0	60	60
20	70	50
40	80	40

Xulosa: a ortgan sari matematika kitoblari soni ortadi, fizika kitoblari soni kamayadi.

5. XULOSA CHIQARISH VA TAQDIMOT

O'quvchilar natijalarni izohlab, xulosa chiqaradilar va taqdimot qiladilar.




Natijalar tahlili

- Jami kitoblar soni doim 120 ta.
- $a > 0$ bo'lsa, matematika kitoblari ko'p bo'ladi.
- $a < 0$ bo'lsa, fizika kitoblari ko'p bo'ladi.

GEOMETRIK MA'NO (TO'G'RI CHIZIQLAR)


Sistemadagi ikki tenglama tekislikda ikkita to'g'ri chiziqni ifodalaydi:

$a \neq 0$ bo'lsa – to'g'ri chiziqlar kesiladi (yagona yechim)



$x + y = 120$


$a = 0$ bo'lsa – to'g'ri chiziqlar ustma-ust tushadi – cheksiz ko'p yechim



$x - y = a$

Sistemada bunday holat bo'lmaydi, chunki parallel bo'lish imkoniyati ikkita chiziqning burchak koeffitsiyenti bir xil.

KEYS-STADI METODI JARAYONINING SXEMASI



1. Keys bilan tanishish
2. Muammoni tahlil qilish
3. Matematik model tuzish
4. Sistemani yechish
5. Natijalarni tahlil qilish
6. Xulosa va taqdimot

METODNING AFZALLIKLARI

- O'quvchilarni faol ishtirokini ta'minlaydi
- Nazariya bilan amaliyotni bog'laydi
- Tahlil qilish va xulosa chiqarish ko'nikmalarini rivojlantiradi
- Mustaqil va ijodiy fikrlashni shakllantiradi
- Hayotga tayyorlash va kasbiy yo'naltirishga yordam beradi

XULOSA

Keys-stadi metodi parametrli chiziqli tenglamalar sistemasini o'qitishda o'quvchilarni mustaqil fikrlashga, tahlil qilishga va real hayotiy muammolarga matematik yondashishga yo'naltiradi. Bu esa ta'lim samaradorligini oshiradi va ularning matematik kompetensiyalarini rivojlantiradi.

2-rasm. Parametrli chiziqli tenglamalar sistemasini Keys-stadi metodi asosida o'qitish jarayoni.

O'quvchilar real hayotiy vaziyatni matematik modelga aylantirib, parametrning turli qiymatlarida sistemaning yechimlarini tahlil qilmoqdalar.

Xulosa: Parametrli chiziqli tenglamalar sistemasini o'qitishda zamonaviy pedagogik texnologiyalar va interfaol metodlardan foydalanish o'quvchilarning matematik tafakkuri, mantiqiy fikrlashi hamda tadqiqotchilik kompetensiyalarini rivojlantiradi. Parametrning turli

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qiymatlarida sistemaning yechimga ega bo'lishi yoki bo'lmasligini tahlil qilish o'quvchilarda matematik qonuniyatlarni chuqurroq anglash imkonini yaratadi. STEAM yondashuvi va raqamli texnologiyalar esa ta'limning amaliy ahamiyatini oshirib, o'quvchilarning fanlarga qiziqishini kuchaytiradi.

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THE PRESERVATION OF THE AUTHOR'S STYLE IN TRANSLATING
MOTIVATIONAL WORKS FROM ENGLISH INTO UZBEK (A Case Study of "Steal
Like an Artist")

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ANNOTATSIYA

Ushbu maqolada Austin Kleonning "Steal Like an Artist" asarini ingliz tilidan o'zbek tiliga tarjima qilishda muallif uslubini saqlash muammosi tahlil qilinadi. Motivatsion adabiyot tarjimasida muallifning individual ovozi, qisqa va ta'sirchan jumalari, suhbatdosh ohangi hamda pragmatik ta'sirini qayta yaratish tarjimon oldidagi asosiy vazifalardan biri hisoblanadi. Tadqiqotning maqsadi motivatsion diskursning uslubiy xususiyatlarini aniqlash va ularni o'zbek tilida adekvat ifodalash strategiyalarini o'rganishdan iborat. Tadqiqot davomida qiyosiy, stilistik, pragmatik hamda diskursiv tahlil metodlaridan foydalanildi. Natijalar shuni ko'rsatdiki, motivatsion matnlarni tarjima qilishda semantik aniqlik bilan bir qatorda uslubiy-funksional adekvatlik ham muhim ahamiyat kasb etadi. Ayniqsa, imperativ konstruktsiyalar, faol fe'llar, sintaktik qisqalik va suhbatdosh ohang motivatsion ta'sirni saqlashda muhim rol o'ynaydi. Kalit so'zlar: uslub, muallif ovozi, motivatsion diskurs, pragmatik ekvivalentlik, tarjima strategiyasi, Austin Kleon.

ABSTRACT

This article investigates the problem of preserving authorial style in translating motivational literature from English into Uzbek on the basis of Austin Kleon's "Steal Like an Artist." Motivational discourse is characterized by conversational tone, syntactic brevity, imperative structures, and emotionally persuasive language. The study aims to identify the principal stylistic features of motivational prose and analyze translation strategies used to reproduce them in Uzbek. Comparative, stylistic, pragmatic, and discourse analysis methods were employed in the research. The findings reveal that successful translation of motivational literature requires not only semantic accuracy but also stylistic-functional adequacy. In particular, direct address, lexical simplicity, active verbs, and concise sentence structures play a central role in preserving motivational impact and authorial voice in the target language. Keywords: style, authorial voice, motivational discourse, translation strategy, pragmatic equivalence, Austin Kleon.

INTRODUCTION

At the present stage of globalization and intercultural communication, translation performs an important role in establishing intellectual and cultural dialogue between different societies. Through translation, readers gain access not only to literary masterpieces but also to educational, scientific, and motivational works created in foreign languages. Among these genres, motivational literature occupies a special place because its primary purpose is not simply to provide information but also to inspire, encourage, and influence the reader psychologically and emotionally. Modern motivational discourse is distinguished by its conversational tone,

expressive simplicity, short syntactic constructions, direct address, and pragmatic orientation toward the reader. Consequently, the translation of such texts requires the preservation not only of semantic content but also of stylistic and communicative effect. If the translator transfers only the informational meaning while ignoring the stylistic energy of the source text, the translated work may lose its persuasive power and emotional influence. Austin Kleon's "Steal Like an Artist" represents a vivid example of contemporary motivational prose. The author's style is based on minimalistic expression, memorable imperatives, colloquial rhythm, and metaphorical compactness. These features create a recognizable authorial voice that forms the central communicative force of the text. Therefore, the book provides valuable material for investigating the preservation of authorial style in English-Uzbek translation. The relevance of this study is determined by the growing popularity of motivational literature among Uzbek readers and by the increasing importance of translation studies in modern linguistic research. The article aims to analyze the principal stylistic features of motivational discourse and identify effective translation strategies for reproducing authorial style in Uzbek.

LITERATURE REVIEW AND METHODOLOGY

The issue of style preservation has been extensively discussed in modern translation studies. Peter Newmark argues that translation should reproduce not only meaning but also communicative effect. Mona Baker emphasizes the importance of pragmatic equivalence and textual cohesion in achieving adequate translation. Jean Boase-Beier considers style to be an integral component of meaning and argues that stylistic analysis should occupy a central position in translation criticism. Theoretical discussions concerning motivational discourse also demonstrate that self-development literature possesses distinctive rhetorical features. Such texts frequently employ imperatives, aphoristic structures, emotionally coloured vocabulary, and conversational syntax in order to establish intimacy with the reader. The present study is based on comparative, stylistic, pragmatic, and discourse analysis. Selected fragments from Austin Kleon's "Steal Like an Artist" were analyzed together with proposed Uzbek translations. Particular attention was paid to lexical choice, syntactic brevity, imperative constructions, metaphorical expressions, and the preservation of conversational tone. The analysis was conducted according to three principal criteria: semantic accuracy, stylistic adequacy, and pragmatic effectiveness.

RESULTS

The analysis demonstrated that one of the dominant stylistic features of Kleon's prose is syntactic minimalism. Short and rhythmically compact constructions create motivational intensity and direct communicative force. For example, the phrase "Do the work" may be translated as "Ishni qil." Both versions preserve brevity, directness, and imperative energy. However, a more formal translation such as "Ishni bajaring" weakens the conversational tone of the original. Another significant feature is the use of provocative lexical units. The central metaphorical verb "steal" functions not in its literal criminal sense but as a metaphor for creative borrowing and artistic influence. The Uzbek equivalent "o'g'irlamoq" preserves the provocative effect successfully, whereas softer alternatives such as "o'rganmoq" or "ilhom olmoq" reduce the stylistic sharpness of the original expression. The analysis also revealed the importance of conversational reader engagement. Phrases such as "Share your work" and "Start copying what you love" create intimacy between author and reader through direct imperatives. Uzbek renderings like "Ishingni boshqalar bilan baham ko'r" and "Yoqtirgan narsangdan nusxa olishni boshla" preserve the communicative immediacy of the source text more effectively than highly formal alternatives. Furthermore, stylistic losses most frequently occur when translators employ

excessively academic or explanatory constructions. Long descriptive phrases tend to weaken motivational rhythm and diminish emotional accessibility. Therefore, lexical simplicity and syntactic compactness should be regarded as essential translation priorities in motivational discourse.

DISCUSSION

The findings confirm that motivational literature presents distinctive translation challenges because its communicative effect depends heavily on style. In motivational prose, style is not merely decorative but functions as a pragmatic instrument of persuasion and emotional influence. One of the central translation difficulties arises from structural and stylistic differences between English and Uzbek. English motivational prose frequently values conversational directness and minimalistic expression, whereas Uzbek literary discourse traditionally tends toward greater grammatical expansion and formal politeness. Consequently, literal translation often produces semantically accurate but stylistically weakened texts. The research also demonstrates the importance of preserving conversational tone. Austin Kleon's authorial voice is based on closeness to the reader, simplicity of expression, and spoken-like immediacy. Excessive formalization disrupts this communicative relationship and transforms motivational prose into detached explanatory discourse. Another important issue concerns the translation of imperatives. Imperative structures in motivational literature perform both grammatical and pragmatic functions: they encourage action, create rhythm, and strengthen reader involvement. Therefore, replacing direct imperatives with neutral descriptive forms significantly reduces motivational force. The study additionally confirms the importance of stylistic-functional adequacy in translation. Successful translation should reproduce not only the informational meaning of the source text but also its stylistic energy, emotional atmosphere, and communicative purpose. In this regard, the translator acts not merely as a linguistic mediator but also as a stylistic interpreter.

CONCLUSION

The present study examined the preservation of authorial style in translating motivational literature from English into Uzbek using Austin Kleon's "Steal Like an Artist" as a case study. The research demonstrated that motivational discourse possesses distinctive stylistic features including conversational tone, lexical simplicity, syntactic brevity, imperative constructions, and pragmatic orientation toward the reader. The analysis confirmed that successful translation of motivational prose depends not only on semantic equivalence but also on stylistic-functional adequacy. Direct address, active verbs, compact sentence structures, and emotionally expressive vocabulary play a crucial role in reproducing the author's voice and preserving motivational effect in Uzbek. The study also revealed that excessive formalization weakens communicative energy and disrupts the intimate relationship between author and reader. Therefore, translators should prioritize natural conversational expression while maintaining stylistic fidelity to the source text. From a theoretical perspective, the research contributes to the study of style preservation and motivational discourse in translation studies. From a practical perspective, the findings may assist translators, students, and researchers working with motivational and self-development literature. Future research may investigate reader reception of translated motivational texts and compare alternative translation strategies in contemporary Uzbek translation practice.

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**THE PRESERVATION OF AUTHORIAL STYLE IN TRANSLATING
MOTIVATIONAL LITERATURE FROM ENGLISH INTO UZBEK**

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Abstract:

This article examines the preservation of authorial style in translating motivational literature from English into Uzbek. The study is based on Austin Kleon's "Steal Like an Artist," a motivational work distinguished by conversational tone, syntactic brevity, and expressive simplicity. The article analyzes stylistic features of motivational discourse and investigates translation strategies aimed at reproducing authorial voice and communicative effect in Uzbek. The findings indicate that successful translation of motivational prose requires not only semantic equivalence but also stylistic-functional adequacy and pragmatic adaptation.

Keywords:

authorial style, motivational discourse, translation strategy, stylistic equivalence, pragmatic adaptation, Austin Kleon, Uzbek translation

The translation of motivational literature has become an increasingly relevant issue in modern translation studies due to the growing popularity of self-development and inspirational texts across different cultures. Unlike scientific or purely informative works, motivational discourse performs not only an informational function but also a psychological and emotional one. Such texts seek to encourage readers, inspire action, and influence their worldview through expressive and stylistically marked language. Consequently, the preservation of authorial style becomes one of the most important objectives in the translation process.

In contemporary English literature, Austin Kleon's "Steal Like an Artist" occupies a distinctive place among motivational works because of its highly recognizable style. The book is characterized by conversational tone, lexical simplicity, aphoristic constructions, and direct imperatives addressed to the reader. Kleon deliberately avoids complicated explanations and instead relies on short, emotionally expressive sentences that create intimacy and immediacy. This stylistic minimalism forms the basis of the author's communicative power and therefore presents significant challenges for translators.

One of the major difficulties in translating motivational literature into Uzbek arises from structural and stylistic differences between the two languages. English motivational prose often values syntactic brevity and spoken-like rhythm, whereas Uzbek literary tradition tends toward more expanded sentence structures and formal expression. As a result, literal translation may preserve informational meaning while weakening emotional intensity and stylistic individuality. For example, the phrase "Do the work" achieves its motivational force through directness and compactness. The Uzbek equivalent "Ishni qil" preserves the imperative energy more effectively than formal alternatives such as "Ishni bajaring," which sound more distant and bureaucratic.

Another important issue concerns the translation of metaphorical and provocative lexical units. The word "steal" in Kleon's title functions not in its literal criminal meaning but as a metaphor

for creative borrowing and artistic inspiration. The Uzbek equivalent “o‘g‘irlamoq” successfully preserves the provocative emotional impact of the original text. However, replacing it with softer expressions such as “o‘rganmoq” or “ilhom olmoq” significantly reduces the stylistic sharpness intended by the author. This demonstrates that stylistic-functional adequacy sometimes requires preserving emotional provocation alongside semantic meaning.

The analysis also reveals that conversational tone plays a central role in motivational discourse. Through direct imperatives such as “Share your work” and “Start before you are ready,” the author establishes a close communicative relationship with the reader. In Uzbek translation, maintaining this intimacy requires lexical simplicity, natural rhythm, and spoken-like syntax. Excessive formalization transforms motivational discourse into detached explanatory prose and weakens its persuasive force. Therefore, translators should avoid unnecessarily academic constructions when working with motivational texts.

From a theoretical perspective, the preservation of authorial style is closely connected with the concepts of dynamic equivalence and pragmatic adaptation. Eugene Nida argues that translation should reproduce not only linguistic structure but also communicative effect. In motivational literature, communicative effect depends heavily on emotional accessibility, conversational immediacy, and stylistic naturalness. Consequently, translators must balance semantic precision with pragmatic effectiveness in order to preserve the original impact of the text.

Furthermore, the study demonstrates that motivational literature requires a flexible translation strategy combining semantic accuracy with stylistic creativity. The translator acts not merely as a linguistic mediator but also as a stylistic interpreter capable of reproducing rhythm, tone, and emotional atmosphere in the target language. Successful translation therefore depends on deep familiarity with both linguistic systems and with the rhetorical conventions of motivational discourse.

In conclusion, the translation of motivational literature from English into Uzbek requires careful preservation of authorial style alongside semantic meaning. Austin Kleon’s “Steal Like an Artist” demonstrates that conversational tone, lexical simplicity, imperative constructions, and syntactic brevity function as essential stylistic components of motivational discourse. The study confirms that stylistic-functional adequacy and pragmatic adaptation play a decisive role in achieving successful translation. Preserving the emotional energy and communicative intimacy of the source text remains one of the principal responsibilities of the translator in contemporary motivational prose.

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THE MOTIF OF FREEDOM IN MARK TWAIN'S NOVELS

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Abstract. This article explores the motif of freedom in the novels of Mark Twain and examines how the writer presents personal, social, moral, and psychological freedom through his major fictional characters and narrative structures. As one of the most influential American authors of the nineteenth century, Mark Twain critically portrayed the contradictions of American society, especially issues related to slavery, racial discrimination, social hypocrisy, and individual independence. Through novels such as *The Adventures of Tom Sawyer*, *Adventures of Huckleberry Finn*, and *A Connecticut Yankee in King Arthur's Court*, Twain developed freedom not merely as a political concept but as a universal human aspiration connected to identity, morality, and self-realization.

The article argues that freedom functions as a central thematic motif in Twain's fiction and serves as a tool through which the author criticizes restrictive social norms and institutions. Twain's protagonists are often young individuals who resist authority and seek autonomy in societies dominated by rigid conventions and moral contradictions. In this regard, freedom is represented both physically and spiritually. The study focuses particularly on the journey of Huck Finn, whose escape from civilization symbolizes the search for moral independence and authentic humanity. Huck's relationship with Jim, an enslaved African American seeking liberation, demonstrates Twain's critique of slavery and racial injustice. Their journey on the Mississippi River becomes a symbolic movement toward human equality and emotional freedom. Furthermore, the article analyzes how Twain contrasts natural freedom with the artificial restrictions imposed by society. In *The Adventures of Tom Sawyer*, childhood freedom is associated with imagination, adventure, and resistance to adult expectations. Tom's desire to escape routine social discipline reflects the universal human need for self-expression and independence. Twain idealizes childhood as a period of unrestricted creativity while simultaneously exposing the limitations of social institutions such as school, religion, and family authority. Through satire and humor, the novelist reveals the tension between individual desires and communal expectations.

Another important aspect discussed in the article is Twain's use of satire to expose the illusion of freedom in civilized societies. In *A Connecticut Yankee in King Arthur's Court*, Twain combines historical fantasy with political criticism to

question whether technological progress necessarily leads to human liberation. The protagonist attempts to modernize medieval society through science and rationality; however, the novel ultimately demonstrates that power and control can reproduce oppression in different forms. This paradox highlights Twain's skepticism regarding absolute freedom and suggests that social systems often manipulate individuals under the appearance of progress and civilization. The article also examines the psychological dimension of freedom in Twain's novels. His characters frequently struggle between social morality and personal conscience. Huck Finn's moral conflict is one of the clearest examples of this inner struggle. Although society teaches Huck that helping an enslaved person escape is wrong, his personal experiences lead him to reject these values and follow his conscience instead. Twain thus presents freedom as a moral awakening that requires individuals to challenge accepted beliefs and prejudices. The motif of freedom becomes closely connected with ethical responsibility and emotional maturity. In addition, the study investigates the symbolic significance of space and movement in Twain's fiction. Rivers, roads, islands, and journeys function as metaphors for liberation and transformation. The Mississippi River, in particular, symbolizes fluidity, escape, and the possibility of constructing a new identity beyond social restrictions. Nature in Twain's novels often appears as a space where characters experience temporary freedom from hypocrisy and oppression. However, the return to society usually reintroduces conflict, demonstrating the difficulty of achieving complete independence within structured communities.

The article employs thematic and socio-historical approaches to literary analysis in order to evaluate how Twain's representation of freedom reflects the realities of nineteenth-century America. Twain wrote during a period marked by industrialization, social inequality, and debates over race and democracy. His works reveal deep concern about the conflict between American democratic ideals and actual social practices. Freedom in Twain's novels is therefore not only a personal desire but also a political and cultural issue linked to justice, equality, and human dignity. Moreover, the research emphasizes Twain's continuing relevance in contemporary literary and cultural discussions. The themes of oppression, identity, racism, and personal autonomy remain significant in modern societies. Twain's exploration of freedom encourages readers to reconsider the relationship between the individual and society and to question systems that limit human potential. His novels continue to inspire critical discussions about morality, democracy, and social responsibility across different cultures and historical contexts. The motif of freedom occupies a central place in Mark Twain's literary vision and artistic philosophy. Through adventure narratives, satire, symbolism, and realistic characterization,

Twain presents freedom as a complex and multidimensional concept involving moral choice, social resistance, and personal growth. His novels challenge readers to recognize the limitations imposed by society and to value compassion, equality, and independent thought. By analyzing Twain's treatment of freedom, this article demonstrates that his works remain essential contributions to American literature and to broader humanistic discussions concerning liberty and human identity.

Keywords: Mark Twain, freedom motif, American literature, individual liberty, social criticism, slavery, racial discrimination, moral independence, satire, Huck Finn, Tom Sawyer, human identity, social hypocrisy, personal autonomy, nineteenth-century American society, literary analysis, symbolism, psychological freedom, democracy, human dignity.

Introduction. American literature of the nineteenth century reflects the political, cultural, and social transformations that shaped the development of the United States. During this period, writers increasingly focused on issues such as slavery, racial discrimination, democracy, social hypocrisy, and the struggle for individual liberty. Among the major literary figures of this era, Mark Twain occupies a unique position because of his realistic style, satirical voice, and deep concern for human dignity and moral independence. Twain's novels continue to attract readers and scholars due to their exploration of freedom as both a personal and social concept. His works reveal the contradictions of American society while emphasizing the universal human desire for autonomy, equality, and self-expression. The motif of freedom is one of the most significant themes in Mark Twain's fiction. Through memorable characters, adventurous plots, and symbolic settings, Twain presents freedom not only as physical liberation but also as psychological and moral independence. His novels portray individuals who resist restrictive social conventions and search for authentic identity in a society dominated by prejudice, injustice, and hypocrisy. By examining the experiences of characters such as Huck Finn and Tom Sawyer, Twain criticizes social systems that limit human potential and suppress individuality. Freedom in Twain's literary world becomes a powerful symbol of personal growth, ethical awakening, and resistance against oppression. One of Twain's greatest achievements is his ability to combine humor and satire with serious social criticism. His novels entertain readers through adventure and wit while simultaneously exposing the flaws of nineteenth-century American society. Twain uses satire to criticize institutions such as slavery, organized religion, rigid education, and social hierarchy. In this respect, his fiction serves not only as literary entertainment but also as a reflection of historical realities and cultural conflicts. Through irony and realistic characterization, Twain demonstrates that civilization

often imposes artificial restrictions on individuals and prevents them from achieving true freedom.

The issue of slavery plays an especially important role in Twain's representation of freedom. In *Adventures of Huckleberry Finn*, the relationship between Huck and Jim illustrates the moral contradictions of a society that claims to value democracy while denying basic human rights to African Americans. Jim's desire for liberation symbolizes the universal human struggle for dignity and equality. Huck's internal conflict between social morality and personal conscience reflects Twain's criticism of racial prejudice and social hypocrisy. Although Huck has been taught to believe that helping an enslaved man is wrong, his experiences gradually lead him to reject society's values and follow his own sense of morality. Through this transformation, Twain presents freedom as an ethical and psychological process rather than merely a political condition.

In addition to social freedom, Twain also explores the importance of childhood freedom and imagination. In *The Adventures of Tom Sawyer*, the protagonist seeks escape from routine discipline and adult expectations through adventure and creativity. Tom's rebellious spirit represents the natural human desire for independence and self-expression. Twain portrays childhood as a stage of life characterized by curiosity, imagination, and emotional honesty. However, he also demonstrates how social institutions attempt to control individual behavior and limit creativity. As a result, freedom in Twain's novels is closely connected with the conflict between individuality and social conformity. Another important aspect of Twain's fiction is the symbolic use of nature and movement. Rivers, islands, forests, and journeys often represent spaces of liberation where characters can temporarily escape social restrictions. The Mississippi River in *Adventures of Huckleberry Finn* functions as a central symbol of freedom, transformation, and hope. On the river, Huck and Jim experience moments of equality and emotional connection that are impossible within conventional society. However, Twain also shows that complete freedom is difficult to achieve because social structures and prejudices continue to influence individuals even after physical escape. This tension between freedom and social control forms a major thematic element in Twain's novels.

Twain's concern with freedom is also connected to the historical context in which he wrote. The nineteenth century in America was marked by rapid industrialization, territorial expansion, political conflict, and debates over race and democracy. Although the United States promoted ideals of liberty and equality, many social groups remained oppressed and marginalized. Twain observed these contradictions and used literature to question the gap between American ideals and social reality.

His novels expose the hypocrisy of a society that celebrates freedom while practicing discrimination and injustice. Therefore, the motif of freedom in Twain's works reflects broader political and cultural concerns of American history.

Moreover, Twain's literary exploration of freedom remains relevant in contemporary society. Modern readers continue to engage with issues such as racism, identity, social inequality, and personal autonomy. Twain's novels encourage critical thinking about the relationship between the individual and society and challenge readers to reconsider accepted moral values. His works demonstrate that freedom requires courage, compassion, and independent thought. Through realistic storytelling and social satire, Twain creates timeless narratives that continue to influence discussions of democracy, morality, and human rights. This article aims to analyze the motif of freedom in Mark Twain's major novels and to examine how the author represents personal liberty, moral independence, and resistance to social oppression. The study focuses primarily on *The Adventures of Tom Sawyer*, *Adventures of Huckleberry Finn*, and *A Connecticut Yankee in King Arthur's Court*. Using thematic and socio-historical approaches, the article investigates the ways in which Twain employs symbolism, satire, and characterization to criticize social injustice and promote human dignity. By exploring the different dimensions of freedom in Twain's fiction, this research seeks to demonstrate the enduring significance of his literary vision in both American literature and global humanistic thought.

Aim of the Research. The primary aim of this research is to investigate the motif of freedom in the novels of Mark Twain and to analyze how the writer represents the idea of liberty through his characters, themes, symbols, and narrative techniques. As one of the most influential authors in American literature, Mark Twain explored various aspects of human life, including social injustice, racial discrimination, individual identity, and moral independence. His literary works reflect the contradictions of nineteenth-century American society and reveal the tension between social expectations and personal freedom. Therefore, this research seeks to examine the different dimensions of freedom in Twain's novels and to demonstrate how the author uses literature as a means of social criticism and moral reflection.

Another important aim of this study is to explore how Twain portrays freedom not only as physical liberation but also as psychological, emotional, and ethical independence. In many of his novels, characters struggle against restrictive social conventions, oppressive institutions, and accepted moral values. Twain presents freedom as a universal human aspiration connected with dignity, equality, and self-realization. Through the experiences of characters such as Huck Finn, Tom Sawyer,

and Hank Morgan, the author illustrates the conflict between individuality and social conformity. This research aims to identify the ways in which Twain's protagonists search for autonomy and attempt to establish their own moral principles in societies dominated by hypocrisy and prejudice.

The study also aims to analyze the role of social criticism in Twain's representation of freedom. Twain's novels are deeply connected with the historical and cultural realities of nineteenth-century America, especially issues related to slavery, racism, democracy, and social inequality. By using satire, irony, and realistic characterization, Twain criticizes the contradictions of a society that promotes ideals of liberty while simultaneously practicing oppression and discrimination. This research intends to examine how Twain exposes the failures of social institutions such as slavery, organized religion, rigid education, and class hierarchy. Through this analysis, the study seeks to reveal the author's concern for human dignity and social justice. Furthermore, the research aims to investigate the symbolic significance of freedom in Twain's fiction. Symbols such as the Mississippi River, islands, roads, and journeys play a central role in representing escape, transformation, and personal growth. In *Adventures of Huckleberry Finn*, for example, the river symbolizes both physical and emotional liberation, providing Huck and Jim with temporary freedom from the restrictions of society. This study aims to analyze how Twain uses symbolic settings and movement to emphasize the contrast between natural freedom and the artificial limitations imposed by civilization. By exploring these literary symbols, the research intends to demonstrate the complexity and depth of Twain's artistic vision.

Another objective of this research is to examine the psychological dimension of freedom in Twain's novels. Twain's characters often experience internal conflicts between social morality and personal conscience. Huck Finn's moral struggle is one of the most significant examples of this theme. Although society teaches Huck to accept slavery and racial prejudice, his personal experiences with Jim lead him to question these beliefs and develop his own understanding of morality. This research aims to analyze how Twain presents freedom as an internal process of ethical awakening and intellectual independence. The study also seeks to show that true freedom in Twain's fiction requires individuals to challenge accepted norms and think critically about social values. In addition, this research aims to evaluate Twain's portrayal of childhood freedom and imagination. In *The Adventures of Tom Sawyer*, childhood is represented as a period of creativity, curiosity, and resistance to authority. Tom Sawyer's adventures symbolize the natural human desire for independence and self-expression. However, Twain also illustrates how social institutions attempt to control individual behavior and suppress creativity. The study

aims to explore the relationship between childhood freedom and social discipline in Twain's novels and to identify how the author critiques rigid systems that limit personal development. The research also seeks to investigate the connection between freedom and identity in Twain's works. Many of Twain's characters undergo journeys of self-discovery during which they redefine their understanding of morality, society, and human relationships. Freedom becomes closely associated with the formation of personal identity and the rejection of false social values. This study aims to demonstrate how Twain's characters achieve emotional and moral growth through experiences of isolation, adventure, and rebellion against authority. By examining these transformations, the research hopes to provide a deeper understanding of Twain's humanistic philosophy.

Another important aim of the study is to analyze Twain's use of satire as a literary technique for discussing freedom and social criticism. Twain's humor and irony make his novels entertaining while simultaneously delivering serious messages about injustice and hypocrisy. In *A Connecticut Yankee in King Arthur's Court*, for example, Twain criticizes both medieval and modern societies by questioning the relationship between technological progress and human freedom. The study aims to examine how satire enables Twain to challenge political and cultural systems and to encourage readers to think critically about civilization and democracy. Moreover, the research intends to demonstrate the continuing relevance of Twain's ideas in contemporary society. Issues such as racism, inequality, identity, and personal autonomy remain significant in the modern world. Twain's exploration of freedom continues to inspire discussions about democracy, morality, and social responsibility across cultures and historical periods. This study aims to show that Twain's novels are not limited to the context of nineteenth-century America but possess universal themes that remain meaningful for present-day readers. By connecting Twain's literary works with modern social concerns, the research seeks to emphasize the timeless value of his contribution to world literature.

Finally, the overall aim of this research is to contribute to the academic study of Mark Twain by providing a comprehensive analysis of freedom as a central motif in his novels. Through thematic, symbolic, and socio-historical approaches, the study seeks to explore the relationship between individual liberty and social control in Twain's fiction. The research hopes to demonstrate that Twain's literary works combine artistic creativity with profound social and moral insight. By analyzing his treatment of freedom, this study aims to highlight Twain's importance not only as a novelist and satirist but also as a thinker deeply concerned with human rights, equality, and the moral development of society.

Discussion. The motif of freedom occupies a central place in Mark Twain's novels and reflects the writer's deep concern with social justice, individual liberty, and moral independence. Twain's literary works examine the complex relationship between the individual and society, showing how social institutions, traditions, and prejudices often limit human potential and suppress personal identity. Through adventure narratives, satire, symbolism, and realistic characterization, Twain explores freedom as a multidimensional concept that includes physical liberation, psychological autonomy, ethical responsibility, and emotional self-expression. His novels reveal that freedom is not simply the absence of physical restriction but also the ability to think independently, challenge injustice, and develop one's own moral values. One of the most important examples of freedom in Twain's fiction can be found in *Adventures of Huckleberry Finn*. This novel presents freedom both as a social issue and as a personal journey of self-discovery. Huck Finn, the central character, seeks escape from the limitations imposed by civilization, including strict social rules, religious expectations, and family authority. From the beginning of the novel, Huck feels uncomfortable within organized society because it attempts to control his behavior and suppress his individuality. His decision to leave society and travel along the Mississippi River symbolizes his desire for autonomy and independence.

The Mississippi River functions as one of the most powerful symbols of freedom in American literature. On the river, Huck and Jim experience moments of equality and peace that are impossible within conventional society. The river represents movement, transformation, and escape from oppression. Jim, who is an enslaved African American, seeks physical liberation from slavery, while Huck searches for emotional and moral freedom. Their shared journey creates a unique relationship based on mutual respect, friendship, and human understanding. Twain uses this relationship to criticize racism and challenge the social values of nineteenth-century America. Huck's internal moral conflict is especially significant in understanding Twain's concept of freedom. Society teaches Huck that helping an enslaved man escape is morally wrong. However, through his experiences with Jim, Huck gradually realizes that the moral principles accepted by society are deeply flawed and unjust. The famous moment when Huck decides to help Jim despite believing he may "go to hell" demonstrates his rejection of social hypocrisy and his commitment to personal conscience. This scene represents a major turning point in Huck's psychological development because he chooses humanity and compassion over accepted social values. Twain suggests that true freedom requires individuals to think independently and resist oppressive systems, even when society condemns such actions.

Twain's criticism of slavery is one of the most important aspects of his exploration of freedom. Although slavery had officially ended before the publication of *Adventures of Huckleberry Finn*, racial discrimination and inequality continued to shape American society. Twain exposes the cruelty and immorality of slavery by portraying Jim not as a stereotype but as a complex human being with emotions, intelligence, and dignity. Jim's dream of reuniting with his family emphasizes his humanity and challenges racist assumptions. Through Jim's character, Twain demonstrates that freedom is a universal human right that should not be denied on the basis of race or social status. In addition to racial freedom, Twain also explores the theme of childhood freedom in *The Adventures of Tom Sawyer*. Tom Sawyer represents imagination, adventure, and resistance to adult authority. Unlike Huck, who seeks escape from civilization because of suffering and social pressure, Tom views freedom as excitement and creative self-expression. He rejects routine discipline and transforms ordinary life into imaginative adventures. Through Tom's playful behavior, Twain celebrates the creativity and curiosity associated with childhood.

However, Twain also critiques the restrictive nature of social institutions such as schools, churches, and family structures. These institutions attempt to discipline children and impose conformity, limiting their natural freedom and imagination. Tom's rebellious actions can therefore be interpreted as a form of resistance against social control. Twain presents childhood as a period of emotional honesty and individuality that becomes increasingly restricted by adulthood and social expectations. This idea reflects Twain's broader concern with the conflict between personal liberty and social conformity. Another significant work in the discussion of freedom is *A Connecticut Yankee in King Arthur's Court*. In this novel, Twain uses satire and historical fantasy to examine political power, technological progress, and social control. The protagonist, Hank Morgan, travels back in time to medieval England and attempts to modernize society through science, technology, and rational thinking. At first, Hank believes that knowledge and progress will create a freer and more democratic society. However, as the novel develops, Twain reveals the dangers of power and the illusion of complete freedom. Although Hank seeks to eliminate oppression, he eventually creates new systems of control and violence. Twain demonstrates that technological advancement alone cannot guarantee human freedom or moral improvement. This idea reflects Twain's skepticism toward industrialization and modern civilization. He suggests that societies often replace one form of oppression with another, even when they claim to promote liberty and progress. Through satire, Twain criticizes both medieval injustice and modern

social systems, emphasizing the complexity of freedom in political and historical contexts.

Twain's use of satire plays a major role in his treatment of freedom. Humor and irony allow him to criticize society without becoming overly didactic. His satirical style exposes the contradictions and hypocrisies of American culture, especially regarding democracy, religion, race, and morality. Twain frequently portrays respectable social institutions as irrational, corrupt, or morally weak. Through comedy, he encourages readers to question accepted beliefs and think critically about social norms. Religion is another institution that Twain often critiques in relation to freedom. In several novels, religious teachings are shown as tools that reinforce social conformity rather than promote compassion or justice. Huck Finn, for example, struggles to reconcile religious instruction with his own emotional understanding of right and wrong. Twain suggests that blind obedience to religious authority can prevent individuals from developing moral independence. Instead, he values personal conscience and human empathy as foundations of ethical behavior. Nature and movement are also essential elements in Twain's representation of freedom. Rivers, forests, caves, and islands function as spaces where characters temporarily escape from social restrictions and experience emotional liberation. In contrast, towns and civilized communities are often associated with hypocrisy, prejudice, and control. This contrast between nature and society reflects the Romantic literary tradition while also supporting Twain's social criticism. Nature symbolizes authenticity and possibility, whereas civilization frequently represents limitation and corruption.

At the same time, Twain does not idealize freedom as something simple or absolute. His novels demonstrate that complete freedom may be impossible within organized society. Characters who seek independence often face loneliness, danger, or moral uncertainty. Huck, for instance, achieves a degree of personal freedom by rejecting society's values, but he remains isolated from stable social relationships. Similarly, Hank Morgan's attempt to create a perfectly rational and free society ultimately ends in destruction. Twain therefore presents freedom as a complicated and often contradictory experience that involves both opportunity and responsibility. The psychological dimension of freedom is particularly important in Twain's fiction. Freedom is not limited to physical escape but involves emotional and intellectual growth. Twain's protagonists often undergo personal transformations during their journeys. Huck develops moral awareness through his friendship with Jim, while Tom Sawyer gains confidence and self-expression through adventure. These experiences allow the characters to challenge authority and define their own identities. Twain emphasizes that personal growth requires independence of thought

and the courage to reject unjust social expectations. Furthermore, Twain's novels continue to remain relevant in contemporary society because the issues he discusses are still significant today. Racism, inequality, social hypocrisy, and the struggle for personal autonomy continue to shape modern life. Twain's critique of prejudice and oppression encourages readers to reflect on current social systems and moral values. His exploration of freedom speaks not only to nineteenth-century America but also to universal human concerns about dignity, justice, and identity.

Modern literary critics often interpret Twain's works from multiple perspectives, including postcolonial, psychological, sociological, and cultural approaches. These interpretations demonstrate the richness and complexity of his representation of freedom. Some scholars focus on Twain's criticism of slavery and racism, while others analyze his skepticism toward civilization and modern progress. Despite different interpretations, most critics agree that freedom remains one of the defining themes of Twain's literary vision. In conclusion, the motif of freedom in Mark Twain's novels reflects the writer's profound engagement with social, moral, and psychological questions. Through characters such as Huck Finn, Tom Sawyer, and Hank Morgan, Twain examines the human desire for independence and the difficulties of achieving true liberty within restrictive societies. His use of satire, symbolism, adventure, and realistic dialogue allows him to criticize injustice while exploring the complexities of personal identity and moral responsibility. Twain portrays freedom not only as physical escape but also as ethical awakening, emotional honesty, and intellectual independence. His novels continue to inspire readers because they address timeless questions concerning humanity, equality, and the relationship between the individual and society. As a result, Twain remains one of the most important literary voices in discussions of freedom and human dignity in American literature and beyond.

Conclusion. In conclusion, the motif of freedom plays a fundamental role in Mark Twain's novels and serves as one of the central elements of his literary and philosophical vision. Through his realistic narratives, memorable characters, satire, and symbolism, Twain explores the complex relationship between the individual and society while examining the human desire for independence, dignity, and moral self-determination. His novels reveal that freedom is not limited to physical liberation alone but also includes psychological, emotional, intellectual, and ethical dimensions. By presenting characters who struggle against restrictive social systems and accepted moral conventions, Twain demonstrates the importance of personal conscience, critical thinking, and human compassion. The analysis of Twain's major works shows that freedom is closely connected with the search for identity and moral growth. In *Adventures of Huckleberry Finn*, Huck's journey along the Mississippi River symbolizes his gradual movement toward moral independence and self-awareness. Through his friendship with Jim, Huck learns to reject the racist and hypocritical values of society and to trust his own understanding of justice and humanity. Twain uses Huck's internal conflict to criticize slavery, racial discrimination, and social hypocrisy in nineteenth-century America. Jim's struggle for liberation further emphasizes the universal significance of freedom as a basic human right connected with equality and dignity. Their relationship demonstrates that genuine human connection can overcome social prejudice and cultural barriers.

Similarly, *The Adventures of Tom Sawyer* presents freedom through the imagination, creativity, and rebellious spirit of childhood. Tom's adventures represent the natural human desire for independence and self-expression. Twain portrays childhood as a stage of emotional honesty and unrestricted creativity, contrasting it with the rigid discipline imposed by adult society. Through humor and satire, Twain criticizes educational systems, social expectations, and moral hypocrisy that attempt to suppress individuality and freedom. The novel suggests that imagination and personal liberty are essential parts of human development and happiness. In *A Connecticut Yankee in King Arthur's Court*, Twain expands the discussion of freedom by exploring political authority, technological progress, and the dangers of power. Through satire, he questions whether civilization and scientific advancement necessarily lead to human liberation. Although Hank Morgan seeks to modernize medieval society and establish democratic ideals, his efforts ultimately result in violence and destruction. Twain therefore presents freedom as a complicated and often contradictory concept that cannot be achieved solely through technological or political reform. Instead, true freedom requires moral responsibility, ethical awareness, and respect for human values.

Another important aspect revealed in this study is Twain's use of symbolism and setting to represent liberation and restriction. Natural spaces such as rivers, islands, and forests frequently symbolize escape from social oppression and provide characters with opportunities for emotional and moral transformation. In contrast, towns and civilized communities are often associated with hypocrisy, prejudice, and social control. This contrast allows Twain to criticize the limitations of organized society while emphasizing the importance of individuality and authenticity. However, Twain also acknowledges that complete freedom may be impossible within human society because individuals remain influenced by cultural expectations and social structures. The study also demonstrates the significance of satire in Twain's treatment of freedom. Twain's humor and irony make his social criticism more powerful and accessible. By exposing the contradictions of American democracy, religion, education, and racial attitudes, he encourages readers to question accepted beliefs and think critically about society. His satirical style allows him to discuss serious social issues while maintaining literary creativity and emotional impact. Twain's criticism remains relevant because many of the problems he addressed, including racism, inequality, intolerance, and moral hypocrisy, continue to exist in contemporary societies.

Furthermore, Twain's exploration of freedom has universal importance beyond the historical context of nineteenth-century America. His novels continue to influence readers and scholars because they address timeless human concerns such as identity, justice, equality, and moral responsibility. Twain's characters represent individuals who seek meaning and independence in societies that often limit personal growth and freedom. Their struggles remain meaningful for modern readers who continue to face social pressures, discrimination, and conflicts between personal beliefs and public expectations. Overall, this research confirms that freedom is one of the most essential and multidimensional motifs in Mark Twain's fiction. Through thematic complexity, realistic characterization, symbolic imagery, and satirical criticism, Twain creates literary works that explore both the possibilities and limitations of human liberty. His novels demonstrate that freedom requires courage, self-awareness, and the willingness to challenge unjust systems and social conventions. Twain ultimately presents freedom not as a simple achievement but as an ongoing moral and psychological process connected with human dignity and ethical responsibility. Therefore, Mark Twain's contribution to American literature extends far beyond entertainment and humor. His works provide profound insight into the nature of society, morality, and human identity. By analyzing the motif of freedom in his novels, this study highlights Twain's enduring significance as a writer who used literature to defend equality, individuality, and the fundamental rights of

humanity. His exploration of freedom continues to inspire critical reflection on social justice and personal autonomy, making his novels important not only in literary studies but also in broader discussions of democracy, ethics, and human values.

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Annotatsiya

Ushbu maqolada qiyosiy tarixiy metodning nazariy asoslari va uning amaliy tadqiqotlarda qo'llanish xususiyatlari tahlil etiladi. Metodning shakllanishi, asosiy tamoyillari va ilmiy ahamiyati ochib beriladi. Bundan tashqari, tarixiy tahlil davomida qiyosiy yondashuvning ustunliklari va yechilishi lozim bo'lgan jihatlari ham ko'rib chiqiladi. Maqola tarixiy tadqiqot metodologiyasining rivojlanishiga hissa qo'shadi.

Kalit so'zlar: qiyosiy metod, tarixiy tadqiqot, metodologiya, nazariya, amaliyot.

Kirish

Tarixiy jarayonlarni ilmiy tadqiq etish jarayonida metodlarning o'rni beqiyosdir. Ayniqsa, qiyosiy tarixiy metod tarixiy faktlar va hodisalarni chuqurroq tushunishga xizmat qiladi. Mazkur metod yordamida turli zamon va makondagi ijtimoiy hodisalar o'rtasidagi o'xshashlik va farqlar aniqlanadi. Shu bois, qiyosiy tarixiy metod zamonaviy tarixshunoslikda asosiy metodlardan biri sifatida qaraladi. Ushbu maqolada qiyosiy tarixiy metodning nazariy asoslari va amaliy tatbiqi o'rganiladi.

Asosiy qism

Qiyosiy tarixiy metodning nazariy asoslari

Qiyosiy tarixiy metod — bu turli tarixiy hodisalarni qiyoslash orqali ularning umumiy va farqli jihatlarini aniqlash, sabab-oqibat munosabatlarini yoritish usulidir. Bu metod XIX asrda ilmiy tarixshunoslikning shakllanishi bilan rivojlandi. Jumladan, Leopold fon Ranke va boshqa klassik tarixchilar qiyosiy metodning asoschilaridan hisoblanadi. Qiyosiy metod ilmiy tahlilni chuqurlashtiradi, tarixiy jarayonlarning o'zaro bog'liqligini ko'rsatadi va umumlashmalar chiqarishga imkon beradi.

Uning asosiy prinsiplari quyidagilardan iborat:

- Hodisalarni bir-biriga teng sharoitlarda qiyoslash,
- Zamon, makon va madaniy kontekstni hisobga olish,
- Faktlarga asoslangan ob'ektiv taqqoslash.

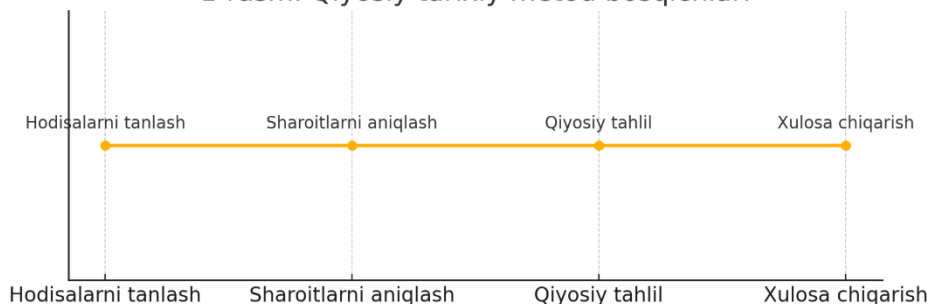
Qiyosiy metodning tamoyillari va ilmiy yondashuvlari

Qiyosiy metod asosida quyidagi tamoyillar yotadi:

- Struktural o'xshashliklarni aniqlash,
- Tarixiy tajribalarni taqqoslash,
- Farqlarga asoslangan tahlil.

Metodologik jihatdan qiyosiy metod eksperimental ilmiy metodlarga yaqinlashadi, chunki u ham tekshiruv ob'ektlarini aniq parametrlar asosida solishtiradi.

1-rasm. Qiyosiy tarixiy metod bosqichlari



Tarixiy tadqiqotlarda qiyosiy metodning qo'llanilishi

Tarixshunoslikda qiyosiy metod turli sohalarda keng qo'llaniladi. Jumladan, u quyidagi yo'nalishlarda o'zini samarali namoyon qiladi:

- siyosiy tizimlarning shakllanishi va evolyutsiyasi;
- madaniy o'zgarishlar va sivilizatsiyalararo ta'sirlar;
- ijtimoiy-iqtisodiy modellarni tahlil qilish va solishtirish.

Misol sifatida Yevropa va Osiyodagi feodal tizimlarning rivojlanishini qiyoslash mumkin. Har ikkala hududda ham feodalizm ijtimoiy-iqtisodiy tizim sifatida shakllangan bo'lsa-da, uning rivojlanish yo'llari va natijalari o'zaro sezilarli darajada farq qilgan. Yevropada feodal tuzum asosida markazlashgan monarxik davlatlar vujudga kelgan, diniy institutlar (ayniqsa, katolik cherkovi) siyosiy hayotda muhim rol o'ynagan. Osiyoda esa, ko'plab mahalliy hokimiyatlar nisbatan mustaqil bo'lib qolgan va diniy institutlar siyosiy tizimdan nisbatan ajralgan holda faoliyat yuritgan. Bu farqlar iqtisodiy rivojlanish, siyosiy barqarorlik va ijtimoiy tizimlarning shakllanishiga bevosita ta'sir ko'rsatgan.

O'xshashliklar	Yevropadagi farqlari	Osiyodagi farqlari
Yer egaligi asosiy rol o'ynagan	Markazlashgan monarxiya shakllandi	Mahalliy hokimiyatlar mustaqilroq
Vassallik tizimi mavjud	Diniy institutlar ta'siri kuchli	Din va davlat ajratilgan

1-jadval. Yevropa va Osiyo feodal tizimlarining qiyosiy tahlili.

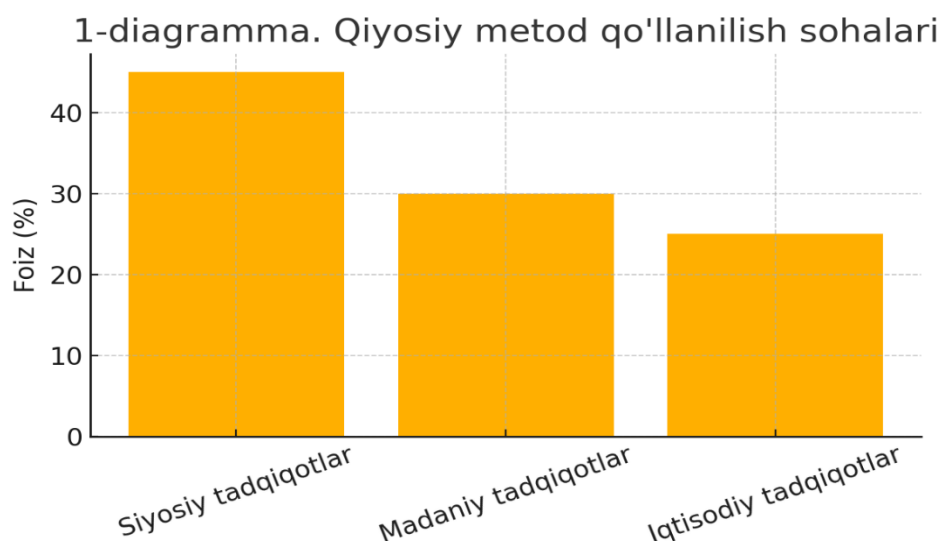
Qiyosiy metodning afzalliklari va cheklavlari

Afzalliklari:

- Tarixiy jarayonlarning umumiy qonuniyatlarini aniqlash imkonini beradi,
- Tarixiy tahlilga ob'ektivlik va sistematiklik kiritadi,
- Global tarixiy tajribalarni o'rganishga xizmat qiladi.

Cheklavlari:

- Turli davrlar va hududlar sharoitlarining farqliligi qiyosiy tahlilni murakkablashtiradi,
- Ba'zan qiyoslash uchun ob'ektlar yetarlicha mos kelmaydi,
- Subyektiv interpretatsiyalar xavfi mavjud.



1-diagramma. Qiyosiy metodning qo'llanilish sohalari.

Xulosa

Qiyosiy tarixiy metod zamonaviy tarixshunoslikda o'zining mustahkam o'rniga ega. Bu metod tarixiy hodisalarni chuqur tahlil qilish, umumiy qonuniyatlarni aniqlash va tarixiy tajribaning ko'lamini kengaytirish imkonini beradi. Qiyosiy yondashuv turli davrlar va hududlardagi ijtimoiy-siyosiy, madaniy va iqtisodiy tizimlarni solishtirish orqali global va lokal darajadagi tarixiy jarayonlarni yaxshiroq tushunishga xizmat qiladi. Uning nazariy asoslari va amaliy qo'llanilishi tarixiy bilimlarni boyitadi, tadqiqotchilarga murakkab tarixiy muammolarni tizimli va analitik tarzda o'rganish imkonini beradi. Xususan, tarixiy voqealar va jarayonlarning sabab-oqibat aloqalarini aniqlash, o'xshash va farqli jihatlarni yoritish orqali tarixiy umumlashmalar yaratishga yordam beradi. Qiyosiy metod, shuningdek, tarixiy rivojlanishning alternativ yo'llarini ko'rsatish va tarixiy tajribalarning xilma-xilligini ochib berish imkonini yaratadi. Biroq, qiyosiy tarixiy metodni qo'llashda yuqori darajada ehtiyotkorlik talab etiladi. Soxta analogiyalar keltirib chiqarish, tarixiy kontekstlarni yetarlicha hisobga olmaslik yoki subyektiv interpretatsiya xavfi mavjud. Shu sababli tadqiqotchilar har bir hodisani o'z zamonaviy va madaniy kontekstida baholashi, qiyosiy tahlilni ob'ektiv mezonlarga asoslangan holda olib borishi zarur.

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ФОРМИРОВАНИЕ НАУЧНОГО МЫШЛЕНИЯ И ЭКОЛОГИЧЕСКОЙ КУЛЬТУРЫ УЧАЩИХСЯ ЧЕРЕЗ ИНТЕГРАЦИЮ ЕСТЕСТВЕННЫХ НАУК

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Аннотация. В статье рассматривается вопрос развития научного мышления и экологической культуры учащихся в процессе изучения естественных наук. Особое внимание уделяется использованию интегрированного подхода, который позволяет объединять знания из разных дисциплин и применять их при решении практических задач. Показано, что такой подход способствует повышению интереса учащихся к обучению, развитию логического мышления и формированию ответственного отношения к окружающей среде. В работе также отмечается важность применения проектных и исследовательских заданий в образовательном процессе.

Ключевые слова: научное мышление, экологическая культура, интегрированное обучение, естественные науки, межпредметные связи, обучение учащихся.

Abstract. This article examines the development of students' scientific thinking and environmental culture in the process of studying natural sciences. Special attention is given to the use of an integrated approach that allows the combination of knowledge from different disciplines and its application in solving practical tasks. It is shown that such an approach increases students' interest in learning, develops logical thinking, and promotes responsible attitudes toward the environment. The study also emphasizes the importance of project-based and research-oriented activities in the educational process.

Keywords: scientific thinking, environmental culture, integrated learning, natural sciences, interdisciplinary connections, student education.

Annotatsiya. Ushbu maqolada tabiiy fanlarni o'rganish jarayonida o'quvchilarda ilmiy fikrlash va ekologik madaniyatni rivojlantirish masalalari ko'rib chiqiladi. Integratsiyalashgan yondashuv orqali turli fan bilimlarini birlashtirish va ularni amaliy masalalarni hal etishda qo'llash imkoniyati alohida ta'kidlanadi. Bunday yondashuv o'quvchilarning darsga bo'lgan qiziqishini oshirishi, mantiqiy fikrlashni rivojlantirishi hamda atrof-muhitga mas'uliyatli munosabatni shakllantirishi ko'rsatiladi. Shuningdek, ta'lim jarayonida loyiha va tadqiqot topshiriqlaridan foydalanish muhimligi qayd etiladi.

Kalit so'zlar: ilmiy fikrlash, ekologik madaniyat, integratsiyalashgan ta'lim, tabiiy fanlar, fanlararo aloqalar, o'quvchilar ta'limi.

ВВЕДЕНИЕ. В современном образовании всё больше внимания уделяется не только передаче знаний, но и развитию у школьников умения самостоятельно мыслить, анализировать информацию и применять её в реальной жизни. В этом процессе особое значение имеют естественные науки, так как они помогают понять окружающий мир и формируют у обучающихся научный подход к изучению явлений. Сегодня вопросы экологии становятся особенно важными. Проблемы загрязнения окружающей среды,

изменения климата и рационального использования природных ресурсов требуют от людей осознанного отношения к природе. Поэтому в процессе обучения необходимо формировать у учеников экологическую культуру и ответственное поведение. Одним из способов достижения этих целей является объединение различных естественных наук в процессе обучения. Такой подход помогает учащимся лучше понимать связи между предметами и видеть, как полученные знания можно использовать на практике.

Роль естественных наук в формировании мышления учащихся. Изучение естественных наук играет важную роль в развитии у школьников способности мыслить логически и последовательно. В процессе обучения школьники учатся наблюдать явления, сравнивать факты, делать выводы и объяснять происходящие процессы. Я считаю такие навыки помогают не только в изучении предметов, но и в повседневной жизни.

Естественные науки дают возможность рассматривать окружающий мир как единую систему, где все процессы взаимосвязаны. Это способствует формированию у школьников более целостного представления о природе и понимания причинно-следственных связей.

Значение интеграции естественных наук в обучении. Интеграция естественных наук предполагает объединение знаний из различных предметов, таких как биология, химия, физика и география. На мой взгляд такой подход позволяет школьникам видеть связь между изучаемыми темами и применять знания комплексно.

В традиционном обучении предметы часто рассматриваются отдельно, что может затруднять понимание общей картины. Интегрированный подход, наоборот, помогает объединить знания и сделать их более понятными и практико-ориентированными.

Кроме того, интеграция способствует повышению интереса к обучению, так как ученики начинают видеть практическое применение изучаемого материала в реальной жизни.

Формирование экологической культуры учащихся Экологическая культура является важной частью современного образования. Она включает в себя понимание ценности природы, бережное отношение к окружающей среде и осознание ответственности человека за состояние экосистемы и природы.

В процессе изучения естественных наук у школьников формируются представления о влиянии человека на природу, причинах экологических проблем и возможных способах их решения. Это помогает воспитывать у учеников ответственное поведение и стремление к сохранению природных ресурсов.

Особую роль в формировании экологической культуры играют обсуждения, проблемные вопросы и ситуации, анализ реальных ситуаций и выполнение заданий, связанных с экологическими проблемами.

Практические методы обучения и проектная деятельность. Для эффективного формирования научного мышления и экологической культуры важно использовать активные методы обучения. К ним относятся наблюдения, эксперименты, исследовательские задания и работа над проектами.

Проектная деятельность позволяет школьникам самостоятельно изучать выбранную тему, собирать информацию, анализировать данные и представлять результаты своей работы. Я считаю это способствует развитию самостоятельности, ответственности и умения работать в команде.

Практические задания делают процесс обучения более наглядным и интересным. Школьники не только получают теоретические знания, но и учатся применять их на практике, что значительно повышает качество усвоения материала.

Развитие исследовательских навыков. Одним из важных результатов интегрированного обучения является развитие у школьников исследовательских навыков. Ученики учатся задавать вопросы, выдвигать предположения и находить на них ответы. На мой взгляд это особенно важно в условиях современного образования, где ценится умение самостоятельно добывать знания. Я считаю даже простые задания, такие как наблюдение за природными явлениями или проведение небольших экспериментов, могут способствовать развитию интереса к науке и формированию активной позиции учащегося.

Связь обучения с реальной жизнью Я считаю ещё одним важным аспектом является связь учебного материала с реальной жизнью. Когда школьники видят, как знания применяются на практике, у них появляется больше мотивации к обучению. Например, обсуждение экологических проблем своего региона помогает ученикам лучше понять значимость изучаемых тем и почувствовать свою ответственность за окружающую среду.

Использование современных технологий. В современном обучении всё чаще используются цифровые технологии, которые помогают разнообразить учебный процесс. Виртуальные лаборатории, видеоуроки и интерактивные задания позволяют сделать обучение более наглядным, понятным и доступным. Я считаю использование технологий также помогает учителю организовать урок более эффективно и вовлечь учащихся в активную работу.

ЗАКЛЮЧЕНИЕ. В ходе работы было рассмотрено, как формирование научного мышления и экологической культуры школьников может осуществляться через изучение естественных наук. Я считаю что при таком подходе обучение становится более осмысленным, так как школьники не просто запоминают материал, а начинают понимать, как разные знания связаны между собой и как их можно применять в жизни. Интеграция предметов помогает по-другому взглянуть на учебный процесс. Ученики лучше воспринимают информацию, когда видят её связь с другими дисциплинами и реальными ситуациями. На мой взгляд в современных условиях важно не только давать знания, но и формировать у школьника понимание ответственности за окружающую среду. Это помогает воспитывать более внимательное отношение к природе и осознание последствий своих действий.

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Termiz iqtisodiyot va servis universiteti 2-bosbisqich talabasi Bo'riyeva Sarvinoz
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Annotatsiya

Ushbu maqolada o'zbek xalq og'zaki ijodining muhim qismini tashkil etuvchi, marosim va udumlar-to'y dafn marosimlari, bayramlar yoritilib beriladi. Maqolada ushbu marosimlarning turlari, ularning bajarilish tartibi haqida batafsil to'xtalinadi. Tadqiqot davomida folklorshunos, etnografiya va madaniyatshunoslik sohalaridagi asosiy nazariy manbalar, jumladan B.Sarimsoqov A.Mazayev, O.Safarov kabi olimlarning ilmiy fikrlari tahlil qilinadi.

Kalit so'zlar: Marosim folklori, marosim turlari, to'y marosimlari, dafn marosimlari, bayramlar diniy bayramlar, ijtimoiy va ma'naviy qadriyatlar.

Kirish. Marosimlar va ularning jamiyatdagi o'rni. Marosimlar insoniyat tarixida ijtimoiy-madaniy hayotning ajralmas qismi sifatida shakllanib kelgan. Ular orqali xalq o'z dunyoqarashi, e'tiqod va qadriyatlarini namoyon etadi. O'zbek xalqining marosimlari qadimiy an'analar, urf-odatlar va diniy e'tiqodlar bilan chambarchas bog'liq. Har bir marosim muayyan ijtimoiy vazifani bajaradi va kishilarni birlashtiradi. To'y marosimlari ijtimoiy birlik va qadriyatlar timsoli. To'y o'zbek xalqining eng muhim va tantanali marosimlaridan biridir. U nafaqat ikki yoshning oila qurishi, balki ikki urug'ning, ikki avlodning yaqinlashuvi, sifatida qaraladi. To'yga tayyorgarlik bosqichlari, sovchilarning kelishi, fотиha to'y, nikoh va kelin salom kabi bosqichlar xalq orasida asrlar davomida shakllangan rasm-rusumlar asosida amalga oshiriladi. Bu marosimlar og'zaki ijod namunalari to'y qo'shiqlari, maqollar, duolar keng o'rin oladi. Dafn marosimlari xalqning o'lim borasidagi tasavvurlari, axloqiy qarashlari va ruhiy an'analari bilan uzviy bog'liq. Marhumni yuvish, kafanlash, janoza namozi, ta'ziya va osh berish kabi urf-odatlar marhumga bo'lgan hurmat va ehtirom ifodasidir. Bu marosimlar orqali xalq o'z e'tiqodi va ruhiy birdamligini saqlab qoladi. Bayramlar xalq hayotining ko'zgusi. Bayramlar o'zbek xalqining madaniy merosida muhim o'rin tutadi. Ular yillik davriy marosimlar sifatida milliy o'zlikni anglash, birlik va hamjihatlikni mustahkamlashga xizmat qiladi.

Asosiy qism

Shuni ta'kidlab o'tish kerakki an'ana, odat marosim, tushunchalarining izohi bir biriga bog'liq. Shu bilan birga bir qatorda, an'analarning tarkibiy qismi odat, odatning tarkibiy qismi esa marosimdir. An'ana va odat tushunchalariga nisbatan marosim koproq bayram bilan aloqadorroq deb ta'kidlab o'tadi. Oxunjon Safarov "Ozbek xalq og'zaki ijodi" darsligida [125 -126 b]. B.Sarimsoqov fikrlariga ko'ra o'zbek folklorshunosligida boshqa xalqlar folklorshunosligida bo'lganidek, marosim izchil ilmiy tasnif qilingan emas. B.Sarimsoqovning "O'zbek marosim folklori" kitobida marosim folklori tasnifi masalalariga alohida e'tibor qaratilgan bo'lsada, aynan o'zbek marosim folklori o'rganilmaganligini, shu davrgacha umuman tasnif qilinmaganligini ta'kidlaydi. Biroq 1974-yilda chop etilgan, M.Alaviyaning "O'zbek marosim qo'shiqlari" nomli monografiyasida o'zbek marosim folkloriga dahldor fikrlar ilgari surilganligi e'tibordan chetda qoldirilgan. T.Mirzayev qayd qilishicha, o'zbek marosim folklori "mavsumiy marosimlar folklori", "oilaviy-maishiy marosimlar folklori" va "diniy -ibodat marosimlari folklori"ga bo'linadi [8,9 -bet]. Shuni alohida ta'kidlamochimanki an'ana, odat va marosim tushunchalar bir-biridan ajralmas va o'zaro bog'liq hodisalardir. Mening fikrimcha, bu tushunchalar bir-

birini to'ldiradi hatto ular o'zaro ketma – ketlikda mavjud bo'lib biri ikkinchisining asosini tashkil etadi. Ya'ni, har qanday an'ananing zamirida odat yotadi, odat esa o'z navbatida marosimdan kelib chiqadi. Men bu fikrga shu sababli qo'shilaman chunki marosimlar ko'proq amaliyotda muayyan vaziyatlarda o'tkaziladi, vaqt o'tishi bilan u doimiy odatga aylanadi, odat esa ko'p takrorlana – takrorlana xalqning madaniy xotirasida an'anaga aylanadi. Misol uchun to'y marosimlarida ko'p uchraydigan udumlar bor: kelinning yuzini ochish, kuyovga do'ppi kiydirish – bu avval marosim bo'lgan, hozir esa odat, hattoki an'anaga aylangan. Shu asosida aytmoqchimanki, bu tushunchalar orasida qat'iy chiziq yo'q ular bir tizim sifatida qaralishi kerak. Marosim – odatni tug'diradi, odat esa an'ana sifatida mustahkamlashadi.

Muhokama va natijalar

Tadqiqot davomida ma'lum bo'ldiki, to'y marosimlari, dafn marosimlari va xalq bayramlari nafaqat ijtimoiy hayot tarzining bir qismi, balki xalq tafakkuri va ma'naviyatining ajralmas bo'lagi sifatida shakllangan. To'y oldidan qilinadigan so'rash, elchilik, fотиha, sovchi qo'yish kabi bosqichlari folklor namunalari bilan boyitilgan holda o'tgan. Bu marosimlar bugungi kunda ham mavjud, ammo hozirgi kunga kelib ularning shakli va mazmunini biroz zamonaviylashgan. B.Sarimsoqovning marosimlarga doir izlanishlarida [1957-1964 yillar] ushbu o'zgarishlar chuqur ilmiy tahlil qilingan. Dafn marosimlari esa o'zbek xalqining diniy qarashlari bilan uzviy bog'liq. Islom dini qabul qilingan davrdan boshlab dafn marosimlari Qur'oniy an'analar asosida shakllangan. Biroq bu marosimlarda islomdan avvalgi qadimiy urf – odatlarning izlari hamon ko'zga tashlanadi. Misol uchun "jo'natuv" qo'shiqlari yoki marhumning oxirgi marta kuzatish paytidagi yig'ilar bugungi kunda ham ayrim mintaqalarda saqlanib qolgan. Bayramlar ayniqsa navro'z, hayit bayramlari–xalqning dunyoqarashi hosildorlikka, ishonchi, bilan bog'liq bo'lgani holda vujudga kelgan. Navro'z bayrami tarixiy manbalarga ko'ra [Zardushtiylik davrida] xalq tafakkurining eng qadimiy shakllaridan biri hisoblanadi. Sovet davrida [1920 – 1980 yillar] bu bayramlar mafkuraviy sabablarga ko'ra to'sqinliklarga uchragan bo'lsa-da, 1991 yilda mustaqillik qayta tiklangach ular yana milliy maqomga ega bo'lib, xalq hayotining muhim qismiga aylandi. Mening fikrimcha, hozirgi kunda marosim va udumlar shaklan zamonaviylashgan bo'lsada ularning ma'naviy va tarbiyaviy mazmuni saqlanib qolgan. Biroq ayrim hollarda ular faqat tashqi ko'rinishdagina takrorlanmoqda, ichki mazmuni esa yoddan chiqmoqda. Masalan: to'y marosimlari ko'p hollarda rasmiyatchilik yoki poygaga aylanmoqda. Bu bilan nima demoqchiman, marosimlarning asl mohiyatidan chiqib ketmoqdamiz faqat tashqi ko'rinishga bor e'tiborimizni qaratmoqdamiz an'anaviy qadriyatlarimizni chuqur anglamasdan ish ko'ryabmiz. Bu holatlar esa marosimlarning asl maqsadini ya'niy oila qurish, jamiyatdagi birlik va hamjihatlikni mustahkamlash kabi qadriyatlarni soya ostida qoldirib, ularni faqatgina tashqi ko'rinishga aylantiradi. Shuningdek, M.Alaviya : O'zbek to'y marosimlarining qadimiyligi va ularning xalq hayotidagi o'rni haqida so'z yuritadi M.Jo'rayev : O'zbek marosim folklorining o'rganilishida katta hissa qo'shgan. U "Oy oldida bir yulduz" nomli asarida o'zbek xalq marosim qo'shiqlari haqida so'z yuritadi. Zamonaviy hayot tarzining o'zgarishi bilan ba'zi an'anaviy bayramlar o'zining asl mohiyatini yo'qolib borilayotgani kuzatilmoqda. Bu holatni oldini olish uchun yosh kelajak avlodlarimizni milliy bayramlarga, marosimlarga qiziqtirish muhimdir.

Adabiyotlar tahlili

1. Muzayyana Alaviya o'zbek folklorshunosligining yetuk vakillaridan biri bo'lib, uning "O'zbek xalq marosim qo'shiqlar" nomli asari 1974-yilda Toshkentda nashr etilgan. Ushbu asar o'zbek xalqining marosim qo'shiqlari bo'yicha yozilgan. Asarda marosim qo'shiqlari xususan to'y

motam, mehnat va mavsumiy marosimlar bilan bog'liq qo'shiqlarning ijtimoiy hayotdagi o'rni va ahamiyati tahlil qilinadi.

2. Bahodir Sarimsoqov o'zbek marosim folklorini keng qamrovda o'rgangan. U marosim folklorini mavsumiy marosimlar va oilaviy marosimlar va ijtimoiy marosimlar, kabi turlarga ajratgan. Sarimsoqov marosimlarning tarixiy ildizlari, ularning shakllanishi va rivojlanishi jarayonlarini tahlil qiladi. Marosimlarning ijtimoiy ahamiyati: Har ikki muallif marosimlarning jamiyatdagi o'rnini, ularning ijtimoiy funksiyalarini yoritiladi. Farqli jihatlari esa Alaviya asosan marosim qo'shiqlarining janrlari bo'yicha tasnifiga e'tibor qaratgan bo'lsa, Sarimsoqov marosim folklorini kengroq doirada, ya'ni marosimlarning turlari va ularning tarixiy rivojlanish nuqtai nazaridan o'rganadi. Alaviya.M. [1974]. Ozbek xalq marosim qo'shiqlari: Toshkent Fan nashriyoti 168 b. Ushbu monografiyada M. Alaviya o'zbek xalq qo'shiqlarining turlari, ularning badiiy xususiyatlari va ijtimoiy ahamiyati haqida tadqiqot olib borgan. Sarimsoqov B. [1968]. O'zbek marosim folklori. Toshkent: Fan nashriyoti. 200 b. B. Sarimsoqovning bu asarida o'zbek marosimi folklorning janrlari, va ularning kelib chiqishi, funksiyalari va poetic xususiyatlari chuqur tahlil qilingan.

Xulosa

O'zbek xalqining marosim va udumlari nafaqat qadimiy an'analarni saqlab qolish, balki bizning kundalik hayotimizda ham o'z aksini topadi. To'y yoki dafn marosimlarida, har bir tafsilot o'zining chuqur ma'nosi bilan alohida ahamiyatga ega. Bu an'analarni har biri bizni birlashtiradi, ajratib turadigan holat emas, balki hamjihatlik va o'zaro hurmatni oshiradi. Shuni ta'kidlashim mumkinki, ushbu marosimlar orqali biz faqatgina o'tmish bilan bog'lanmaymiz, balki hozirgi zamon va kelajak uchun ham ko'plab qimmatli qadriyatlarni o'rganamiz. Xalq an'analari bizni insoniylikni unutmaslikka, o'z ildizlarimizga sodiq qolishga va ulkan tarixiy madaniyatni yanada rivojlantirishga ilhomlantiradi.

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MUSTAQILLIK DAVRIDA O‘ZBEKISTONDA MILLATLARARO MUNOSABATLAR MODELINING EVOLYUTSIYASI.

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Annotatsiya

Mazkur maqolada O‘zbekistonda millatlararo munosabatlar siyosati va bag‘rikenglik tamoyillarining shakllanishi hamda rivojlanish bosqichlari ijtimoiy-falsafiy jihatdan tahlil qilingan. Unda mustaqillik yillarida amalga oshirilgan davlat siyosatining asosiy yo‘nalishlari, “O‘zbekiston - umumiy uyimiz” g‘oyasidan “Yangi O‘zbekiston - bag‘rikenglik diyori” konsepsiyasigacha bo‘lgan evolyutsion jarayonlar yoritilgan. Shuningdek, Konstitutsiyaviy-huquqiy asoslar, milliy-madaniy markazlar faoliyati, fuqarolik birdamligini mustahkamlash va madaniy xilma-xillikni qo‘llab-quvvatlash masalalari ilmiy nuqtayi nazardan tahlil etilgan.

Kalit so‘zlar: millatlararo totuvlik, bag‘rikenglik, fuqarolik birdamligi, milliy-madaniy markazlar, Konstitutsiya, Yangi O‘zbekiston, ijtimoiy-falsafiy tahlil.

Аннотация

В статье проводится социально-философский анализ этапов становления и развития политики межнациональных отношений и принципов толерантности в Узбекистане. Рассматриваются основные направления государственной политики, реализуемой в годы независимости, а также эволюция концептуальных подходов от идеи «Узбекистан - наш общий дом» к концепции «Новый Узбекистан - край толерантности». Особое внимание уделяется конституционно-правовым основам, деятельности национально-культурных центров, укреплению гражданского единства и поддержке культурного многообразия как важным факторам общественного развития.

Ключевые слова: межнациональное согласие, толерантность, гражданское единство, национально-культурные центры, Конституция, Новый Узбекистан, социально-философский анализ.

Abstract

This article provides a socio-philosophical analysis of the formation and development of interethnic relations policy and the principles of tolerance in Uzbekistan. It examines the main directions of state policy implemented during the years of independence and highlights the evolution from the idea of “Uzbekistan is Our Common Home” to the concept of “New Uzbekistan - the Land of Tolerance.” The study also focuses on constitutional and legal foundations, the activities of national-cultural centers, the strengthening of civic unity, and the promotion of cultural diversity as important factors of social development.

Keywords: interethnic harmony, tolerance, civic unity, national-cultural centers, Constitution, New Uzbekistan, socio-philosophical analysis.

O‘zbekistonda millatlararo munosabatlar siyosati va bag‘rikenglik g‘oyasi evolyutsiyasini shartli ravishda bir necha bosqichga ajratib ko‘rsatish mumkin. Bu jarayon “O‘zbekiston - umumiy

uyimiz” shioridan “Yangi O‘zbekiston - bag‘rikenglik diyori” tamoyiliga bosqichma-bosqich o‘tish bilan tavsiflanadi¹.

1-bosqich. Mustaqillikning dastlabki davri - millatlararo totuvlik asoslarini shakllantirish (1991-2000-yillar). Bu davrda mustaqil davlatning millatlararo siyosati uchun asosiy g‘oya “O‘zbekiston - umumiy uyimiz” shiori orqali ifodalandi. Uning mazmuni mamlakat hududida yashovchi barcha millat va elat vakillarini yagona Vatan atrofida birlashtirish, fuqarolik birdamligini mustahkamlashdan iborat edi².

Mazkur bosqichning muhim jihatlari quyidagilardan iborat. Millatlararo totuvlikni davlat siyosati darajasiga ko‘tarish, milliy-madaniy markazlarni tashkil etish, 1992-yilda Respublika Baynalmilal Madaniyat Markazi faoliyatini yo‘lga qo‘yish, turli millat vakillarining til va madaniyatini saqlashga sharoit yaratish³.

2-bosqich. Millatlararo hamjihatlikni mustahkamlash va institutsional rivojlanish (2000-2016-yillar). Bu davrda millatlararo totuvlik siyosati yanada mustahkamlandi va institutsional jihatdan rivojlandi. “O‘zbekiston - umumiy uyimiz” g‘oyasi amaliy mazmun bilan boyitildi.

Asosiy xususiyatlar:

milliy-madaniy markazlar faoliyatining kengayishi;
madaniy festival va anjumanlarning ko‘payishi;
ijtimoiy-siyosiy faollikning oshishi;
bag‘rikenglik dasturlarining amalga oshirilishi⁴.

3-bosqich. Yangi siyosiy bosqich - bag‘rikenglik siyosatini modernizatsiya qilish (2017-2021-yillar). Bu davrda millatlararo munosabatlar siyosati yangi bosqichga ko‘tarildi. Shu jarayonda Millatlararo munosabatlar va xorijiy mamlakatlar bilan do‘stlik aloqalari qo‘mitasi tashkil etildi⁵.

Asosiy yo‘nalishlar:

millatlararo hamkorlikni rivojlantirish;
bag‘rikenglik g‘oyasini xalqaro miqyosda targ‘ib qilish;
madaniy diplomatiya mexanizmlarini rivojlantirish.

4-bosqich. “Yangi O‘zbekiston” konsepsiyasi - bag‘rikenglik tamoyilining yangi bosqichi (2021-yildan hozirgacha). Ushbu davrda millatlararo siyosat Yangi O‘zbekiston taraqqiyot strategiyasi doirasida yangi mazmun kasb etdi. Natijada “Yangi O‘zbekiston - bag‘rikenglik diyori” tamoyili shakllandi⁶.

Asosiy yo‘nalishlar:

bag‘rikenglikni global qadriyat sifatida targ‘ib qilish;
madaniy muloqotni rivojlantirish;
fuqarolik birdamligini mustahkamlash;

¹ O‘zbekiston Respublikasi Konstitutsiyasi. – Toshkent: O‘zbekiston, 2023. – 80 b.

² O‘zbekiston Respublikasining davlat mustaqilligi asoslari to‘g‘risida: O‘zbekiston Respublikasining Qonuni, 31 avgust 1991 yil // O‘zbekiston Respublikasi Oliy Kengashining Axborotnomasi. – 1991. – №11.

³ Respublika Baynalmilal Madaniyat Markazi faoliyati to‘g‘risida hujjatlar va materiallar to‘plami. – Toshkent, 1992.

⁴ O‘zbekiston Respublikasi Vazirlar Mahkamasi qarorlari to‘plami (2000-2016-yillar). – Toshkent: Adolat, 2017.

⁵ Shavkat Mirziyoyev. Millatlararo totuvlik va bag‘rikenglikni mustahkamlash chora-tadbirlari to‘g‘risida: O‘zbekiston Respublikasi Prezidentining farmoni, 19 may 2017 yil // O‘zbekiston Respublikasi qonun hujjatlari to‘plami. - 2017. – №21.

⁶ Yangi O‘zbekiston taraqqiyot strategiyasi 2022-2026 / Shavkat Mirziyoyev. - Toshkent: O‘zbekiston, 2022. - 120 b.

ochiq jamiyat tamoyillarini rivojlantirish^{7,7}

Xulosa. “O‘zbekiston - umumiy uyimiz” shiori mustaqillikning dastlabki yillarida millatlararo totuvlikni ta‘minlashning ideologik asosini yaratgan bo‘lsa, bugungi kunda “Yangi O‘zbekiston - bag‘rikenglik diyori” tamoyili ushbu g‘oyaning zamonaviy, keng qamrovli va xalqaro miqyosga yo‘naltirilgan bosqichini ifodalaydi.

Mustaqillik yillarida O‘zbekistonda millatlararo totuvlik va bag‘rikenglik tamoyillariga asoslangan yangi ijtimoiy model shakllandi. Ushbu modelning huquqiy asosi O‘zbekiston Respublikasi Konstitutsiyasida mustahkamlab qo‘yilgan. Konstitutsiyada millatlararo munosabatlarni tartibga soluvchi bir qator muhim normalar belgilangan bo‘lib, ular jamiyatda turli millat va elat vakillarining teng huquqli hamda totuv yashashini ta‘minlashga xizmat qiladi. Xususan, Konstitutsiyaning 4-moddasida O‘zbekiston Respublikasining davlat tili o‘zbek tili ekani belgilangan bo‘lsa-da, mamlakat hududida yashovchi turli millat va elatlarning tillari, urf-odatlar hamda an‘analari hurmat qilinishi va ularning rivojlanishi uchun zarur sharoitlar yaratilishi davlat tomonidan kafolatlanadi. Mazkur norma O‘zbekiston jamiyatida madaniy xilma-xillikni saqlash, milliy qadriyatlarni qo‘llab-quvvatlash hamda turli etnik guruhlarining o‘zligini asrab-avaylashga xizmat qilmoqda⁸.

Konstitutsiyaning 8-moddasiga ko‘ra, O‘zbekiston xalqini millatidan qat‘i nazar, mamlakat fuqarolari tashkil etadi. Bu qoida O‘zbekiston jamiyatining fuqarolik birlik tamoyiliga asoslanishini ifodalaydi. Ya‘ni, davlatda yashovchi barcha millat va elat vakillari yagona siyosiy hamjamiyat - O‘zbekiston xalqining ajralmas qismi hisoblanadi⁹.

Shuningdek, Konstitutsiyaning 18-moddasida O‘zbekiston Respublikasining tashqi siyosati tinchliksevar tamoyillarga asoslanishi belgilangan¹⁰. Davlat xalqaro tashkilotlar va boshqa davlatlar bilan ikki va ko‘p tomonlama munosabatlarni rivojlantirish orqali xalqaro hamkorlikni mustahkamlaydi. Bu jarayon ham millatlararo munosabatlarning barqaror rivojlanishiga xizmat qiladi, chunki xalqaro hamkorlik va ochiq siyosat turli madaniyatlar o‘rtasidagi muloqot va o‘zaro hurmatni kuchaytiradi.

Konstitutsiyaning 19-moddasida esa inson huquq va erkinliklari xalqaro huquqning umume‘tirof etilgan normalariga muvofiq e‘tirof etilishi va kafolatlanishi qayd etilgan¹¹. Ushbu modda barcha fuqarolarning jinsi, irqi, millati, tili, dini yoki ijtimoiy kelib chiqishidan qat‘i nazar qonun oldida tengligini ta‘minlaydi. Bu esa mamlakatda millatlararo totuvlik, ijtimoiy adolat hamda tenglik tamoyillarini mustahkamlashda muhim omil bo‘lib xizmat qilmoqda.

Umuman olganda, mustaqillik yillarida O‘zbekistonda millatlararo munosabatlarning yangi modeli shakllanib, u fuqarolik birlik, milliy tenglik, madaniy xilma-xillikni hurmat qilish hamda inson huquqlarini ta‘minlash tamoyillariga asoslanmoqda. Ushbu model jamiyatda barqarorlikni saqlash, turli millat vakillarining totuv yashashi hamda mamlakatning barqaror taraqqiyotini ta‘minlashda muhim ahamiyat kasb etadi.

Mustaqillik yillarida O‘zbekistonda millatlararo totuvlik va bag‘rikenglikni ta‘minlash davlat siyosatining muhim yo‘nalishlaridan biriga aylandi. Bu jarayonda milliy siyosatning asosiy maqsadi jamiyatda turli millat va elat vakillari o‘rtasida o‘zaro hurmat, do‘stlik va hamkorlik

⁷ Millatlararo munosabatlar sohasidagi davlat siyosati konsepsiyasi: O‘zbekiston Respublikasi Prezidenti Farmoni, 15 noyabr 2019 yil. – Toshkent, 2019.

⁸ O‘zbekiston Respublikasi Konstitutsiyasi. - Toshkent: O‘zbekiston, 2023. - 4-modda.

⁹ O‘zbekiston Respublikasi Konstitutsiyasi. - Toshkent: O‘zbekiston, 2023. – 8-modda.

¹⁰ Shu manba – 18-modda.

¹¹ Shu manba –19-modda.

muhitini mustahkamlashdan iborat bo'ldi. Ayniqsa, so'nggi yillarda millatlararo munosabatlarni rivojlantirish, ko'p millatli jamiyatda yagona fuqarolik hamjihatligini shakllantirish hamda yosh avlodni Vatanga sadoqat, milliy va umuminsoniy qadriyatlariga hurmat ruhida tarbiyalashga qaratilgan keng ko'lamli islohotlar amalga oshirildi. Ushbu siyosatning huquqiy va institutsional asoslari qator normativ-huquqiy hujjatlar, xususan, Millatlararo munosabatlar sohasida davlat siyosati konsepsiyasi to'g'risidagi Prezident farmonida o'z ifodasini topgan¹².

Mazkur farmon mamlakatda millatlararo munosabatlarni rivojlantirishning yangi bosqichini boshlab berdi. Unda jamiyatda millatlararo totuvlikni ta'minlash, turli millat va elat vakillarining tili, madaniyati, urf-odatlarini hamda an'analarini asrab-avaylash va rivojlantirish davlat siyosatining ustuvor vazifalaridan biri sifatida belgilandi. Shu bilan birga, ko'p millatli jamiyatda "katta yagona oila" tamoyilini mustahkamlash, fuqarolar o'rtasida o'zaro hurmat va bag'rikenglikni rivojlantirish hamda millatlararo muomala madaniyatini shakllantirish muhim vazifa sifatida e'tirof etildi¹³.

Farmonda qayd etilishicha, O'zbekistonda 130 dan ortiq millat va elat vakillari istiqomat qilib, ular mamlakat Konstitutsiyasi va qonunlari bilan kafolatlangan teng huquq va imkoniyatlardan foydalanib, iqtisodiyot, ilm-fan, madaniyat va ijtimoiy sohalarida samarali faoliyat yuritmoqda. Bu esa O'zbekistonning ko'p millatli jamiyat sifatida rivojlanishida millatlararo totuvlik muhim omil ekanini ko'rsatadi. Turli millat vakillarining mamlakat taraqqiyotiga qo'shayotgan hissasi jamiyatda fuqarolik birdamligi va ijtimoiy barqarorlikni mustahkamlashga xizmat qilmoqda.

Shuningdek, ushbu farmonga muvofiq millatlararo munosabatlar sohasida davlat siyosatini tizimli ravishda amalga oshirish uchun institutsional mexanizmlar takomillashtirildi. Xususan, O'zbekiston Respublikasi Vazirlar Mahkamasi huzuridagi Millatlararo munosabatlar va xorijiy mamlakatlar bilan do'stlik aloqalari qo'mitasi faoliyati kuchaytirilib, millatlararo munosabatlarni o'rganish, monitoring qilish va ilmiy tahlil qilish vazifalari kengaytirildi. Shuningdek, millatlararo munosabatlar bo'yicha ilmiy-amaliy tadqiqotlar markazini tashkil etish orqali ushbu sohada ilmiy tahlil va ekspertiza ishlari yo'lga qo'yildi.

Farmonda millatlararo munosabatlarni rivojlantirishda fuqarolik jamiyati institutlari, milliy madaniy markazlar hamda ommaviy axborot vositalarining rolini kuchaytirish alohida ta'kidlandi. Bu esa jamiyatda millatlararo muloqot madaniyatini shakllantirish, ehtimoliy ixtiloflarning oldini olish va bag'rikenglik muhitini mustahkamlashga xizmat qiladi. Shu bilan birga, ta'lim, madaniyat va axborot sohalarida millatlararo totuvlikni mustahkamlashga qaratilgan ma'rifiy tadbirlar kompleksini amalga oshirish ham davlat siyosatining muhim yo'nalishlaridan biri sifatida belgilandi.

Bundan tashqari, farmonda xalqaro hamkorlikni rivojlantirish, xorijdagi vatandoshlar bilan aloqalarni mustahkamlash hamda O'zbekistonning xalqaro maydondagi nufuzini oshirish vazifalari ham belgilangan. Bu jarayon O'zbekistonning ochiq va tinchliksevar tashqi siyosatini aks ettirib, turli xalqlar va madaniyatlar o'rtasidagi o'zaro muloqotni rivojlantirishga xizmat qilmoqda.

Umuman olganda, mazkur farmon mustaqillik yillarida O'zbekistonda millatlararo munosabatlarning yangi modelini shakllantirishda muhim huquqiy asoslardan biri bo'lib xizmat qiladi. Ushbu model fuqarolik birdamligi, millatlararo totuvlik, madaniy xilma-xillikni hurmat qilish hamda bag'rikenglik tamoyillariga asoslanadi. Natijada O'zbekiston ko'p millatli

¹² O'zbekiston Respublikasi Prezidentining "Millatlararo munosabatlar sohasida davlat siyosati konsepsiyasini tasdiqlash to'g'risida"gi farmoni. – Toshkent, 2019 yil 15 noyabr.

¹³ <https://uza.uz/posts/millatlararo-munosabatlar-sohasida-o-zbekiston-respublikasi--18-11-2019>

jamiyatda barqarorlik va ijtimoiy hamjihatlikni ta'minlashga qaratilgan samarali milliy siyosat modelini shakllantirishga erishdi.

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