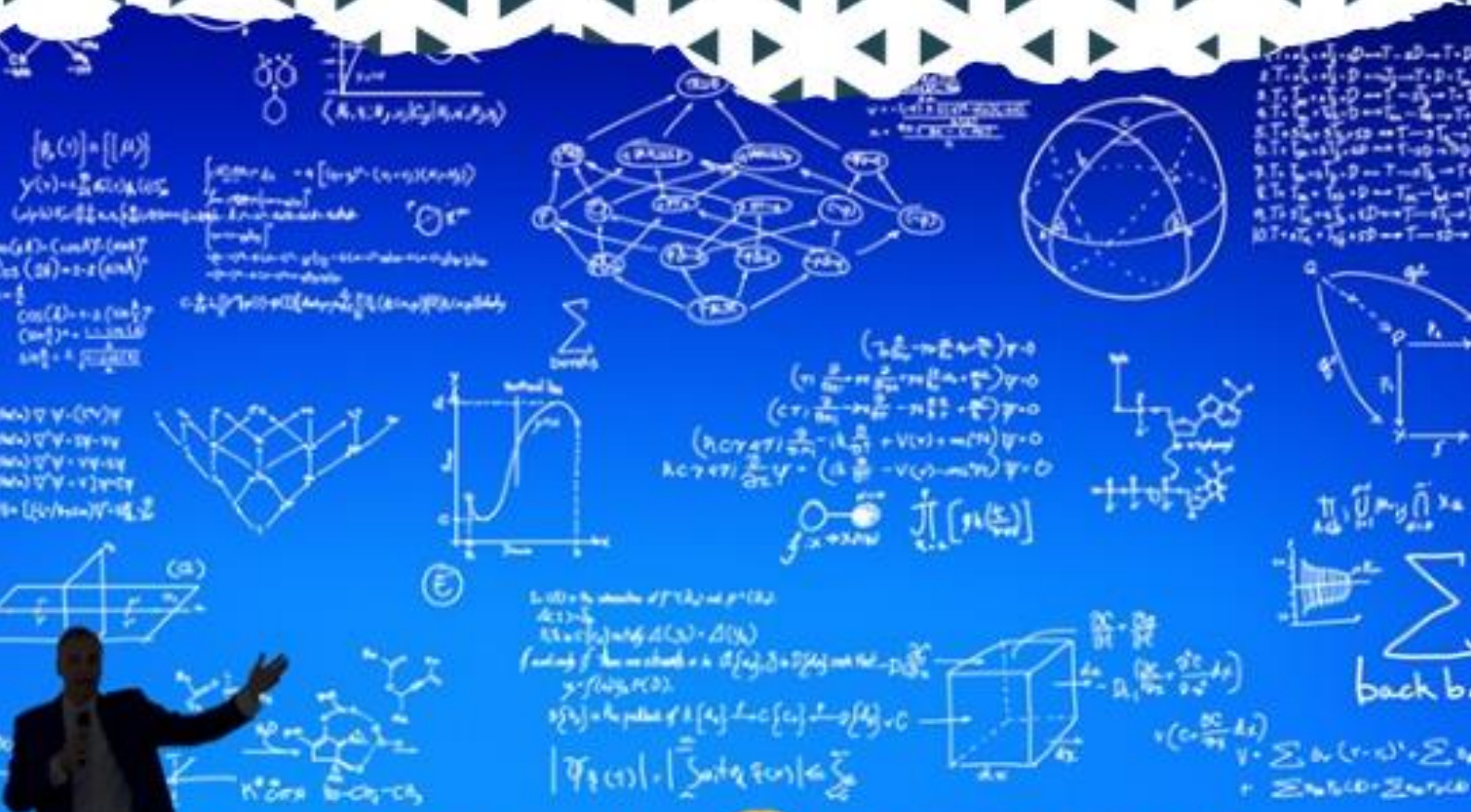




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**«ZAMONAVIY ILM-FAN VA TADQIQOTLAR: MUAMMO VA
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ONLAYN KONFERENSIYASI**

**ILMIY-ONLAYN KONFERENSIYA TO'PLAMI
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**« ZAMONAVIY ILM-FAN VA TA'LIM: MUAMMO VA YECHIMLAR » NOMLI
ILMIY, MASOFAVIY, ONLAYN KONFERENSIYASI**

O'ZBEKISTON RESPUBLIKASI PREZIDENTINING 2020 YIL 2-MART KUNGI «ILM, MA'RIFAT VA RAQAMLI IQTISODIYOTNI RIVOJLANTIRISH YILI»DA AMALGA OSHIRISHGA OID DAVLAT DASTURI TO'G'RISIDA»GI FARMONIDA KO'ZDA TUTILGAN VAZIFALARNI IJROSINI TA'MINLASH MAQSADIDA «INNOVATIVE WORLD» MCHJ TOMONIDAN TA'SIS ETILGAN «ORIENTAL JOURNAL ACADEMIC AND MULTIDISCIPLINARY JOURNAL (OJAMR)» ILMIY-USLUBIY JURNALINING (O'ZBEKISTON RESPUBLIKASI PREZIDENTI ADMINISTRATSIYASI HUZURIDAGI AXBOROT VA OMMAVIY KOMMUNIKASIYALARNI RIVOJLANTIRISH AGENTLIGINING 138572-SONLI GUVOHNOMA HAMDA ISSN 3030-3079) "ZAMONAVIY ILM-FAN VA TA'LIM: MUAMMO VA YECHIMLAR" NOMLI ILMIY, MASOFAVIY RESPUBLIKA ILMIY-AMALIY ONLINE KONFERENSIYASINI E'LON QILADI.

KONFERENSIYA TO'PLAMI ZENODO, OPEN AIRE, OPEN ACCESS VA INTERNET ARCHIVE BAZALARIDA INDEKSLANADI. KONFERENSIYA TO'PLAMIGA DOI RAQAMI BERILADI.

KONFERENSIYA TO'PLAMIGA QUYIDAGI YO'NALISHLAR BO'YICHA MAQOLALAR QABUL QILADI:

1. ANIQ FANLAR
2. TABIIY FANLAR
3. TEXNIKA FANLARI
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ESLATMA! KONFERENSIYA MATERIALLARI TO'PLAMIGA KIRITILGAN MAQOLALARDAGI RAQAMLAR, MA'LUMOTLAR HAQQONIYLIGIGA VA KELITIRILGAN IQTIBOSLAR TO'G'RILIGIGA MUALLIFLAR SHAXSAN JAVOBGARDIRLAR.



Internet va ijtimoiy tarmoqlarda diniy targ'ibotning ta'siri

Zokirjonov Muzaffarbek Zohidjon o'g'li

Farg'ona davlat universiteti Yurisprudensiya yo'nalishi

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Annotatsiya. Internet va ijtimoiy tarmoqlarda diniy targ'ibotning ta'siri mavzusi bugungi kunda globallashuv va raqamli texnologiyalar sharoitida dolzarb masalalardan biridir. Ushbu maqola diniy targ'ibotning onlayn platformalarda tarqalishi, uning ijtimoiy-psixologik ta'sirlari, amaliy misollar, tahliliy va qiyosiy yondashuvlarni o'rganadi. Maqolada internetning diniy ekstremizmni kuchaytirishi, ijtimoiy tarmoqlarning algoritmlari orqali targ'ibotning kuchayishi, shuningdek, turli mamlakatlar va dinlardagi farqlar tahlil qilinadi. Natijada, diniy targ'ibotning salbiy oqibatlarini yumshatish bo'yicha tavsiyalar beriladi.

Аннотация. Тема влияния религиозной пропаганды в интернете и социальных сетях является актуальной в условиях глобализации и цифровых технологий. В статье исследуются распространение религиозной пропаганды на онлайн-платформах, её социально-психологические эффекты, практические примеры, аналитический и сравнительный подходы. Анализируется роль интернета в усилении религиозного экстремизма, алгоритмы социальных сетей в усилении пропаганды, а также различия в разных странах и религиях. В итоге даются рекомендации по смягчению негативных последствий религиозной пропаганды.

Abstract. The topic of the impact of religious propaganda on the internet and social networks is relevant in the context of globalization and digital technologies. This article explores the dissemination of religious propaganda on online platforms, its socio-psychological effects, practical examples, analytical and comparative approaches.

It analyzes the role of the internet in strengthening religious extremism, the algorithms of social networks in amplifying propaganda, as well as differences across countries and religions. In conclusion, recommendations are provided for mitigating the negative consequences of religious propaganda.

Kalit so'zlar: Diniy targ'ibot, internet, ijtimoiy tarmoqlar, ekstremizm, algoritmlar, ijtimoiy ta'sir, psixologik mexanizmlar, qiyosiy tahlil, raqamli texnologiyalar, globallashuv.

Ключевые слова: Религиозная пропаганда, интернет, социальные сети, экстремизм, алгоритмы, социальное влияние, психологические механизмы, сравнительный анализ, цифровые технологии, глобализация.

Keywords: Religious propaganda, internet, social networks, extremism, algorithms, social impact, psychological mechanisms, comparative analysis, digital technologies, globalization.

Kirish. Zamonaviy dunyoda internet va ijtimoiy tarmoqlar inson hayotining ajralmas qismiga aylandi. Ular axborot almashinuvi, ijtimoiy aloqalar va ma'naviy qadriyatlarni tarqatish uchun qudratli vosita bo'lib xizmat qilmoqda. Biroq, bu platformalar diniy targ'ibotning tarqalishi uchun ham keng imkoniyatlar yaratmoqda, bu esa ijtimoiy va siyosiy jarayonlarga jiddiy ta'sir ko'rsatmoqda. Diniy targ'ibot – bu diniy e'tiqodlarni, qadriyatlar va g'oyalarni targ'ib qilish orqali jamiyatni shakllantirishga qaratilgan faoliyat bo'lib, internet orqali u global miqyosda tarqalmoqda. Bu jarayonning ta'siri, ayniqsa, yosh avlod va ijtimoiy jihatdan zaif guruhlar uchun kuchli bo'lib, ekstremizm, ijtimoiy nizolar va madaniy qarama-qarshiliklarni keltirib chiqarishi mumkin. Statistika ma'lumotlariga ko'ra, 2025-yilga kelib, internet foydalanuvchilari soni 5 milliarddan oshib, ijtimoiy tarmoqlar orqali kuniga millionlab diniy mazmundagi kontent tarqalmoqda.

Masalan, Facebook, Twitter (hozirgi X) va Instagram kabi platformalarda diniy guruhlar va tashkilotlar tomonidan yaratilgan sahifalar millionlab obunachilarga ega. Bu platformalar algoritmlari orqali foydalanuvchilarning shaxsiy ma'lumotlarini tahlil qilib, ularga moslashtirilgan diniy kontentni taklif qiladi, bu esa «echo chamber» (aks-sado xonasi) effektini yaratadi – ya'ni, foydalanuvchilar faqat o'z e'tiqodlarini tasdiqlovchi ma'lumotlarni ko'rib chiqadi. Natijada, diniy radikallashtiruv kuchayadi va jamiyatda polarizatsiya (qutblanish) sodir bo'ladi.

Mavzuning dolzarbligi shundan iboratki, diniy targ'ibot internet orqali nafaqat diniy qadriyatlarni tarqatadi, balki siyosiy maqsadlarda ham foydalaniladi. Masalan, Yaqin Sharq mintaqasida diniy ekstremistik guruhlar ijtimoiy tarmoqlardan foydalanib, yoshlarni jalb qilmoqdalar. O'zbekiston kabi mamlakatlarda ham internetning rivojlanishi bilan diniy targ'ibotning ta'siri kuchaymoqda, bu esa milliy xavfsizlik va ijtimoiy barqarorlikka tahdid solmoqda. Ushbu maqola diniy targ'ibotning internet va ijtimoiy tarmoqlardagi ta'sirini chuqur tahlil qilishga qaratilgan bo'lib, amaliy misollar, tahliliy yondashuvlar va qiyosiy tahlillarni o'z ichiga oladi. Maqola strukturasi kirishdan keyin asosiy qismda amaliy, tahliliy va qiyosiy jihatlar batafsil yoritiladi, hulosa esa umumiy xulosalar va tavsiyalarni taqdim etadi.

Davrning o'ziga xos xususiyatlarini hisobga olgan holda, maqolada AI sun'iy intellekt va deepfake texnologiyalari kabi yangi elementlarning diniy targ'ibotdagi ro'li ham ko'rib chiqiladi. Masalan, 2020-2025-yillarda ijtimoiy tarmoqlarda AI orqali yaratilgan diniy kontentning hajmi keskin oshgan, bu esa foydalanuvchilarni aldash va manipulyatsiya qilish imkoniyatlarini kengaytirgan. Shu sababli, ushbu tadqiqot nafaqat nazariy, balki amaliy ahamiyatga ega bo'lib, diniy targ'ibotning salbiy ta'sirlarini yumshatish yo'llarini taklif qiladi.

Asosiy qism. Internet va ijtimoiy tarmoqlarda diniy targ'ibotning amaliy ta'siri real hayotdagi voqealar va misollar orqali yaqqol namoyon bo'ladi. Masalan, ISIS (Islomiy Davlat) guruhining ijtimoiy tarmoqlardan foydalanishi diniy targ'ibotning qudratini ko'rsatadi.

2014-2020-yillarda ISIS Twitter va Facebook orqali minglab videolar va postlarni tarqatib, yoshlarni jalb qilgan. Tadqiqotlarga ko'ra, bu guruhning 90% dan ortiq rekrutlari ijtimoiy tarmoqlar orqali jalb qilingan. O'zbekiston kontekstida ham shunga o'xshash holatlar kuzatilmoqda: 2023-yilda O'zbekiston Ichki ishlar vazirligi ma'lumotlariga ko'ra, internet orqali diniy ekstremistik materiallar tarqatgan 500 dan ortiq holat aniqlangan, bu esa jamiyatda ijtimoiy nizolarni keltirib chiqargan.

Diniy dezinformatsiyaning tarqalishi. Bangladeshda o'tkazilgan tadqiqotda ijtimoiy tarmoqlarda diniy yolg'on ma'lumotlar tarqalishi natijasida ijtimoiy nizolar kuchaygani ko'rsatilgan. O'zbekistonda ham shunga o'xshash holatlar bor: 2022-yilda Telegram kanallari orqali diniy targ'ibot materiallari tarqalib, yoshlar orasida radikallashuv sodir bo'lgan. Amaliy tahlilda shuni ta'kidlash lozimki, ijtimoiy tarmoqlarning algoritmlari foydalanuvchilarning oldingi faolligiga asoslanib, diniy kontentni taklif qiladi, bu esa «filter bubble» (filtr pufagi) effektini yaratadi va foydalanuvchilarni ekstremistik g'oyalarga olib boradi.

Davr hususiyatlarini hisobga olgan holda, AI va deepfake'larning ro'li kuchaymoqda. Masalan, 2025-yilda X platformasida AI orqali yaratilgan diniy tasvirlar (masalan, musulmonlarga qarshi nafrat uyg'otuvchi suratlar) 27 milliondan ortiq interaktsiyaga sabab bo'lgan. Bu texnologiyalar diniy targ'ibotni yanada samarali qilmoqda, chunki ular real ko'rinadigan kontent yaratadi va foydalanuvchilarni manipulyatsiya qiladi.

Tahliliy Jihatlar. Diniy targ'ibotning ta'sirini tahlil qilganda, ijtimoiy-psixologik mexanizmlarni chuqur o'rganish lozim. Ijtimoiy tarmoqlarning algoritmlari foydalanuvchilarning e'tiqodlarini kuchaytirib, kognitiv bias (ongiy bias) ni yaratadi. Masalan, confirmation bias (tasdiqlash biasi) orqali foydalanuvchilar faqat o'z diniy qarashlarini tasdiqlovchi kontentni ko'radi, bu esa radikallashuvga olib keladi. Tahliliy yondashuvda shuni ta'kidlash kerakki, diniy targ'ibot ijtimoiy identifikatsiyani kuchaytiradi. Guruh ichidagi (in-group) va tashqaridagi (out-group) farqlarni kuchaytirib, nizolarni keltirib chiqaradi.

Masalan, Hindiston va Pokiston orasidagi diniy nizolarda ijtimoiy tarmoqlar ro'l o'ynagan, bu esa zo'ravonlikka olib kelgan. O'zbekistonda ham internet orqali diniy targ'ibot yoshlarning dunyoqarashiga ta'sir qilib, milliy birlikka tahdid solmoqda. Psixologik tahlilda, diniy kontentning emotsional ta'siri muhim. Videolar va suratlar orqali qo'rquv, g'azab va umid tuyg'ularini uyg'otish orqali targ'ibot samarali bo'ladi. Tadqiqotlarga ko'ra, ijtimoiy tarmoqlarda diniy postlarning engagement (qatnashuv) darajasi oddiy postlarga nisbatan 2-3 baravar yuqori. Bu esa platformalarning biznes

modeliga mos keladi, chunki yuqori engagement reklama daromadini oshiradi.

Qiyosiy Jihatlar. Qiyosiy tahlilda diniy targ'ibotning turli dinlar va mamlakatlardagi farqlarini ko'rib chiqamiz. Islomiy targ'ibotda ijtimoiy tarmoqlar rekrutlash uchun ishlatilsa, nasroniy targ'ibotda siyosiy qo'llab-quvvatlash foydalaniladi. Qiyosda, Islom mamlakatlarida (O'rta Sharq) diniy targ'ibot ekstremizmga olib kelsa, G'arb mamlakatlarida (AQSh, Yevropa) u madaniy integratsiyaga ta'sir qiladi.

O'zbekiston va Saudiya Arabistonini qiyoslaganda, O'zbekistonda diniy targ'ibot milliy qonunlar bilan cheklangan bo'lsa, Saudiyada u davlat siyosati qismi bo'lib, ijtimoiy tarmoqlar orqali tarqatiladi.

Qiyosiy tahlilda gender va yosh farqlarini ham hisobga olish lozim. Yoshlar orasida diniy targ'ibot kuchliroq ta'sir qilsa, ayollar guruhida u ijtimoiy normalarni shakllantiradi. Davr hususiyatlari bo'yicha, 2010-yillarda diniy targ'ibot oddiy postlar orqali bo'lsa, 2020-yillarda AI va video kontent orqali kuchaygan.

Xulosa. Internet va ijtimoiy tarmoqlarda diniy targ'ibotning ta'siri murakkab va ko'p qirrali jarayon bo'lib, u jamiyatga ham ijobiy, ham salbiy ta'sir ko'rsatadi. Ijobiy tomondan, u diniy qadriyatlarini tarqatib, ijtimoiy birlikni mustahkamlaydi. Biroq, salbiy ta'sirlar – ekstremizm, nizolar va manipulyatsiya – dolzarb muammo bo'lib qolmoqda. Davr hususiyatlarini hisobga olgan holda, AI va yangi texnologiyalar diniy targ'ibotni yanada xavfli qilmoqda.

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**SPORT ORQALI MILLIY O'ZLIKNI SHAKLLANTIRISH OMILLARI: JAHON
TAJRIBASI VA O'ZBEKISTON MISOLIDA IJTIMOYIY TAHLIL****Xolmatov Ixtiyor Baxtiyorovich ,**

Farg'ona Davlat Universiteti,

Sotsiologiya yo'nalishi magistranti

Ilmiy rahbar: **G'aniev Baxodir Sadikjanovich,**

Farg'ona Davlat Universiteti, f.f.d., professor

Annotatsiya. Ushbu maqolada sportning milliy o'zlikni shakllantirishdagi o'rni va ijtimoiy ahamiyati tahlil qilindi. Globalizatsiya davrida sport millatlararo raqobat, madaniy integratsiya va milliy identitetni namoyon etish vositasi sifatida qaraladi. Jahon tajribasida, xususan Indoneziya, Yaponiya va Yevropa mamlakatlarida sport milliy birlikni mustahkamlovchi omil sifatida shakllanganligi tahlil qilindi. O'zbekiston misolida esa, sport siyosati, yoshlar ishtiroki, milliy sport turlarining rivoji (masalan, kurash) orqali milliy o'zlikni ifodalash jarayoni o'rganildi. Maqolada zamonaviy statistik ma'lumotlar, xalqaro ilmiy manbalar va davlat siyosati tahlili asosida xulosa hamda amaliy tavsiyalar ishlab chiqildi.

Kalit so'zlar: Sport, milliy o'zlik, identitet, yoshlar, ijtimoiy integratsiya, kurash, sport siyosati, globalizatsiya, O'zbekiston, milliy qadriyatlar.

Kirish. Sport inson hayotining nafaqat jismoniy, balki ma'naviy va ijtimoiy sohalarida ham muhim rol o'ynaydi. U milliy qadriyatlar, urf-odatlar va madaniyatni saqlash, targ'ib etish hamda jahon sahnasida mamlakatning imijini shakllantirishda beqiyos ahamiyatga ega. So'nggi yillarda O'zbekistonda sportning ommalashuvi, yoshlar orasida faol ishtirok darajasining ortishi va milliy sport turlarining rivojlanishi milliy o'zlikni mustahkamlashda muhim omilga aylangan. Statistik ma'lumotlarga ko'ra, 2025-yil yanvar-avgust oylari holatiga ko'ra, erkaklarning 71,9 foizi, ayollarning esa 64,1 foizi muntazam sport bilan shug'ullanadi (1). Bu ko'rsatkichlar sog'lom turmush tarzining kengayishi bilan birga, sportning jamiyatda birlashtiruvchi, milliy o'zlikni mustahkamlovchi ijtimoiy kuchga aylanganini ko'rsatadi. Milliy o'zlik tushunchasi sotsiologik va madaniy jihatdan murakkab hodisa bo'lib, Benedict Andersonning "Tasavvur qilingan jamoalar" nazariyasiga ko'ra, millat – bu o'zini yagona jamoa deb his qiladigan insonlar birligi hisoblanadi (2). Nelson Mandela takidlaganidek "Sport dunyoni o'zgartira oladigan yagona kuchlardan biridir. U millatni birlashtiradi, insonlarga g'urur va umid bag'ishlaydi." Sport musobaqalari, milliy jamoalar va davlat ramzlari bu "tasavvur qilingan jamoa"ni real hayotda ifodalash vositasidir. Shuningdek, sport milliy g'urur, birdamlik, va ijtimoiy identifikatsiyani mustahkamlash mexanizmi sifatida qaraladi (3) Sport musobaqalari, milliy jamoalar va davlat ramzlari — bu "tasavvur qilingan jamoa"ni real hayotda ifodalovchi eng kuchli vositalardir. Chunki ular nafaqat

jismoniy raqobatni, balki millatning ramziy birdamligini, tarixiy xotirasini va ma'naviy birlik tuyg'usini ifodalaydi. Benedict Anderson (1983) ta'kidlaganidek, millat o'zini "ramzlar, marosimlar va umumiy qadriyatlar orqali his etadigan" ijtimoiy konstruksiyadir. Sport ana shu ramziy birlikni jonli shaklda ko'rsatadi: milliy bayroq, madhiya, liboslar, va g'alaba lahzalari milliy identitetni kuchaytiruvchi psixologik katalizatoridir (4). Sport tadbirlari, ayniqsa, yirik xalqaro musobaqalar — Olimpiada o'yinlari, Jahon chempionatlari, Osiyo o'yinlari — milliy birdamlikning eng yaqqol ifodasiga aylanadi. Masalan, 2018-yilgi FIFA Jahon chempionatida Xorvatiya jamoasining muvaffaqiyati butun mamlakatda milliy g'ururni kuchaytirdi, sportchilar "xalq elchisi" sifatida millatni global maydonda birlashtirdi. Shu kabi, 2021-yilgi Tokio Olimpiadasida Yaponiya milliy jamoasining muvaffaqiyati yapon xalqining "ganbaru" (kurash va qat'iyat) qadriyatlarini ifodaladi (5). Sotsiologik nuqtai nazardan, sport — bu ijtimoiy integratsiyaning eng samarali vositalaridan biridir. U turli millatlar, sinflar, jinslar va ijtimoiy qatlamlar o'rtasidagi chegaralarni yumshatadi, "biz" degan kollektiv identifikatsiyani shakllantiradi. Shuning uchun sportni "ijtimoiy kapital"ning kuchli shakli deb atash mumkin (6). Ayniqsa, yoshlar orasida sport musobaqalarida ishtirok etish orqali jamoaviylik, mas'uliyat va birdamlik kabi fazilatlar shakllanadi — bu esa milliy o'zlikning psixologik poydevorini mustahkamlaydi. O'zbekistonda ham sport musobaqalari milliy birlik va g'ururni ifodalash vositasiga aylangan. Har bir xalqaro g'alaba, xususan, kurash, boks, gimnastika yoki futbol sohasidagi yutuqlar jamiyatda "biz o'zbekimiz" degan umumiy iftixor hissini kuchaytiradi. Bayroq hilpirab, madhiya yangragan lahzalar — bu "tasavvur qilingan jamoa"ning real timsoli sifatida xalq ruhiyatiga singadi. Sportchi g'alabasi orqali xalq o'zini dunyoga ko'rsatadi, milliy iftixorni qayta his etadi. Bundan tashqari, davlat ramzlarining sport bilan uyg'unligi — liboslardagi milliy naqshlar, sport arenalaridagi o'zbek tilidagi shiorlar, madhiya sadolari — sportni nafaqat jismoniy, balki madaniy o'zlikning sahnasiga aylantiradi. Shu sababdan, sportni "milliy o'zlikning sahnaga chiqishi" (performance of national identity) deb atash mumkin.

Shunday ekan, sport — bu milliy g'urur, birdamlik va ijtimoiy identifikatsiyani mustahkamlovchi murakkab, lekin tabiiy mexanizm. U nafaqat tanani, balki millatning ruhini chiniqtiradi. Olimlar sportni "madaniy kod" deb ta'riflaydilar, chunki u orqali jamiyat o'z qadriyatlarini, tarixini va g'ururini namoyon etadi.

Jahon tajribasida sport milliy o'zlikni shakllantirishda kuchli vosita sifatida e'tirof etilgan. Masalan, Indoneziyada o'tkazilgan PON XX Papua milliy sport festivali mintaqalar o'rtasidagi birdamlikni oshirib, yoshlar orasida "biz indonezionalikimiz" tuyg'usini mustahkamladi (7). Shu bilan birga, Yaponiya "Sport for Tomorrow" dasturi orqali sportni milliy brend va ta'lim tizimining ajralmas qismiga aylantirdi. Evropada esa futbol, regbi, kriket kabi

sport turlari milliy identitetning ajralmas timsoliga aylangan. Masalan, Angliya milliy futbol jamoasi xalqaro maydondagi ishtiroki orqali "inglizlik" g'ururini ifodalaydi, Germaniyada esa sport yutuqlari urushdan keyingi milliy birlikni tiklashda muhim rol o'ynagan (8). Bu misollar shuni ko'rsatadiki, sport faqat jismoniy faoliyat emas, balki millatni ijtimoiy-psixologik jihatdan birlashtiruvchi vositadir.

O'zbekiston tajribasi shuni ko'rsatmoqdaki yurtimizda sport davlat siyosatining strategik yo'nalishlaridan biriga aylandi. Prezident Sh. M. Mirziyoyev ta'kidlaganidek: "Sport – bu yoshlarimizni sog'lom, kuchli iroda egasi va vatanparvar qilib tarbiyalovchi eng samarali vosita. Sportdagi yutuqlar bizda milliy g'urur va faxr tuyg'usini yanada mustahkamlaydi." (9) Sport jamiyat hayotining ajralmas qismi sifatida nafaqat sog'lom turmush tarzini shakllantiradi, balki xalqning milliy o'zligini, tarixiy qadriyatlarini va ma'naviy merosini mustahkamlashda muhim omil hisoblanadi. O'zbekistonda mustaqillik yillarida sport, ayniqsa milliy sport turlari orqali milliy g'urur va vatanparvarlik tuyg'ularini rivojlantirishga alohida e'tibor qaratildi.

O'zbek xalqining tarixiy an'alarida otchoparlik, kurash, chavandozlik, kamondan otish, dorbozlik va boshqa milliy sport turlari qadimdan mavjud. Ular xalq hayot tarzini, jasoratini, jismoniy quvvatini ifodalagan. Ayniqsa, o'zbek kurashi xalqning ruhiyati va or-nomusini ifoda etuvchi sport turi sifatida milliy o'zlikning ramziga aylangan. O'zbekistonda sportni rivojlantirish davlat siyosatining muhim yo'nalishlaridan biridir. Mustaqillikdan so'ng milliy sport turlarini rivojlantirishga oid qator me'yoriy-huquqiy hujjatlar qabul qilindi, jumladan:

- ✓ "O'zbekiston Respublikasida jismoniy tarbiya va sportni rivojlantirish to'g'risida"gi qonun ;
- ✓ O'zbek milliy kurashini rivojlantirish davlat dasturi;
- ✓ Kurash bo'yicha xalqaro federatsiyaning (International Kurash Association — IKA) tashkil etilishi (1998-yil, Toshkent).

Shuningdek, Prezident farmonlari bilan "Kurash" sport turi Butunjahon o'yinlari dasturiga kiritildi va UNESCO nomoddiy madaniy merosi ro'yxatiga kiritilishi orqali milliy sport global darajada tan olindi. So'nggi yillarda respublika bo'ylab milliy sport turlari bilan shug'ullanish uchun zamonaviy sharoitlar yaratildi. Viloyat, tuman markazlarida kurash zallari, ot sporti majmualari, sport maktablari tashkil etildi, "kurash" va "ot sporti federatsiyalari" faoliyati kengaytirildi, yoshlar orasida milliy sport turlarini ommalashtirish maqsadida "Barkamol avlod" sport musobaqalari, "Umid nihollari", "Universiada" dasturlariga milliy sport turlari kiritildi.

Ta'lim tizimi va yoshlar tarbiyasida milliy sportning roli o'ziga xosdir. O'zbekiston ta'lim tizimida milliy sport turlarini o'rgatish davlat standartlari darajasida mustahkamlandi. Maktab va oliy ta'lim muassasalarida o'zbek kurashi, belbog'li kurash, ot sporti dars mashg'ulotlariga kiritildi. Jismoniy tarbiya institutlarida milliy sport turlari bo'yicha trener va hakamlar



tayyorlanmoqda, yoshlarni milliy qadriyatlarga hurmat ruhida tarbiyalashda sport musobaqalari, xalq sayllari va an'anaviy bayramlarda milliy sport musobaqalari muntazam o'tkazilmoqda. Milliy sport turlari orqali yosh avlod o'z xalqining tarixiga, madaniyatiga qiziqish uyg'otadi, milliy g'urur va vatanparvarlik tuyg'ulari bilan kamol topadi, sog'lom turmush tarzi, halollik, mardlik, adolat kabi qadriyatlarga sodiq bo'lib voyaga yetadi. Kurashchilar, chavandozlar va boshqa milliy sport vakillari xalq orasida mardlik, sabr-toqat, mehnatsevarlik timsoliga aylandi

O'zbekiston sportchilari milliy sport turlarida xalqaro arenalarda muvaffaqiyatli ishtirok etmoqda. Bunda kurash bo'yicha jahon chempionatlari va Osiyo o'yinlarida o'zbekistonlik sportchilar doimiy ishtirokchiga aylandi, ot sporti va belbog'li kurash xalqaro turnirlarida o'zbekistonlik chavandoz va kurashchilar mamlakat obro'sini yuksaltirib kelmoqda. Bu esa milliy sport orqali O'zbekistonning ijobiy imijini dunyo miqyosida mustahkamlashga xizmat qilmoqda.

O'zbekistonda milliy sport turlarini rivojlantirish orqali milliy o'zlikni shakllantirish davlat siyosatining ustuvor yo'nalishiga aylangan. Bu yo'lda quyidagi yutuqlar e'tiborga molik:

- Milliy sport turlari uchun mustahkam huquqiy asos yaratildi;
- Infratuzilma va ta'lim tizimi yangilandi;
- Xalqaro miqyosda milliy sport turlari O'zbekistonning madaniy brendiga aylandi.

So'nggi yillarda O'zbekistonda sport infratuzilmasi sezilarli kengaydi. "Bolalar sportini rivojlantirish jamg'armasi", "Universiada", "Yoshlar o'yinlari" kabi loyihalar yosh avlodni sportga keng jalb etmoqda. Milliy sport turlaridan Kurash 2018-yilda Osiyo o'yinlarining rasmiy sport turi sifatida tan olinganligi bu xalqimiz uchun milliy qadriyatni jaxon maydonida e'tirof etilishi (10) milliy o'zlikning xalqaro maydondagi ifodasidir.

O'zbekistonning sport siyosatida milliy qadriyatlar bilan uyg'unlik aniq seziladi: sportchi liboslarida milliy naqshlar, madhiyalar, milliy ramzlar faol qo'llaniladi. Shu orqali sport — milliy o'zlikni ifodalash, madaniy merosni saqlash va targ'ib etish vositasiga aylanmoqda.

Tahlil va muhokama

O'zbekiston misolida sport milliy o'zlikni shakllantirishda quyidagi uchta asosiy mexanizmni ko'rsatadi:

1. Ramziy mexanizm – sport musobaqalari va milliy timsollar (bayroq, madhiya, liboslar) orqali milliy birlikni ifodalash.
2. Ijtimoiy mexanizm – yoshlarni birlashtirish, sog'lom turmush tarzini targ'ib qilish orqali "biz" tuyg'usini kuchaytirish.
3. Madaniy mexanizm – milliy sport turlarini (Kurash, ot sporti, xalq o'yinlari) rivojlantirish orqali o'zlikni anglashni mustahkamlash.



Bu jarayon sportni nafaqat jismoniy, balki ma'naviy va madaniy fenomen sifatida talqin etish zarurligini ko'rsatadi.

Xulosa va tavsiyalar

Xulosa: Sport – milliy o'zlikni shakllantirishda kuchli ijtimoiy-madaniy vositadir. Jahon tajribasi va O'zbekiston misolida ko'rildiki, sport orqali millatning birdamligi, g'ururi, qadriyati va madaniy merosi ifodalanadi.

Tavsiyalar:

1. Milliy sport turlarini xalqaro maydonda targ'ib qilishni kuchaytirish;
2. Sport ta'limi tizimida milliy qadriyatlarni integratsiya qilish;
3. Sport ommaviy axborot vositalarida milliy o'zlikni aks ettirishga e'tibor berish;
4. Sport sotsiologiyasi sohasida ilmiy tadqiqotlarni kengaytirish;
5. Yoshlar orasida "sport orqali milliy g'urur" tushunchasini mustahkamlovchi dasturlar ishlab chiqish.

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MATN PROTSESSORI BILAN ISHLASH MAVZUSINI O'QITISH METODIKASI

Mamatova Zilolaxon XabibulloxonovnaFarg'ona davlat universiteti dotsenti, pedagogika
fanlari bo'yicha falsafa doktori (PhD)

Orcid: 0009-0009-9247-3510

E-mail: mamatova.zilolakhon@gmail.com**Sobirjonov Siyavushxoja Suxrobo'ja o'g'li**Farg'ona davlat universiteti Amaliy matematika
yo'nalishi 3-bosqich 23.07-guruh talabasiE-mail: Siyavushxujayev@gmail.com**Tursunaliyeva Mohinur Zoirjon qizi**Farg'ona davlat universiteti Amaliy matematika
yo'nalishi 3-bosqich 23.07-guruh talabasiE-mail: mohinurtursunaliyeva2907@gmail.com

Annotatsiya: Ushbu maqolada matn protsessorlari bilan ishlash mavzusini o'qitish metodikasi yoritiladi. Axborot-kommunikatsiya texnologiyalari rivojlanishi jarayonida matn protsessorlari ta'lim jarayonining ajralmas qismiga aylangan. Mavzuni o'qitishda kompetensiyaviy yondashuv, amaliy mashg'ulotlarni ko'paytirish, bosqichma-bosqich ko'nikma shakllantirish hamda o'quvchi faoliyatiga yo'naltirilgan usullardan foydalanish muhim sanaladi. Maqolada dars jarayonini loyihalash, interaktiv metodlardan foydalanish, baholash mezonlari hamda o'quv jarayonini raqamli resurslar bilan boyitish bo'yicha tavsiyalar keltirilgan.

Kalit so'zlar: Matn protsessori, axborot-kommunikatsiya texnologiyalari, raqamli kompetensiya, amaliy ko'nikmalar, o'qitish metodikasi, dars loyihalash, interaktiv usullar, pedagogik texnologiyalar, o'quv jarayoni, baholash mezonlari.

Annotation: This article discusses the methodology of teaching the topic of working with word processors. In the context of the development of information and communication technologies, word processors have become an integral part of the educational process. Effective teaching requires a competency-based approach, practical task-oriented learning, step-by-step skill development, and student-centered methods. The article provides recommendations on lesson planning, the use of interactive teaching methods, assessment criteria, and the integration of digital resources into the learning process.

Keywords: Word processor, information and communication technologies (ICT), digital competence, practical skills, teaching methodology, lesson design, interactive methods, pedagogical technologies, learning process, assessment criteria.

Аннотация: В данной статье рассматривается методика преподавания темы работы с текстовыми процессорами. В условиях развития информационно-коммуникационных технологий текстовые процессоры становятся неотъемлемой частью образовательного процесса. Эффективное обучение предполагает компетентностный подход, увеличение доли практических занятий, поэтапное формирование навыков и использование методов, ориентированных на активную деятельность обучающихся. В статье приведены рекомендации по проектированию уроков, применению интерактивных методов, критериям оценивания и использованию цифровых ресурсов в учебном процессе.

Ключевые: Текстовый процессор, информационно-коммуникационные технологии (ИКТ), цифровая компетентность, практические навыки, методика обучения, проектирование урока, интерактивные методы, педагогические технологии, учебный процесс, критерии оценивания.

Kirish

Zamonaviy ta'lim jarayonida axborot-kommunikatsiya texnologiyalarining o'rni tobora ortib bormoqda. Shaxsni raqamli jamiyat sharoitida samarali faoliyat yuritishga tayyorlash, uning axborot madaniyatini shakllantirish hamda kompyuter savodxonligini rivojlantirish bugungi ta'lim tizimining ustuvor vazifalaridan biridir. Ushbu jarayonda matn protsessorlari bilan ishlash ko'nikmalari alohida ahamiyat kasb etadi, chunki har qanday kasbiy faoliyat turi matnli axborotni yaratish, qayta ishlash, saqlash va taqdim etish bilan chambarchas bog'liqdir.

Matn protsessorlari – bu matnlarni yaratish, tahrirlash, formatlash, saqlash va chop etish uchun mo'ljallangan dasturiy vositalar bo'lib, ular o'quvchilarda nafaqat texnik ko'nikmalarni, balki muloqot madaniyatini, matnni mantiqiy tuzish, rasmiy-idoraviy hujjatlar bilan ishlash, taqdimotlar tayyorlash kabi muhim amaliy qobiliyatlarni ham shakllantiradi. Matn protsessorlaridan foydalanish ko'nikmasi har bir o'quvchi uchun umumiy o'quv kompetensiyalarining ajralmas qismi sifatida qaraladi.

Matn protsessorlarini o'qitish metodikasini rivojlantirishda ta'limning zamonaviy yondashuvlari – kompetensiyaviy yondashuv, faoliyatga yo'naltirilgan o'qitish, bosqichma-bosqich ko'nikma shakllantirish va interaktiv metodlardan foydalanish muhim ahamiyatga ega. Mazkur yondashuvlar o'quvchilarning mustaqil fikrlashi, ijodiy ishlash qobiliyatlarini rivojlantiradi hamda bilimlarni amaliy faoliyatda qo'llay olish imkonini yaratadi. Shuningdek, dars jarayonini raqamli resurslar bilan boyitish, multimediyadan foydalanish, masofaviy va aralash ta'lim texnologiyalarini qo'llash o'quv faoliyatining samaradorligini oshiradi.

Matn protsessori bilan ishlash mavzusini o'qitishda o'quvchilarning yosh va psixologik xususiyatlarini hisobga olish, ularda axborot madaniyati,

tartiblilik va aniq texnik talablarni bajarish mas'uliyatini shakllantirish, mavzuni real hayotiy vazifalar bilan bog'lash o'qitishning eng muhim jihatlaridan biridir. Shu boisdan, ushbu maqolada matn protsessorlari bilan ishlashni o'qitishning nazariy asoslari, metodik prinsiplari, dars jarayonini tashkil etish bo'yicha amaliy tavsiyalar va baholash mezonlari ko'rib chiqiladi.

Matn protsessorlari tushunchasi va ularning o'quv jarayonidagi ahamiyati

Matn protsessorlari — bu kompyuterda matnli hujjatlarni yaratish, qayta ishlash, formatlash, tahrirlash, saqlash va chop etish uchun mo'ljallangan dasturiy vositalardir. Hozirgi kunda eng keng tarqalgan matn protsessorlariga Microsoft Word, LibreOffice Writer, WPS Office Writer, Google Docs va boshqa raqamli hujjatlashtirish xizmatlari kiradi. Ushbu dasturlar yordamida foydalanuvchi matnlarni strukturaviy, grammatik va uslubiy jihatdan to'g'ri tuzish, rasmiy hujjatlar standartlarini qo'llash, jadvallar, chizmalar, rasm va diagrammalarni joylashtirish orqali yuqori sifatli hujjat tayyorlash imkoniga ega bo'ladi.

Ta'lim jarayonida matn protsessorlarining o'rni nihoyatda muhim. Chunki bugungi raqamli davr sharoitida o'quvchilar nafaqat matn yozish, balki uni tizimli, mantiqli va huquqiy talablar asosida rasmiylashtirishni ham bilishlari zarur. Matn yaratish madaniyati o'quvchining umumiy savodxonligi bilan bevosita bog'liq bo'lib, u fikrni to'g'ri va ravon bayon qilish, rasmiy-idoraviy hujjatlar bilan ishlash, ilmiy tadqiqot natijalarini tartibli ravishda ifodalash imkonini yaratadi.

O'quv jarayonida matn protsessorlari bilan ishlash quyidagi vazifalarni bajaradi:

1. **Axborot madaniyatini shakllantiradi.** O'quvchi kompyuter bilan ongli va maqsadli ishlash ko'nikmalariga ega bo'ladi.
2. **Til va nutq rivojlanishiga ta'sir ko'rsatadi.** Matnni mantiqiy tuzish, tahrirlash va qayta ishlash jarayonida o'quvchi nutq strukturasi ustida ishlaydi.
3. **Ijodiy va mustaqil fikrlashni rivojlantiradi.** O'quvchi hujjatni bir nechta uslubiy variantlarda tayyorlab, eng maqbulini tanlashni o'rganadi.
4. **Rasmiy hujjatlar bilan ishlash ko'nikmasini shakllantiradi.** Buyruq, ariza, rezyume, ma'lumotnoma, tavsifnoma kabi hujjatlar namunalarini yaratishga o'rgatadi.
5. **Kasbiy tayyorgarlikni mustahkamlaydi.** Har bir soha xodimi rasmiy hujjatlar tayyorlay olishi zarur.

Shu sababdan matn protsessorlarini o'qitish shunchaki texnik amallarni o'rgatish bilan chegaralanmasligi kerak. O'qituvchi mavzuni **amaliy hayotiy vazifalar, loyiha ishlar, muammoli topshiriqlar va mustaqil ijodiy faoliyat** bilan bog'lab borishi lozim. Dars davomida o'quvchi nafaqat

buyruqlarni qo'llaydi, balki ularni **nima uchun** va **qaysi sharoitda** qo'llash zarurligini tushunishi ham muhim.

Matn protsessorini o'rganish jarayonida o'quvchida quyidagi kompetensiyalar shakllanadi:

Raqamli kompetensiya, matn bilan ishlash kompetensiyasi, muloqot va taqdimot ko'nikmalari, tanqidiy va mantiqiy fikrlash, axborot xavfsizligi madaniyati.

Shunday qilib, matn protsessorlari bilan ishlash nafaqat kompyuter savodxonligining tarkibiy qismi, balki o'quvchining umumiy intellektual rivojlanishi, kommunikativ madaniyati va kasbiy tayyorgarligini shakllantirishda muhim omil sifatida qaraladi.

Matn protsessorlarini o'qitishning metodik asoslari

Matn protsessorlari bilan ishlashni o'qitishning metodikasi pedagogika, axborot texnologiyalari, didaktika va psixologiya fanlarining kesishgan nuqtasida shakllanadi. Ushbu mavzuni samarali o'qitish uchun o'quvchi faoliyatini to'g'ri tashkil etish, o'quv jarayonini bosqichma-bosqich rejalashtirish, amaliy mashg'ulotlarga yaqinlashtirilgan topshiriqlarni tanlash hamda o'quvchilarning individual imkoniyatlarini hisobga olish zarur.

Matn protsessorlari bilan ishlashni o'qitishda quyidagi didaktik yondashuvlar asosiy hisoblanadi:

1. **Kompetensiyaviy yondashuv** – o'quvchini nafaqat bilimga, balki real vaziyatlarda qo'llay oladigan amaliy ko'nikmalar va malakalarga ega qilish.
2. **Faoliyatga yo'naltirilgan yondashuv** – o'quvchi dars jarayonida faol sub'ekt bo'lib, o'rganilgan amallarni mustaqil bajaradi.
3. **Muammoli ta'lim** – o'quvchiga ma'lum bir muammo vaziyati taklif etiladi va u uni matn protsessori vositasida hal qiladi.
4. **Integrativ yondashuv** – matn protsessori bilan ishlashni ona tili, adabiyot, matematika, mehnat, iqtisod va boshqa fanlar bilan bog'lab o'qitish.

Ushbu yondashuvlar o'quv faoliyatini mazmunan boyitadi, o'quvchining chuqur tushunchaga ega bo'lishiga yordam beradi, ayniqsa amaliy natijaga yo'naltiradi.

Matn protsessorlari mavzusini o'qitish jarayonida darslar **bosqichma-bosqich** tashkil qilinadi:

Bosqich	Mazmuni
Tanishuv bosqichi	Dastur interfeysi, menyu, asboblarni paneli, oynaning tuzilishi bilan tanishtirish.
Asosiy amaliyot bosqichi	Matn kiritish, tahrirlash, formatlash, shrift, abzas parametrlari, sahifa sozlamalari.
Rivojlantiruvchi bosqich	Jadvallar, rasm, grafik obyektlar, sarlavhalar, avtomatlashtirilgan elementlardan foydalanish.

Bosqich	Mazmuni
Yakuniy loyiha bosqichi	Real hujjatlar yaratish: ariza, rezyume, ma'lumotnoma, hisobot, referat va boshqalar.
	Bunday tizimli yondashuv o'quvchilarning ko'nikmalarini izchil shakllantiradi. Matn protsessori darslarida quyidagi metodlar samarali hisoblanadi: "Ko'rsat va bajar" metodi – o'qituvchi amallarni ko'rsatadi, o'quvchi darhol takrorlaydi.
	Mini-loyiha – o'quvchi kichik mavzuga doir hujjat tayyorlaydi (masalan, "Mening oilam").
	Juftlikda ishlash – o'quvchilar bir-birining ishini tahrirlash orqali o'rganadilar.
	Rolga kirish metodi – o'quvchi "sekretar", "menejer" yoki "dizayner" rolida hujjat tayyorlaydi.
	Muammoli topshiriqlar – noto'g'ri formatlangan matnni to'g'rilash, jadvalni qayta tuzish va hokazo.
	Bu metodlar o'quvchini dars jarayoniga faol jalb qiladi, mustaqil fikrlashni kuchaytiradi.
	Baholash o'quvchining nafaqat natijasi, balki jarayonini ham qamrab olishi kerak. Baholashda quyidagi ko'rsatkichlar hisobga olinadi:
	topshiriqni to'g'ri bajarish darajasi, formatlash qoidalariga rioya qilish, matn strukturasi mantiqiylik, hujjat dizayni va tozaligi, mustaqil ishlash darajasi.
	Baholash mezonlarining aniq bo'lishi o'quvchilarni tartib va mas'uliyatga o'rgatadi.
	Amaliy mashg'ulotlarni tashkil etish va o'quv topshiriqlari tizimi
	Matn protsessorlari bilan ishlash bo'yicha bilim va ko'nikmalarni shakllantirishda amaliy mashg'ulotlar asosiy o'rin tutadi. Chunki ushbu mavzu nazariy ma'lumotlardan ko'ra ko'proq amaliy faoliyatni talab qiladi. Dars jarayonida o'quvchi kompyuterda mustaqil ishlashi, buyruqlarni qo'llashi, hujjat yaratishi yoki mavjud matnni tahrirlashi orqali o'z bilimini faol ravishda sinovdan o'tkazadi. Shu boisdan amaliy topshiriqlarni to'g'ri tanlash, ketma-ketlikni belgilash va murakkablik darajasini bosqichma-bosqich oshirib borish o'qitish samaradorligini ta'minlaydi.
	Amaliy darslar quyidagi metodik tamoyillarga asoslangan holda tashkil etilishi lozim:
	1. Izchillik va tizimlilik tamoyili – mashqlar oddiydan murakkabga qarab o'rgatiladi.
	2. Faollik tamoyili – o'quvchi topshiriqlarni o'zi bajaradi, o'qituvchi esa yo'naltiradi.
	3. Mustaqillikni rivojlantirish tamoyili – har bir bosqichda o'quvchi o'z xatolarini tahlil qilishi va to'g'rilashi kerak.

4. **Hayotga yaqinlik tamoyili** – topshiriqlar real hayotda uchraydigan vazifalar asosida tuziladi.
5. **Natijaviylik tamoyili** – har bir mashg'ulot yakunida o'quvchi tayyor mahsulot (hujjat)ga ega bo'lishi kerak.

Bu tamoyillar o'quv faoliyatini maqsadli, izchil va samarali qiladi.

3.2. Amaliy mashg'ulotlarning shakllari

Matn protsessorlari bilan ishlashni o'qitishda quyidagi mashg'ulot shakllari qo'llanilishi mumkin:

Individual mashg'ulotlar – o'quvchi mustaqil ishlaydi va o'qituvchi individual maslahat beradi.

Juftlikda ishlash – o'quvchilar bir-birining ishini tahrirlab, fikr almashadilar.

Guruhli loyihalar – bir nechta o'quvchi birgalikda katta hajmli hujjat tayyorlaydi (hisobot, ma'lumotnoma, taqdimot matni).

Kichik test va trening mashqlari – tezkor bajariladigan amaliy topshiriqlar.

Ushbu shakllarni navbat bilan qo'llash darsni jonlantiradi, o'quvchilarning motivatsiyasini oshiradi.

Quyida o'quvchilar uchun amaliy vazifalar **murakkablik darajasi bo'yicha** ketma-ketlikda keltiriladi.

Boshlang'ich darajadagi topshiriqlar

Oddiy matn terish va saqlash.

Matnni nusxalash, kesish va joylashtirish.

Shrift va abzas parametrlarini sozlash.

Sahifa chegaralarini belgilash.

O'rta darajadagi topshiriqlar

Jadval yaratish va formatlash.

Rasm va grafik obyektlarni joylashtirish.

Sarlavhalar va ro'yxatlar bilan ishlash.

Avtomatik raqamlash va havolalar qo'llash.

Yuqori darajadagi (ijodiy) topshiriqlar

Ariza, ma'lumotnoma, tavsifnoma tayyorlash.

Referat yoki hisobotni to'liq rasmiylashtirish.

Rezyume dizayni va kompozitsiyasini ishlab chiqish.

Loyihaviy hujjatlar (shartnoma matni, reja-jadval, xulosa) tayyorlash.

Ushbu tizim o'quvchiga o'z imkoniyatiga qarab rivojlanish imkonini beradi.

Har bir amaliy dars yakunida quyidagilar amalga oshiriladi:

o'quvchi ishini o'qituvchi tomonidan baholash,

o'zaro baholash (o'quvchilar ishlari bilan almashib ko'rish),

xatolarni muhokama qilish,

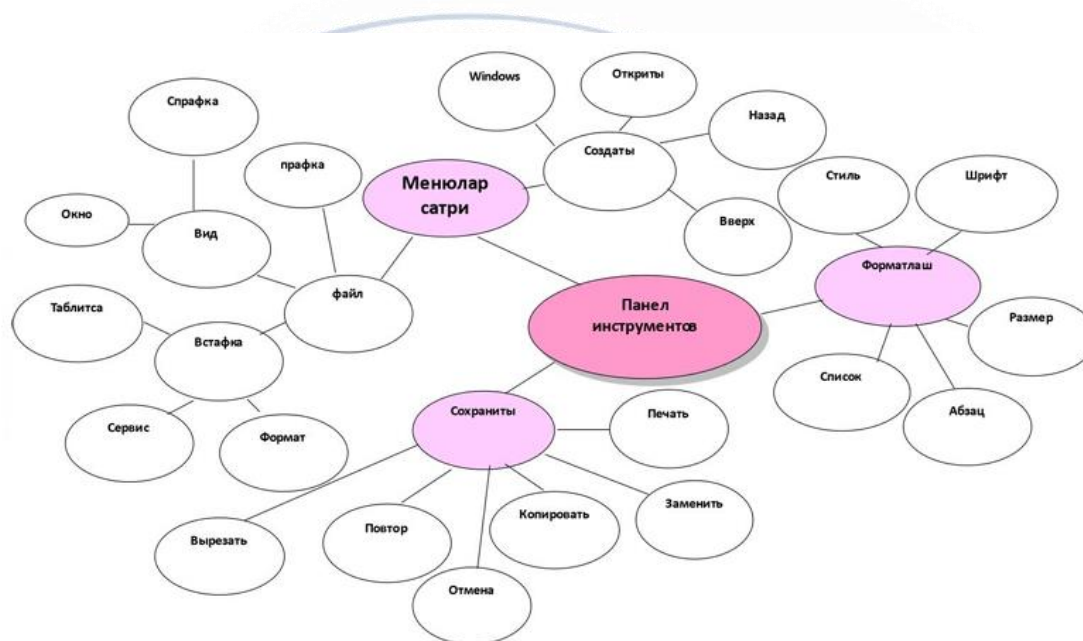
eng yaxshi ishlarni namuna sifatida ko'rsatish.

Bu bosqich o'quvchining **xatoni ko'ra olish, tahlil qilish va to'g'rilash** ko'nikmasini mustahkamlaydi.



O'quvchilar bilimini baholash va nazorat qilish usullari

Matn protsessorlari bo'yicha bilim va ko'nikmalarni baholash o'quv jarayonining ajralmas tarkibiy qismidir. Baholashning asosiy maqsadi o'quvchining egallagan nazariy bilim darajasini aniqlash, amaliy ko'nikmalarini mustahkamlash, o'quv faoliyatiga mas'uliyat bilan yondashishni shakllantirish va o'quv jarayonini takomillashtirishdir. Baholash jarayoni o'quvchining yakuniy natijasini emas, balki **ish jarayonini, fikrlash faoliyatini** ham qamrab olishi lozim.



Менинг исми методиди:

Bu metod o'quvchilarni darsga bo'lgan qiziqishlarini yanada orttiradi. Bu metodda o'quvchilar o'z ismlarini yozishadi va ismlaridagi har bir xarfga mavzuga doir bo'lgan so'z yoki atamalar yozishadi. Masalan:

M- matn

A- Alt (Klaviaturadagi "Alt" tugmasi ko'plab funksiyalarni tezkor bajarish uchun ishlatiladi)

F- format T- tab (Tabulyator tugmasi, matnni ma'lum bir joyga joylashtirish uchun ishlatiladi.) U- underline (matnni ostiga chizish "ctrl+U" tugmalar birikmasi bilan amalga oshiriladi.)

N- normal (Word dasturida matnni odatdagi normal holatda formatlash usuli)

A- Autocorrect (Word dasturida avtomatik ravishda imlo xatolarini to'g'rilash funksiyasi)

Bu metod o'quvchilarni dars mavzusini o'z ismlari orqali yodda saqlashlariga xizmat qiladi.

Matn protsessorlari bilan ishlash mavzusini o'qitish zamonaviy ta'lim jarayonining muhim yo'nalishlaridan biridir. Chunki raqamli jamiyat sharoitida o'quvchining matnli axborotni ongli ravishda qayta ishlashi, rasmiy hujjatlarni me'yoriy talablar asosida tuza olishi, taqdimot va hisobot

materiallarini savodli rasmiylashtirishi uning kasbiy yetuklik darajasini belgilaydi.

Maqolada matn protsessorlari bo'yicha ta'limni tashkil etishning pedagogik, metodik va texnologik jihatlari tahlil qilindi. Kompetensiyaviy yondashuv, interaktiv dars metodlari, amaliy mashg'ulotlarni tizimli tashkil etish va baholash mezonlarini takomillashtirish mazkur mavzuni samarali o'qitishga xizmat qiladi. O'quv jarayonida real hayotiy topshiriqlar, loyihaviy ishlar va mustaqil amaliy mashqlarni qo'llash o'quvchining faolligini oshiradi, fikrlash madaniyatini rivojlantiradi, ijodiy yondashuvni shakllantiradi.

Shu boisdan matn protsessorlari bilan ishlash bo'yicha ta'lim jarayonini muntazam takomillashtirish, darslarni zamonaviy raqamli vositalar bilan boyitish, o'quvchilarning mustaqil izlanishlari uchun sharoit yaratish ta'lim samaradorligini sezilarli darajada oshiradi.

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DISKURS TUSHUNCHASINING ZAMONAVIY LINGVISTIK TADQIQOTLARDAGI O'RNI

Umaraliyeva Barchinoy Voxidjon qizi

Andijon davlat chet tillari instituti o'qituvchisi
0009-0004-0276-2698

Annotatsiya

Mazkur tezisda diskurs tushunchasining zamonaviy lingvistik tadqiqotlardagi o'rni, uning shakllanish bosqichlari hamda hozirgi davr lingvistik tahlillarida tutgan o'rni tahlil qilinadi. Diskurs nafaqat til birliklari yig'indisi, balki ijtimoiy, madaniy va kognitiv jarayon sifatida o'rganilishi zarurligi ta'kidlanadi. F. de Sossyur, M. Fuko, T. van Deyk, N. Fairclough, D. Shiffrin kabi olimlarning nazariyalari asosida diskurs tahlilining turli yondashuvlari ko'rib chiqiladi. Tadqiqotda diskursning kommunikativ, pragmatik va ijtimoiy-falsafiy o'lchovlari alohida tahlil qilinadi.

Kalit so'zlar: diskurs, diskurs tahlili, pragmatika, kognitiv lingvistika, Fuko, van Deyk, Fairclough, kontekst, kommunikativ hodisa.

Kirish. So'nggi o'n yilliklarda "diskurs" tushunchasi lingvistika, sotsiologiya, falsafa, kommunikatsiya va madaniyatshunoslik sohalarining eng muhim tadqiqot yo'nalishlaridan biriga aylandi. XX asrning ikkinchi yarmidan boshlab tilshunoslik faqat til tizimi (langue) bilan emas, balki uning **ijtimoiy va kognitiv faoliyatdagi qo'llanilishi** — ya'ni **nutq amaliyoti** sifatida o'rganila boshlandi. Shunday qilib, diskurs tahlili nutq faoliyatini kontekst, maqsad va ishtirokchilar bilan bog'liq holda tahlil qilishga yo'naltirilgan yangi paradigma sifatida shakllandi.

Diskurs tushunchasining shakllanishi

"Diskurs" atamasi fransuzcha *discours* so'zidan kelib chiqqan bo'lib, dastlab "nutq", "so'zlashuv" ma'nolarida ishlatilgan. Tilshunoslikda bu tushuncha **strukturaviy lingvistikadan poststrukturalizmga** o'tish davrida shakllandi. F. de Sossyur tilda "langue" (tizim) va "parole" (nutq) farqini kiritgan bo'lsa, keyinchalik M. Fuko diskursni **hokimiyat va bilim o'rtasidagi munosabatni shakllantiruvchi ijtimoiy amaliyot** sifatida talqin etdi.

Fukoning fikricha, "*diskurs ijtimoiy tartibni belgilovchi, bilimni legitimlashtiruvchi mexanizmdir*" (Foucault, 1972). Shu boisdan diskurs nafaqat tildagi belgilar tizimi, balki ijtimoiy g'oyalar, qadriyatlar va mafkuraviy kuchlarni aks ettiruvchi hodisadir.

Zamonaviy lingvistika va diskurs tahlili

Diskurs tahlili tilshunoslikda uch asosiy yondashuv asosida rivojlangan:

- **Pragmatik yondashuv** — D. Shiffrin, J. Ostin, J. Searle ishlarida ifodalangan bo'lib, diskurs nutq aktlari va ularning kommunikativ maqsadlarini o'rganadi.



- **Kognitiv yondashuv** — T. van Deyk va Ch. Fillmor nazariyalarida diskurs inson ongida shakllanuvchi bilim, tajriba va konseptual model sifatida talqin qilinadi.
- **Ijtimoiy-kritik yondashuv** — N. Fairclough va R. Wodak tomonidan ishlab chiqilgan bo'lib, bu yondashuv diskursni **hokimiyat, mafkura va ijtimoiy tengsizliklarni ifodalovchi vosita** sifatida tahlil qiladi.

Van Deyk (1997) diskursni “matn, kontekst, ishtirokchilar, bilim va ijtimoiy tizimlar o'rtasidagi murakkab o'zaro ta'sir” deb ta'riflaydi. Shu sababli, zamonaviy lingvistik tadqiqotlarda diskurs **matn chegarasidan tashqariga chiqib**, ijtimoiy munosabatlar, ideologiya va madaniyat bilan uzviy bog'liq holda o'rganiladi.

Diskursning kommunikativ va kognitiv o'lchovlari

Har qanday diskurs — bu ma'lum **kommunikativ maqsadga** qaratilgan nutq faoliyatidir. U nafaqat axborot uzatish, balki **ta'sir o'tkazish, shakllantirish va hokimiyatni amalga oshirish** vositasi hamdir. Masalan, siyosiy yoki diniy diskurslarda til orqali jamiyatda muayyan g'oyalar mustahkamlanadi.

Kognitiv yondashuvda esa diskurs inson ongining “mental modeli” bilan bog'lanadi. T. van Deykning kognitiv-diskursiv modeliga ko'ra, odamlar voqealarni nafaqat til orqali, balki o'z tajribasi asosida **kognitiv strukturalar** (freym, skript, konsept) yordamida tushunadi.

Diskurs tahlilining qo'llanish sohasi

Bugungi kunda diskurs tahlili quyidagi yo'nalishlarda keng qo'llanmoqda:

- **Siyosiy diskurs** (nutqlar, debatlar, matbuot chiqishlari);
- **Media diskurs** (gazeta, reklama, televideniye, ijtimoiy tarmoqlar);
- **Akademik va ilmiy diskurs** (ilmiy maqolalar, konferensiyalar);
- **Turizm va reklama diskursi** (madaniyatlararo muloqot);
- **Religioz diskurs, gender diskursi, ta'lim diskursi** va boshqalar.

Bu tarmoqlarda diskurs tahlili tilning nafaqat formal jihatlarini, balki uning **ijtimoiy kuch, manipulyatsiya va qadriyatlarini** shakllantirishdagi rolini ochib beradi.

Xulosa

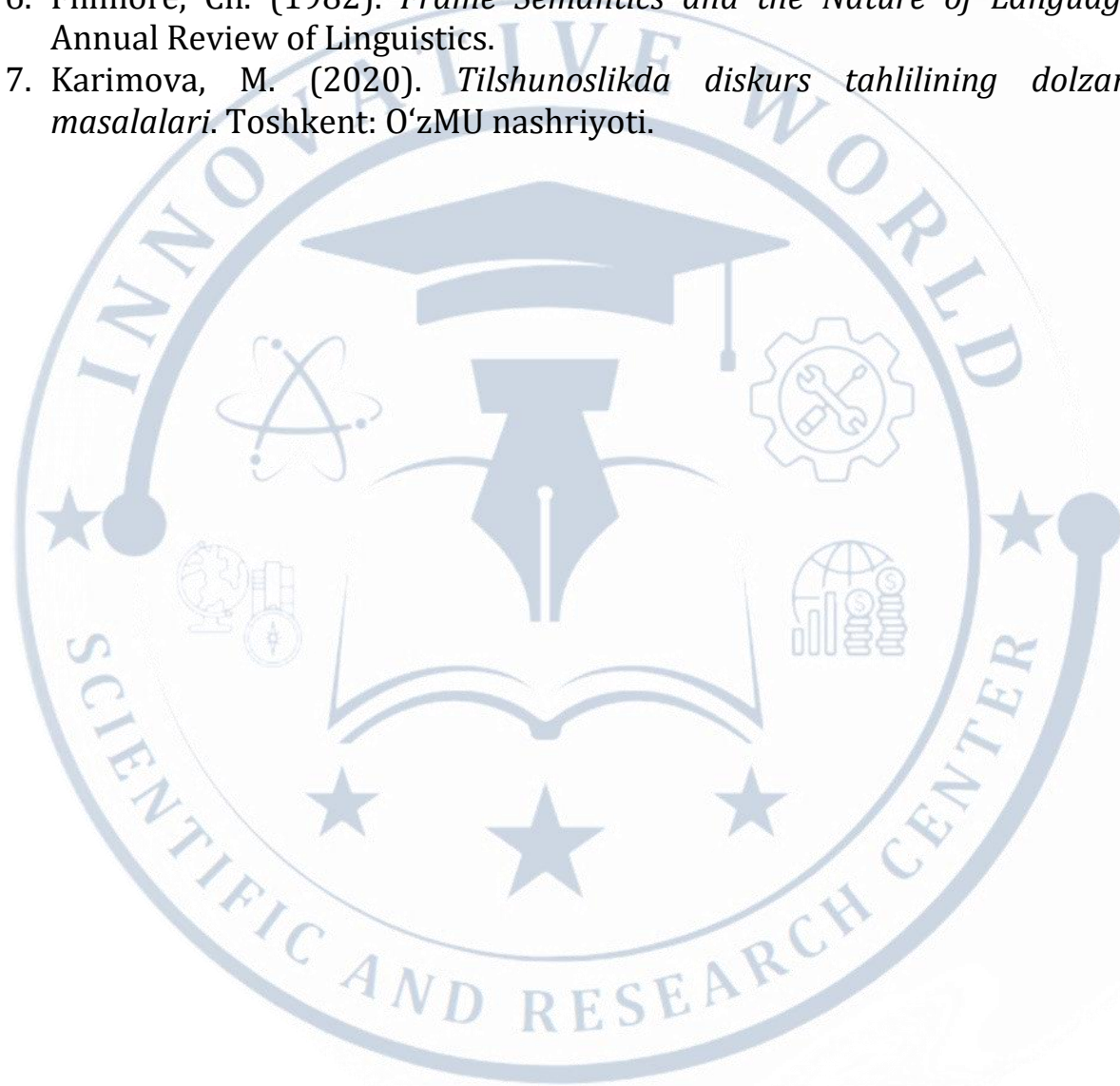
Diskurs zamonaviy lingvistika uchun yangi tadqiqot maydoni bo'lib, u tilning ijtimoiy, kognitiv va pragmatik tabiatini kompleks tarzda tahlil qilish imkonini beradi. Fuko, van Deyk, Fairclough kabi olimlar asarlarida diskurs inson tafakkuri, hokimiyat va madaniyat bilan uzviy bog'langan murakkab hodisa sifatida ko'rsatiladi. Shu boisdan hozirgi davrda diskurs tahlili nafaqat lingvistik, balki **interdisiplinar metodologiya** sifatida ham alohida ahamiyat kasb etadi.

Diskursni o'rganish tilni ijtimoiy tizimdagi faol agent sifatida ko'rish, ya'ni “til orqali jamiyatni, jamiyat orqali tilni tushunish” imkonini beradi.



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SANOAT KORXONALARINING IQTISODIY RIVOJLANISHINI EKONOMETRIK MODELASHTIRISHDA XORIJ TAJBIRASI

Muydinov Xusniddin Nuriddin o'g'li

Toshkent Davlat Iqtisodiyot Universiteti tayanch doktoranti

+91-174-40-30 xmoydinov@gmail.com

Bugungi globallashuv sharoitida sanoat korxonalarining iqtisodiy rivojlanishini chuqur tahlil etish va ilmiy asoslangan prognozlar tuzish masalasi iqtisodiy siyosatning eng muhim yo'nalishlaridan biri hisoblanadi. Bozor mexanizmlarining murakkablashuvi, raqobatning kuchayishi hamda raqamli iqtisodiyotning jadal rivojlanishi sharoitida iqtisodiy jarayonlarni klassik usullar bilan baholash yetarli natija bermayapti. Shu sababli, ekonometrik modellashtirish usullari sanoat tarmog'idagi o'sish, rentabellik, investitsiya samaradorligi va ishlab chiqarish hajmini chuqur tahlil qilishda muhim vosita sifatida keng qo'llanmoqda.

Xorijiy davlatlar tajribasi, xususan AQSh, Germaniya, Janubiy Koreya va Xitoyda sanoat korxonalarini faoliyatini modellashtirishda iqtisodiy-statistik yondashuvlar keng rivoj topgan. Bu tajribalarni o'rganish va ularni O'zbekiston iqtisodiy tizimiga moslashtirish sanoatni modernizatsiya qilish, innovatsion texnologiyalarni joriy etish hamda ishlab chiqarish samaradorligini oshirishda katta imkoniyatlar yaratadi.

Asosiy qism. Xorijiy mamlakatlarda ekonometrik modellashtirish tajribasi

Xorijiy mamlakatlar tajribasi shuni ko'rsatadiki, iqtisodiy jarayonlarni boshqarish va prognozlashda ekonometrik modellashtirish muhim tahliliy vosita sifatida keng qo'llaniladi. AQShda makroiqtisodiy ko'rsatkichlarni bashoratlashda VAR, ARIMA modellari hamda Cobb-Douglas ishlab chiqarish funksiyasi qo'llanilib, iqtisodiy o'sish omillarining ta'siri aniqlanadi. Germaniya va Fransiya kabi Yevropa davlatlarida sanoat korxonalarini samaradorligini baholash uchun SFA va DEA modellari asosida resurslardan foydalanish darajasi va raqobatbardoshlik tahlil qilinadi. Yaponiyada ishlab chiqarish jarayonining optimallashtirilishi "lean production" tamoyillari bilan uyg'un holda ARIMA va GARCH vaqt qatori modellari asosida amalga oshiriladi, Janubiy Koreyada esa innovatsion tarmoqlar rivojini prognozlashda Big Data va sun'iy intellektga asoslangan ekonometrik modellar qo'llanadi. Ushbu tajriba iqtisodiy qarorlarni ilmiy asoslash, ishlab chiqarish samaradorligini oshirish va barqaror iqtisodiy o'sishni ta'minlashga xizmat qiladi.

Xorijiy mamlakatlarda ekonometrik modellashtirishning amaliy natijalari

Davlat	Qo'llanilgan model	Amalga oshirilgan yo'nalish	Olingan aniq natija
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Germaniya	SFA (Stochastic Frontier Analysis)	Resurslardan foydalanish samaradorligini baholash	Tannarx 8–15% ga kamaygan
Yaponiya	ARIMA + Lean Production	Ishlab chiqarish jarayonini prognozlash va yo'qotishlarni kamaytirish	Mehnat unumdorligi 12–20% ga oshgan
AQSh	VAR (Vector Autoregression)	Talab va ishlab chiqarish hajmini prognozlash	Zaxiralar aylanma tezligi 1.4 barobar oshgan
Janubiy Koreya	Big Data regressiya modeli	Innovatsion ishlab chiqarish boshqaruvi va narx strategiyasi	Rentabellik 7–12% ga oshgan

Yuqoridagi jadvaldan ko'rinib turibdiki, xorijiy mamlakatlarda ekonometrik modellashtirish iqtisodiy tahlilning amaliy natijadorligini keskin oshirgan. Germaniya, AQSh, Yaponiya, Yevropa va Janubiy Koreya tajribalari shuni isbotlaydiki, iqtisodiy jarayonlarni matematik va statistik modellarda ifodalash ishlab chiqarish tannarxini kamaytiradi, mehnat unumdorligini oshiradi, resurslardan foydalanish samaradorligini yaxshilaydi hamda investitsion qarorlarni ilmiy asosda qabul qilish imkonini beradi. Natijada, sanoat korxonalarining raqobatbardoshligi, foyda normasi va barqaror iqtisodiy o'sish ko'rsatkichlari sezilarli darajada ortgan. Shu bois, xorijiy tajribani o'rganish va milliy iqtisodiyot sharoitiga moslashtirish iqtisodiy siyosatni samarali yuritishda muhim ahamiyatga ega.

Agar xorijiy mamlakatlar tajribasidagi ekonometrik modellashtirish usullari O'zbekistonda qo'llanilsa, sanoat korxonalarining iqtisodiy samaradorligi sezilarli darajada oshishi kutiladi. Xususan, ishlab chiqarish jarayonini ARIMA yoki VAR modellar asosida tahlil qilish orqali mahsulot hajmi va bozor talabini aniq prognozlash mumkin bo'ladi, bu esa tannarxni 10–12% ga kamaytirish va foyda normasi 7–10% ga oshishiga olib keladi. DEA va SFA modellarini qo'llash resurslardan foydalanish samaradorligini aniqlab, mehnat unumdorligini 15–20% gacha oshirish imkonini beradi. Shu bilan birga, energetika va xomashyo sarfini optimallashtirish orqali ishlab chiqarish xarajatlari 8–10% gacha qisqarishi mumkin. Eng muhimi, ekonometrik modellashtirish asosida tarmoqlar o'rtasidagi o'zaro bog'liqlik aniqlanib, davlat investitsiyalarini yo'naltirishda aniq va ilmiy asoslangan qarorlar qabul qilinadi. Natijada O'zbekiston sanoatining raqobatbardoshligi oshadi, eksport salohiyati kengayadi va barqaror iqtisodiy o'sish ta'minlanadi.

Xulosa

Xorijiy mamlakatlar tajribasi shuni ko'rsatadiki, ekonometrik modellashtirish sanoat korxonalarining iqtisodiy rivojlanishini samarali

boshqarishning muhim vositasidir. AQSh, Yevropa, Yaponiya va Janubiy Koreya sanoatida qo'llanilgan SFA, DEA, VAR, ARIMA hamda Big Data regressiya modellari ishlab chiqarish xarajatlarini kamaytirish, resurslardan foydalanish samaradorligini oshirish, bozor talabini aniq prognozlash va foyda ko'rsatkichlarini barqaror oshirishga xizmat qilgan. Ushbu tajribani O'zbekiston sharoitiga moslashtirgan holda qo'llash sanoat korxonalarida tannarxni kamaytirish, mehnat unumdorligini oshirish, eksport salohiyatini kuchaytirish hamda raqobatbardoshlikni ta'minlashga yordam beradi. Demak, iqtisodiy jarayonlarni ilmiy asosda modellashtirish — milliy sanoatni modernizatsiya qilish, innovatsion rivojlanishni qo'llab-quvvatlash va iqtisodiy o'sishning barqarorligini ta'minlashning strategik omili hisoblanadi

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YOSHLAR ORASIDA ARTERIAL GIPERTENZIYANING ETIOLOGIYASI

Ortiqov Baxodirjon Xudoyberdi o'g'li

Farg'ona Jamoat Salomatligi instituti magistranti

Annotatsiya. Arterial gipertenziya (AG) yoshlar orasida jiddiy sog'liq muammolaridan biriga aylanib bormoqda. Ushbu maqolada arterial gipertenziyaning etiologiyasi, ayniqsa, yosh avlod orasidagi sabablar tahlil qilinadi. AG rivojlanishiga ta'sir etuvchi genetik omillar, noto'g'ri hayot tarzi, ekologik va ijtimoiy omillar hamda simptomatik gipertenziyaning asosiy sabablari yoritiladi. Tadqiqotlar shuni ko'rsatadiki, yoshlar orasida gipertenziyaning ortib borishi noto'g'ri ovqatlanish, kamharakatlik va stress bilan chambarchas bog'liq. Shuningdek, ushbu maqolada buyrak kasalliklari va endokrin buzilishlarning gipertenziya rivojlanishidagi o'rni ham muhokama qilinadi. Tezis arterial gipertenziyaning yoshlar orasidagi oldini olish va nazorat qilish chora-tadbirlarini tushunishda muhim ilmiy asos bo'lib xizmat qiladi.

Kalit so'zlar: Arterial gipertenziya, yoshlar, genetik omillar, hayot tarzi, ekologik omillar, simptomatik gipertenziya, buyrak kasalliklari, endokrin buzilishlar.

Kirish

Arterial gipertenziya (AG) bugungi kunda faqatgina kattalar orasidagi kasallik sifatida emas, balki yosh avlodni ham qamrab olgan dolzarb tibbiy muammolardan biridir. Jahon sog'liqni saqlash tashkiloti (JSST) ma'lumotlariga ko'ra, so'nggi yillarda yoshlar orasida arterial gipertenziya bilan kasallanish holatlari ortib bormoqda [1]. Gipertenziya yurak-qon tomir kasalliklari, insult va buyrak yetishmovchiligiga olib kelishi mumkinligi sababli, uni erta aniqlash va oldini olish muhim ahamiyat kasb etadi.

Gipertenziyaning kelib chiqish sabablari murakkab va ko'p omillarga bog'liq. U genetik moyillik, noto'g'ri ovqatlanish, jismoniy faollikning yetishmovchiligi, psixologik stress, ekologik muhit hamda ba'zi surunkali kasalliklar natijasida rivojlanishi mumkin. Yoshlar orasida AG ning ortib borishi turmush tarzining o'zgarishi va zamonaviy ekologik sharoit bilan bog'liq. Ushbu tezisdagi arterial gipertenziyaning asosiy sabablariga batafsil to'xtalib o'tiladi va bu muammoning oldini olish choralari muhokama qilinadi.

Genetik omillar

Genetik moyillik arterial gipertenziyaning rivojlanishida muhim rol o'ynaydi. Tadqiqotlar shuni ko'rsatadiki, agar ota-onalardan biri yoki har ikkisi arterial gipertenziya bilan kasallangan bo'lsa, farzandda ham ushbu kasallikka moyillik yuqori bo'ladi [2]. Bu holat genetik mutatsiyalar va irsiy ta'sir mexanizmlariga bog'liq.

Genetik jihatdan arterial gipertenziya ko'p omilli (poligen) kasallik bo'lib, uning rivojlanishida bir nechta genlar ishtirok etadi. Angiotenzin-

konvertaza fermenti (ACE), renin-angiotenzin-aldosteron tizimi (RAAS) va endotelin tizimiga oid genlar gipertenziyaning rivojlanishida muhim rol o'ynaydi. Shuningdek, bu genlarning faoliyati atrof-muhit omillari, masalan, tuz iste'moli, stress va jismoniy faollik bilan ham o'zaro bog'liq.

Ba'zi oilaviy tadqiqotlar gipertenziyaning nasldan-naslga o'tishini tasdiqlaydi. Masalan, erta yoshda gipertenziya bilan og'rikan kishilarning ko'pchiligida oilaviy anamnezda ushbu kasallik uchraydi. Shu sababli, genetik skrining va erta profilaktika choralari gipertenziyaning oldini olishda muhim ahamiyat kasb etadi.

Hayot tarzi va odatlar: noto'g'ri ovqatlanish, kamharakatlik, stress

Zamonaviy yoshlar orasida noto'g'ri ovqatlanish va kamharakatlik arterial gipertenziyaning rivojlanishiga sabab bo'luvchi asosiy omillar hisoblanadi. Fast-fud mahsulotlari, ortiqcha tuz iste'moli, yog'lar va oddiy uglevodlarga boy ratsion qon bosimining ortishiga olib keladi [3]. Ayniqsa, gazlangan ichimliklar va energetik ichimliklar tarkibidagi ortiqcha shakar va kofein yurak-qon tomir tizimiga salbiy ta'sir ko'rsatadi.

Jismoniy faollikning yetishmovchiligi ham gipertenziya rivojlanishining muhim omillaridan biridir. Statistik ma'lumotlarga ko'ra, kamharakatlik yurak-qon tomir kasalliklari xavfini 30-40% ga oshiradi. Yoshlar orasida kompyuter o'yinlari va ijtimoiy tarmoqlarga haddan tashqari qaramlik ham jismoniy faollikning kamayishiga olib kelmoqda.

Shuningdek, psixologik stress va uyqusizlik ham arterial gipertenziya bilan bog'liq. Doimiy stress gormonlarining (kortizol, adrenalin) ortiqcha ajralishi qon bosimining doimiy ravishda yuqori bo'lishiga sabab bo'ladi. Shu sababli, yoshlarni sog'lom turmush tarziga o'rgatish va stressni boshqarish ko'nikmalarini shakllantirish muhim hisoblanadi.

Ekologik va ijtimoiy omillar

Arterial gipertenziyaning rivojlanishida ekologik va ijtimoiy omillar ham muhim rol o'ynaydi. Xususan, yirik shaharlarda yashovchi yoshlar orasida gipertenziya darajasi yuqori bo'lib, bu ekologik muhitning salbiy ta'siri bilan bog'liqdir [4]. Atmosferaning ifloslanishi, og'ir metallar va pestitsidlar ta'siri qon tomirlarning torayishiga va arterial bosimning oshishiga olib kelishi mumkin.

Ijtimoiy omillar ham gipertenziyaning rivojlanishida muhim ahamiyatga ega. Kam daromadli oilalarda noto'g'ri ovqatlanish va tibbiy ko'rikdan muntazam o'tmaslik gipertenziya xavfini oshiradi. Bundan tashqari, ish yoki o'qish bilan bog'liq stress, uy-joy sharoitining yetarli emasligi ham gipertenziya rivojlanishiga sabab bo'luvchi omillardir.

Simptomatik arterial gipertenziya sabablari: buyrak kasalliklari, endokrin buzilishlar

Simptomatik arterial gipertenziya boshqa kasalliklarning natijasida yuzaga keladi. Yoshlar orasida bu holat ko'pincha buyrak kasalliklari va endokrin tizim buzilishlari bilan bog'liq bo'ladi.

Buyrak kasalliklari, masalan, surunkali pielonefrit, glomerulonefrit va buyrak arteriyalarining torayishi gipertenziyaning rivojlanishiga olib keladi. Buyrak

yetishmovchiligi natijasida natriy va suyuqlik organizmda to'planib, qon bosimi oshadi.

Endokrin buzilishlardan gormonal kasalliklar, masalan, Kuşing sindromi, gipertireoz va feoxromotsitoma arterial bosimni oshirishi mumkin. Shu sababli, yosh gipertonik bemorlarda buyrak va gormonal tizim tekshiruvlari o'tkazilishi tavsiya etiladi.

Xulosa. Arterial gipertenziya yoshlar orasida tobora keng tarqalib borayotgan jiddiy tibbiy muammolardan biridir. Ushbu tezida gipertenziyaning etiologik omillari – genetik moyillik, noto'g'ri hayot tarzi, ekologik va ijtimoiy omillar hamda simptomatik gipertenziyaning asosiy sabablariga batafsil to'xtalib o'tildi.

Tahlillar shuni ko'rsatadiki, gipertenziyaning rivojlanishida irsiy omillar muhim rol o'ynaydi, biroq hayot tarzi va atrof-muhit bilan bog'liq omillar ham uning rivojlanishiga sezilarli darajada ta'sir ko'rsatadi. Noto'g'ri ovqatlanish, jismoniy faollikning yetishmovchiligi, stress va ekologik muhitning ifloslanishi yoshlar orasida qon bosimining oshishiga olib keluvchi asosiy sabablar hisoblanadi.

Shuningdek, simptomatik arterial gipertenziya ham yoshlar orasida keng uchrab, buyrak kasalliklari va endokrin buzilishlar ushbu kasallikning rivojlanishida muhim rol o'ynaydi. Shu sababli, gipertenziyani erta aniqlash, uning sabablarini chuqur o'rganish va oldini olish choralari ko'rilishi lozim.

Profilaktika choralari sog'lom turmush tarziga rioya qilish, tuz va yog' miqdorini kamaytirish, jismoniy faollikni oshirish, stressni boshqarish va muntazam tibbiy ko'rikdan o'tish kiradi. Ayniqsa, yoshlar orasida arterial gipertenziya tarqalishining oldini olish uchun sog'lom hayot tarzi targ'ibotini kuchaytirish va tibbiy ko'riklarni kengaytirish muhim ahamiyat kasb etadi.

Arterial gipertenziya yoshlar orasida erta boshlangan taqdirda ham, to'g'ri chora-tadbirlar ko'rilsa, uni nazorat qilish va sog'lom hayot tarzini shakllantirish orqali kasallikning oldini olish mumkin. Shu boisdan, ushbu muammoni chuqur o'rganish va sog'liqni saqlash tizimida profilaktik tadbirlarni kuchaytirish bugungi kunning dolzarb vazifalaridan biridir.

Asosiy tavsiyalar:

- Sog'lom ovqatlanish tamoyillariga rioya qilish
- Jismoniy faollikni oshirish
- Stressni boshqarish usullarini qo'llash
- Muntazam tibbiy ko'riklardan o'tish
- Ekologik muhitni yaxshilash bo'yicha choralar ko'rish

Ushbu choralar orqali yoshlar orasida arterial gipertenziya tarqalishini kamaytirish va yurak-qon tomir kasalliklarining oldini olish mumkin.

Foydalanilgan adabiyotlar:

- [1] JSST, 2022
- [2] European Heart Journal, 2021
- [3] American Journal of Hypertension, 2020
- [4] WHO Global Report, 2019



"IJTIMOIY TADBIRKORLIK: INNOVATSION YECHIMLAR VA IJTIMOIY MUAMMOLARNI BARTARAF ETISHNING ZAMONAVIY MEXANIZMI"**Bo'ltaboyev Bahodir Ergashovich,**

Farg'ona Davlat Universiteti

sotsiologiya yo'nalishi magistranti,

e-mail: bahodir-oqtepa@mail.ru, +99899409-89-66

Ilmiy rahbar: **G'aniyev Bahodir Sadiqjonovich,**

Farg'ona Davlat Universiteti, falsafa fanlari doktori, professor

Annotatsiya. Maqolada ijtimoiy tadbirkorlikning mazmuni, innovatsion yondashuv asosida jamiyatdagi dolzarb muammolarni hal qilishdagi roli va iqtisodiy-ijtimoiy samaradorligi tadqiq etiladi. Xalqaro tashkilotlar — Jahon iqtisodiy forumi, OECD, Ashoka, GEM va Jahon banki — hisobotlaridagi ma'lumotlar tahlil qilinib, ijtimoiy tadbirkorlikning global rivojlanish trendi va ta'siri statistik raqamlar orqali asoslab berildi. Tadqiqot natijalari shuni ko'rsatadiki, ijtimoiy tadbirkorlik yangi ish o'rinlari yaratishda, ijtimoiy xizmatlarga kirishni kengaytirishda hamda mahalliy innovatsiyalarni rag'batlantirishda muhim mexanizm hisoblanadi (1)

Kalit so'zlar: ijtimoiy tadbirkorlik, ijtimoiy innovatsiya, ijtimoiy ta'sir, barqaror rivojlanish, ijtimoiy iqtisodiyot.

KIRISH. Oxirgi yillarda dunyoda iqtisodiy o'sish bilan bir qatorda ijtimoiy tengsizlik, bandlikning yetishmasligi, ekologik muammolar, sog'liq va ta'limga kirish imkoniyati kabi masalalar kuchaymoqda. Ushbu muammolarni davlat yoki xususiy sektorning o'zi hal qilolmayotgani sababli, ijtimoiy tadbirkorlik tushunchasi yangi yechim sifatida shakllandi.

Ijtimoiy tadbirkorlik — iqtisodiy daromad olish bilan birga, ijtimoiy muammolarni innovatsion usullar orqali bartaraf etishga yo'naltirilgan tashabbusdir. Jahon iqtisodiy forumi ma'lumotlariga ko'ra, ijtimoiy tadbirkorlik global iqtisodiyotda faol subyektga aylanib, ayrim davlatlarda yalpi ichki mahsulotning sezilarli qismiga ta'sir ko'rsatmoqda (1).

ADABIYOTLAR TAHLILI

Xalqaro manbalar tahlili ijtimoiy tadbirkorlikning jadal rivojlanayotgan sohaga aylanganini ko'rsatadi:

- Ashoka tahlillariga ko'ra, ijtimoiy tadbirkorlarning katta qismi zaif ijtimoiy qatlamlar (yoshlar, nogironlar, ayollar) uchun yangi imkoniyatlar yaratishga qaratilgan (3).
- OECD va Yevropa Ittifoqi ijtimoiy iqtisodiyot subyektlarining mehnat bozoridagi ulushi ba'zi mintaqalarda 6,3 % ga tengligini qayd etadi (2).
- Global Entrepreneurship Monitor (GEM) esa ijtimoiy maqsadlarga yo'naltirilgan tadbirkorlikning soni ortib borayotganini ko'rsatadi (4).



Bu adabiyotlar tahlili shuni ko'rsatadiki, ijtimoiy tadbirkorlik — bu tashabbuskorlikning yangi turi emas, balki ijtimoiy ta'sirga ega iqtisodiyot segmentidir.

TADQIQOT METODOLOGIYASI

Maqola sekundar tadqiqot (secondary research) usuliga tayanildi. Xalqaro tashkilotlar hisobotlari o'rganilib, statistik ma'lumotlar solishtirildi. Asosiy yo'nalishlar sifatida quyidagilarni belgilsh mumkin:

- Ish bilan ta'minlash bo'yicha ko'rsatkichlar.
- Ijtimoiy ta'sir natijalari.
- Innovatsion yechimlarning muvaffaqiyat omillari.

Natijalar meta-analiz yondashuvi orqali umumlashtirildi.

NATIJARAR VA TAHLIL

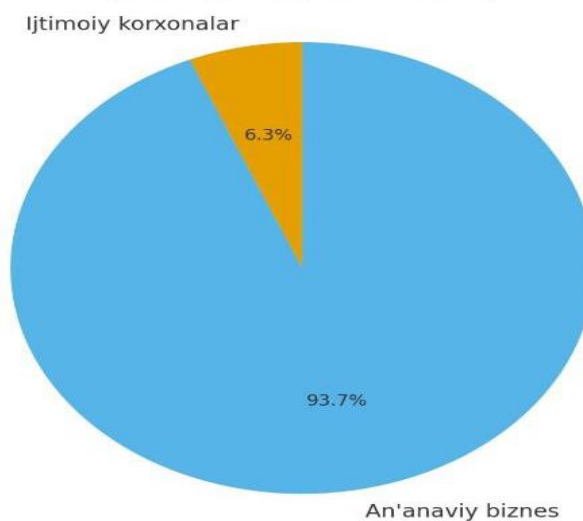
Natijalar tahliliga asosan holatni quyidagicha guruhlariga bo'lish mumkin;

Birinchidan iqtisodiy samaradorlik- Jahon iqtisodiy forumi ma'lumotiga ko'ra, ijtimoiy tadbirkorlik ayrim mamlakatlarda iqtisodiy faoliyatning sezilarli segmentiga aylangan va potentsial ravishda global YIMning taxminan 2 % qismini shakllantirishi mumkin (1).OECD hisobotiga ko'ra, Yevropa davlatlarida ijtimoiy iqtisodiyot subyektlari mehnat bozorining 6,3 % ni tashkil etadi (2).

Ikkinchidan ijtimoiy ta'sir- Ashoka ma'lumotlariga ko'ra, ijtimoiy tadbirkorlik tashabbuslari: yangi ish o'rinlari yaratadi, jamoalarni jalb etadi, odamlarni ijtimoiy faol fuqaroga aylantiradi (3). GEM tadqiqotlari esa ijtimoiy maqsadli startaplar yil sayin ortib borayotganini qayd etadi (4).

Uchinchidan bu sohadagi innovatsion yechimlar- Jahon banki Afrika mintaqasidagi tadqiqotida ijtimoiy korxonalar suv muammosi, ayollar bandligi, sog'liqni saqlash kabi sohalarda past xarajatli innovatsion texnologiyalarni joriy qilayotganini ko'rsatadi (5).

Ijtimoiy iqtisodiyotning mehnat bozoridagi ulushi
(6.3% ijtimoiy korxonalar)



2.OECD va Yevropa Ittifoqi. (2025). Ijtimoiy iqtisodiyot uchun standartlashtirilgan yondashuvlar va tamg'alash tizimi.



MUHOKAMA

Ijtimoiy tadbirkorlikning o'ziga xos afzalliklari mavjud. Asosiy jixat ijtimoiy zaif qatlamlar uchun teng imkoniyatlar ta'minlanadi. Iqtisodiy jixatdan yangi ish o'rinlari yaratiladi, bandlikmasalasi ijobiy hal etiladi. Innovatsion mahalliy muammolar uchun moslashtirilgan yechimlar joriy qilinadi hamda barqarorlik SDG (barqaror rivojlanish maqsadlari) ga hissa qo'shadi.

XULOSA. Ijtimoiy tadbirkorlik iqtisodiy manfaat bilan birga ijtimoiy farovonlikni oshirishga xizmat qiladi. Statistik ma'lumotlar shuni ko'rsatadiki, ijtimoiy tadbirkorlik:mehnat bozorini rivojlantiradi,ijtimoiy tengsizlikni kamaytiradi, mahalliy innovatsiyalarni kengaytiradi.Ushbu sohani qo'llab-quvvatlash davlat, xususiy sektor va fuqarolik jamiyati hamkorligini talab etadi.

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INSON ONGIDA 'YOSH' KONSEPTINING KOGNITIV TUZILMASI VA SEMANTIK QATLAMLARI

Azimova Sevara Abdulla qizi

Andijon davlat chet tillari institut o'qituvchisi

ORCID: 0009-0008-4580-1985

Yoshning kognitiv-semantik modeli kollektiv ong tomonidan shakllangan til birliklarining barqaror ma'nolari va talqinlarini aks ettiruvchi gradatsiya, qarama-qarshilik, normativlik, baholash, obrazlilik va stereotiplash kategoriyalariga asoslanadi.

Yosh konsepti insonning dunyoqarashi va ijtimoiy-madaniy tajribasining muhim tarkibiy qismi bo'lib, uning kognitiv va semantik strukturasi alohida tadqiqot obyekti hisoblanadi. Ushbu konseptning murakkab tabiati uni turli daraja va o'lchamlarda tahlil qilishni talab qiladi.

Yosh konseptining markaziy yadrosi biologik vaqt tushunchasi atrofida shakllangan bo'lib, u insonning hayot sikli davomida sodir bo'ladigan o'zgarishlarni aks ettiradi. Konseptning asosiy yadrosi uch fundamental komponentni o'z ichiga oladi: biologik yosh (organizmning fiziologik rivojlanish darajasi), xronologik yosh (tug'ilgandan boshlab o'tgan vaqt miqdori) va psixologik yosh (shaxsning ruhiy rivojlanish darajasi).

Yadro atrofida joylashgan yaqin periferiya ijtimoiy-madaniy kontekstda shakllanuvchi ma'nolarni o'z ichiga oladi. Bu qatlamda yosh bilan bog'liq ijtimoiy roller joylashgan. Masalan, bolalik, o'smirlik, yoshlik, o'rta yosh va keksalik kabi ijtimoiy kategoriyalar ushbu qatlamning asosiy elementlaridir. Har bir kategoriya o'ziga xos xususiyat, vazifa va ijtimoiy pozitsiyalar bilan tavsiflanadi. Uzoq periferiya esa konseptning madaniy-etnik o'ziga xosliklarini, individual tajribalarni va assotsiativ bog'lanishlarni o'z ichiga oladi. Bu qatlamda ma'lum yosh bilan bog'liq an'ana, marosim, bayram va madaniy amaliyotlar joylashgan. Shuningdek, bu yerda yosh bilan bog'liq metafora, ramz va obrazlar ham mavjud.

Yosh konsepti yagona izolyatsiya qilingan birlik emas, balki boshqa konseptual maydonlar bilan chambarchas bog'langan murakkab tizimdir. Eng muhim bog'lanishlar vaqt, hayot, o'lim, salomatlik, go'zallik, donolik, tajriba, o'rganish va rivojlanish konseptlari bilan amalga oshadi.

Vaqt konsepti bilan bog'lanish yosh tushunchasining temporal tabiatini belgilaydi. Yosh vaqtning o'tishi natijasida yuzaga keladigan o'zgarishlar sifatida idrok etiladi. Bu bog'lanish orqali yosh nafaqat statik holat, balki dinamik jarayon sifatida tushuniladi. Insonlar yoshni o'tmish, hozirgi va kelajak kontekstida baholaydilar.

Hayot va o'lim konseptlari bilan bog'lanish yosh tushunchasining ekzistensial jihatlarini shakllaydi. Yosh hayotning cheklanganligi va vaqtning qaytmas tabiatini anglashga yordam beradi. Bu bog'lanish orqali har bir yosh bosqichi o'ziga xos qiymat va ma'noga ega bo'ladi.

Yosh konseptining semantik tuzilishi bir nechta mikromaydonga bo'linadi. Har bir mikromaydon o'ziga xos leksik birlik, frazeologizm va diskursiv shakllar bilan ifodalanadi. Temporal mikromaydon yosh bilan bog'liq vaqt ko'rsatkichlarini

o'z ichiga oladi. Bu yerda "erta", "kech", "o'z vaqtida", "muddatidan oldin", "muddatidan keyin" kabi temporal belgilovchilar muhim rol o'ynaydi. Shuningdek, "yosh", "keksa", "o'rta yoshli", "voyaga yetgan" kabi to'g'ridan-to'g'ri yosh ko'rsatkichlari ham ushbu mikromaydonga kiradi.

Yosh konsepti har bir inson uchun individual ma'no kasb etadi. Bu individual variantlar shaxsiy tajriba, psixologik xususiyatlar va shaxsiy qadriyatlar tizimi asosida shakllanadi. Ba'zi odamlar yoshni ijobiy hodisa sifatida qabul qilsalar, boshqalari uni muammo yoki cheklash sifatida ko'rishlari mumkin.

Individual variantlarga ta'sir etuvchi omillar orasida shaxsiy tajriba, sog'liq holati, ijtimoiy muhit, kasb faoliyati va oilaviy vaziyat muhim rol o'ynaydi. Masalan, sportchi yoki san'atkorlar uchun yosh konsepti boshqa kasb vakillaridan farqli ma'no kasb etishi mumkin.

Yosh konsepti vaqt o'tishi bilan o'zgarib turadi. Ijtimoiy-iqtisodiy o'zgarishlar, tibbiyot taraqqiyoti, demografik jarayonlar va madaniy transformatsiyalar yosh tushunchasiga ta'sir ko'rsatadi. Zamonaviy jamiyatda umr ko'rish davri oshganligi sababli keksalik konsepti qayta ko'rib chiqilmoqda. Texnologik taraqqiyot ham yosh konseptiga yangi ma'no qo'shmoqda. Raqamli texnologiyalar sohasida "raqamli yosh" tushunchasi paydo bo'ldi. Bu tushuncha insonning texnologik moslashish qobiliyati va raqamli savodxonlik darajasi bilan bog'liq.

Ko'rinadiki, yosh konseptining kognitiv va semantik strukturasi murakkab, ko'p qirrali va dinamik tizimdir. Uning tahlili insonning o'zini va atrofidagi dunyoni qanday anglashi haqida muhim ma'lumotlar beradi. Konseptning turli komponentlari – yadrosi, periferiyasi, mikromaydoni va pragmatik jihatlari – birgalikda insonning yosh haqidagi tushunchalarining to'liq manzarasini yaratadi.

Kelajakdagi tadqiqotlar uchun yosh konseptining madaniyatlararo qiyosiy tahlili, uning diskursiv ifodalanish usullari va zamonaviy ijtimoiy o'zgarishlar ta'sirida transformatsiyasi muhim yo'nalishlar hisoblanadi. Shuningdek, raqamli davr sharoitida yosh konseptining yangi konnotatsiyalari va ifodalanish shakllarini o'rganish ham dolzarb vazifa bo'lib qolmoqda.

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Current Strategies for Early and Late Rehabilitation of Pediatric Patients with Congenital Anomalies of the Digestive Tract.

Bozorov Shavkatjon

PhD, Associate professor, Department of Pediatric Surgery, Andijan State Medical Institute, Andijan, Uzbekistan. Email: shavkatjon.bozorov@mail.ru

Haydarov Abdulhamid

Student of Pediatrics Faculty, Andijan State Medical Institute, Andijan, Uzbekistan. Email: a_xaydarov@icloud.com

Abstract. Congenital anomalies of the digestive tract (CADT) represent a diverse group of pathologies that continue to pose diagnostic and therapeutic challenges in pediatric surgery. Early surgical correction ensures anatomical restoration, yet the postoperative period is often complicated by long-term functional disturbances that require targeted rehabilitation.

This study aimed to analyze the effectiveness of a comprehensive rehabilitation strategy applied during both early and late postoperative periods in children with congenital digestive tract anomalies.

The study included 137 pediatric patients aged from newborn to 15 years who underwent surgery for various forms of CADT at the Republican Scientific Center of Emergency Medical Care (Tashkent, Uzbekistan) between 2014 and 2024. Patients were divided into two groups: the comparison group (n=75) received conventional postoperative care, while the main group (n=62) was treated under an optimized rehabilitation program integrating local and systemic approaches. Statistical analyses were conducted using descriptive and comparative methods, with significance set at $p < 0.05$. Implementation of the multidisciplinary rehabilitation protocol led to a marked reduction in both the frequency and severity of early postoperative complications (from 54.7% to 29.0%; $p=0.004$) and late functional disorders (from 44.0% to 18.5%; $p=0.008$). Hospitalization time was shortened (from 14.2 ± 0.5 to 11.1 ± 0.4 days; $p<0.001$), while overall recovery indicators—nutritional status, bowel function, and quality of life—improved significantly compared to standard management.

The introduction of an evidence-based, stage-specific rehabilitation system for children with congenital digestive tract anomalies significantly enhances postoperative outcomes and accelerates functional recovery. These findings emphasize the need to integrate structured rehabilitation into standard pediatric surgical care protocols.

Keywords: congenital digestive tract anomalies, pediatric surgery, postoperative rehabilitation, early outcomes, long-term outcomes.

Introduction

Congenital anomalies of the digestive tract (CADT) remain among the most complex conditions in pediatric surgery, both in terms of diagnosis and

treatment outcomes. Advances in neonatal intensive care, anesthesia, and surgical techniques have dramatically improved survival rates; however, achieving optimal long-term functional results remains a major challenge. Despite successful anatomical correction, many patients continue to experience persistent gastrointestinal dysfunction, growth delays, and psychosocial adaptation difficulties [1–4].

The causes of these complications are multifactorial and include delayed diagnosis, the severity of the underlying malformation, associated anomalies, and postoperative complications. Moreover, the absence of standardized rehabilitation protocols often leads to inconsistent outcomes across treatment centers [5–7].

A number of studies have emphasized the importance of postoperative rehabilitation as a determinant of successful long-term recovery in children with CADT. Rehabilitation not only restores gastrointestinal motility and nutrient absorption but also supports immune and metabolic stability, reduces the risk of adhesive processes, and prevents recurrent intestinal obstruction [8–11]. Nevertheless, rehabilitation is still frequently underestimated in pediatric surgical practice, with limited implementation of structured, multidisciplinary approaches [12].

In recent years, attention has shifted toward the development of comprehensive systems of care that include early physiotherapeutic, dietary, and pharmacological interventions alongside continuous monitoring and individualized treatment planning [13–15]. These approaches aim to bridge the gap between immediate postoperative recovery and sustained long-term adaptation.

Given these considerations, there is an evident need for systematic research to evaluate the effectiveness of integrated rehabilitation programs in pediatric patients with CADT.

The purpose of this study was to assess the early and long-term outcomes of children with congenital anomalies of the digestive tract treated under a multidisciplinary rehabilitation protocol, comparing these results with outcomes achieved using conventional postoperative management.

Materials and Methods

This clinical study analyzed the treatment and rehabilitation outcomes of 137 pediatric patients with congenital anomalies of the digestive tract (CADT) who underwent surgical correction at the Republican Scientific Center of Emergency Medical Care in Tashkent, Uzbekistan, between 2014 and 2024.

2.1. Study Design and Groups

The patients were divided into two cohorts based on the postoperative management strategy:

- The comparison group (n = 75; 54.7%) included children who received standard postoperative care between 2014 and 2019.



- The main group (n = 62; 45.3%) consisted of patients treated from 2020 to 2024 under an optimized rehabilitation protocol developed and implemented at the center.

The study included children of both sexes ranging from newborns to 15 years of age (mean = 6.8 ± 0.3 years).

2.2. Inclusion and Exclusion Criteria

Inclusion criteria covered patients diagnosed with congenital anomalies requiring surgical correction—such as esophageal atresia, duodenal and jejunal atresia, anorectal malformations, Hirschsprung's disease, and meconium ileus.

Exclusion criteria involved patients with malignant gastrointestinal tumors, severe systemic infections, or genetic syndromes incompatible with life.

2.3. Etiological and Clinical Distribution

The distribution of anomalies was as follows:

- Esophageal atresia: 22 cases (16.1%)
- Duodenal atresia: 28 cases (20.4%)
- Jejunoileal atresia: 24 cases (17.5%)
- Hirschsprung's disease: 19 cases (13.9%)
- Anorectal malformations: 33 cases (24.1%)
- Meconium ileus and others: 11 cases (8.0%)

Most children (72.3%) were operated on during the neonatal period, while the remainder underwent delayed reconstructive interventions due to medical contraindications or late diagnosis.

2.4. Rehabilitation Strategy

The optimized rehabilitation program for the main group incorporated both systemic and local components:

- ✓ Systemic rehabilitation included nutritional correction (age-appropriate parenteral and enteral feeding), probiotic therapy to restore intestinal microbiota, immune modulation, and targeted pharmacotherapy for comorbidities.

- ✓ Local rehabilitation focused on early activation, physiotherapy (low-frequency magnetic stimulation and laser therapy), peristomal and surgical wound care, and prevention of adhesive disease.

Parents were provided with detailed education on home-based stoma and wound care, diet management, and the importance of regular follow-up.

In contrast, the comparison group received traditional management limited to wound dressing, general pharmacological support, and routine monitoring without structured rehabilitation elements.

2.5. Evaluation Criteria

The study assessed early postoperative outcomes (within 30 days) and long-term outcomes (after 6 months and up to 3 years). The following indicators were analyzed:

- ✓ Frequency and severity of postoperative complications, classified according to Clavien–Dindo (2004) [16];
- ✓ Functional results (intestinal motility recovery, stool frequency, feeding tolerance);
- ✓ Growth dynamics and nutritional status;
- ✓ Duration of hospitalization and time to complete recovery.

2.6. Statistical Analysis

All statistical analyses were performed using SPSS 25.0. Descriptive statistics (mean, standard deviation, and percentage) were calculated for all variables. Group differences were assessed using the χ^2 test and Student's t-test. Differences were considered statistically significant at $p < 0.05$.

Results and Discussion

3.1. Early Postoperative Outcomes

Early postoperative complications occurred in 41 (54.7%) patients in the comparison group and 18 (29.0%) in the main group, demonstrating a statistically significant reduction following the introduction of the rehabilitation program ($\chi^2 = 8.53$; $p = 0.004$).

The most frequent complications in both groups included wound infection, pneumonia, intestinal paresis, and anastomotic insufficiency (Table 1).

Table 1. Structure and frequency of early postoperative complications

Type of complication	Comparison group (n=75)	Main group (n=62)
Wound infection	9 (12.0%)	4 (6.5%)
Pneumonia	10 (13.3%)	5 (8.1%)
Intestinal paresis	8 (10.7%)	3 (4.8%)
Anastomotic leakage	5 (6.7%)	2 (3.2%)
Sepsis	3 (4.0%)	1 (1.6%)
Electrolyte imbalance	6 (8.0%)	3 (4.8%)
Total	41 (54.7%)	18 (29.0%)

The average duration of early complications was also reduced—from 6.8 ± 0.4 days in the comparison group to 4.2 ± 0.3 days in the main group ($t = 3.94$; $p < 0.001$).

3.2. Systemic and Local Complications

Systemic complications (such as respiratory or cardiovascular dysfunction) were registered in 32.0% of children in the comparison group and 14.5% in the main group ($p = 0.011$). Local complications related to wound or stoma care occurred in 22.7% versus 9.7%, respectively ($p = 0.025$).

3.3. Length of Hospitalization and Recovery Time

The mean duration of hospitalization was significantly shorter in the main group (11.1 ± 0.4 days) compared to the comparison group (14.2 ± 0.5 days) ($t = 4.33$; $p < 0.001$).

Additionally, the time to achieve full enteral feeding decreased from 8.3 ± 0.4 days to 5.6 ± 0.3 days ($p = 0.002$).

3.4. Long-Term Outcomes

Long-term follow-up (from 6 months to 3 years) was achieved in 67 (89.3%) of comparison group patients and 59 (95.2%) of main group patients.

Persistent functional disorders—such as chronic constipation, abdominal pain, or delayed growth—were recorded in 44.0% of the comparison group and 18.5% of the main group ($\chi^2 = 7.14$; $p = 0.008$). Among these, recurrent intestinal obstruction occurred in 10.7% vs. 3.2%, respectively.

Nutritional outcomes showed clear improvement: children in the main group reached normal body weight for age in 85.5% of cases, compared to 61.3% in the comparison group ($p = 0.014$).

3.5. Severity of Complications

According to the Clavien–Dindo classification (2004) [16], mild complications (Grades I–II) predominated in the main group (19.4%) compared with the comparison group (26.7%). Severe complications (Grades III–V) were less frequent under the optimized protocol (9.6%) than with standard management (28.0%) ($\chi^2 = 9.84$; $p = 0.002$).

3.6. Quality of Life Assessment

Based on parental and clinician surveys using a modified pediatric quality-of-life questionnaire, overall satisfaction with postoperative recovery increased from 64.0% in the comparison group to 88.7% in the main group ($p = 0.003$). Children managed under the structured rehabilitation system demonstrated improved physical activity, reduced digestive discomfort, and faster return to normal social adaptation.

The outcomes of this study confirm that the introduction of a structured rehabilitation system substantially improves both early and long-term postoperative results in children with congenital anomalies of the digestive tract (CADT). The most significant effects were reflected in reduced postoperative complication rates, shortened hospital stays, and improved functional and nutritional recovery.

Our results align with prior studies emphasizing the critical role of postoperative rehabilitation in pediatric surgery. According to recent reports, complication rates following surgical correction of CADT may reach 50–70%, particularly in neonates and infants with comorbidities [17–19]. The early postoperative period is characterized by a high incidence of intestinal dysmotility, wound infections, and respiratory complications due to immaturity of physiological systems and the need for prolonged parenteral support [20].



In this study, implementing a rehabilitation framework that integrated nutritional optimization, physiotherapy, and microbiota restoration reduced the incidence of both local and systemic complications by nearly twofold. These findings are consistent with international evidence showing that structured postoperative rehabilitation significantly improves gastrointestinal function, enhances immunity, and reduces the occurrence of adhesive processes [21–23].

Restoration of intestinal motility is one of the main challenges in the early postoperative phase of CADT treatment. The use of physiotherapeutic techniques such as low-frequency magnetic stimulation and low-intensity laser therapy has demonstrated effectiveness in enhancing intestinal peristalsis and reducing postoperative paresis duration [24,25]. Similarly, optimizing enteral nutrition in the immediate postoperative period has been shown to stimulate mucosal regeneration and reduce metabolic stress, thereby shortening recovery time [26].

Another essential component of rehabilitation involves maintaining microbial homeostasis through the administration of probiotics containing *Lactobacillus* and *Bifidobacterium* strains. This approach supports the restoration of the intestinal barrier, improves nutrient absorption, and minimizes infection-related complications [27,28].

From a broader perspective, the study supports the shift in pediatric surgery toward a multidisciplinary rehabilitation model, where surgical, nutritional, physiotherapeutic, and psychosocial interventions are applied concurrently. The systematization of rehabilitation ensures not only faster recovery but also improved long-term adaptation, which is particularly important for patients who undergo multiple reconstructive procedures or live with residual functional disorders [29–31].

Our findings also highlight the importance of continuous parental involvement in postoperative care. Educating caregivers about nutrition, wound care, and early recognition of complications significantly contributed to better adherence and reduced hospital readmissions. This aligns with previous research demonstrating that family-centered education programs improve both short-term recovery and overall quality of life for pediatric surgical patients [32,33].

Despite these encouraging outcomes, several limitations should be acknowledged. The single-center design and moderate sample size may limit the generalizability of the findings. Furthermore, long-term follow-up beyond three years would be necessary to fully evaluate the sustainability of functional improvements and growth outcomes.

Nonetheless, the observed improvements in recovery rates, reduction of complications, and enhancement of quality of life strongly support the inclusion of structured rehabilitation as a standard element of care for children undergoing surgery for congenital digestive tract anomalies.



Conclusion

The implementation of a comprehensive, stage-specific rehabilitation system for pediatric patients with congenital anomalies of the digestive tract significantly enhances early and long-term postoperative outcomes. This multidisciplinary approach—combining nutritional optimization, microbiota correction, physiotherapy, and caregiver education—effectively reduces complication rates, shortens hospitalization time, and improves functional recovery and quality of life.

The study underscores the critical importance of integrating structured rehabilitation into standard pediatric surgical practice. Early initiation of individualized rehabilitation programs, accompanied by continuous monitoring and multidisciplinary support, ensures better adaptation, sustained gastrointestinal function, and favorable psychosocial development.

Future multicenter studies with larger cohorts are needed to establish unified evidence-based protocols that can further optimize recovery in children with congenital digestive tract anomalies.

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Evaluation of Postoperative Outcomes and Rehabilitation Strategies in Pediatric Ileostomy Care

Bozorov Shavkatjon

PhD, Associate professor, Department of Pediatric Surgery, Andijan State Medical Institute, Andijan, Uzbekistan. Email: shavkatjon.bozorov@mail.ru

Haydarov Abdulhamid

Student of Pediatrics Faculty, Andijan State Medical Institute, Andijan, Uzbekistan. Email: a_xaydarov@icloud.com

Abstract

Objective. This study aimed to assess and compare the effectiveness of different management strategies for pediatric patients with ileostomies, focusing particularly on how a comprehensive rehabilitation program influences postoperative complications and recovery outcomes.

Methods. Clinical data from 126 children who underwent ileostomy between 2014 and 2024 were retrospectively and prospectively analyzed. The control group (n=71) comprised patients managed from 2014–2019 using conventional care protocols, whereas the main group (n=55) received an optimized rehabilitation-based protocol starting in 2020. The improved approach included structured education for parents and patients, personalized stoma care, the use of combined antiseptics and protective films, absorbent dressings, low-intensity laser therapy, and tailored nutritional support. Early and late stoma complications, systemic morbidity, hospital stay, and reconstructive surgery rates were compared. Statistical significance was defined as $p < 0.05$.

Results. Early stoma-related complications were reported in 53.5% of the control group and 27.3% of the main group ($p = 0.003$). Systemic complications declined from 46.5% to 25.5% ($p = 0.016$), while severe complications (Clavien–Dindo grades III–V) were notably higher in the control group (49.3% vs. 14.6%, $p = 0.002$). Late complications decreased from 40.0% to 19.2% ($p = 0.017$), and peristomal skin disorders fell from 41.7% to 21.2% ($p = 0.015$). The mean hospital stay was shorter in the main group (11.5 ± 0.35 vs. 13.2 ± 0.5 days, $p < 0.001$). Additionally, the frequency of timely reconstructive surgery increased, while persistent stoma function was more common in the control group (16.7% vs. 3.8%).

Conclusion. Implementing a comprehensive rehabilitation protocol that integrates advanced local and systemic therapeutic measures substantially reduces postoperative morbidity, accelerates recovery, shortens hospitalization, and improves long-term surgical outcomes in pediatric ileostomy patients.

Keywords: Children, Ileostomy, Stoma complications, Surgical outcomes, Rehabilitation, Postoperative care, Reconstructive surgery

1. Introduction

Ileostomy creation in pediatric surgery remains a crucial life-saving intervention for managing both congenital and acquired intestinal disorders. Despite its essential role, the overall morbidity associated with stoma creation and subsequent closure in children is reported to range from 20% to 38% of cases, reflecting significant clinical challenges [1–4].

In pediatric surgical practice, ileostomies are performed for several primary indications. Among neonates, the most frequent causes include necrotizing enterocolitis, intestinal atresia, anorectal malformations, and Hirschsprung's disease. In older children, severe variants of inflammatory bowel diseases, such as ulcerative colitis and Crohn's disease, may necessitate ileostomy formation [2,5]. The creation of a diverting intestinal stoma allows temporary decompression and diversion of the affected bowel segment, thereby facilitating anastomotic healing and stabilizing the patient's condition prior to definitive reconstructive surgery [1,5,6]. Typically, these stomas are temporary and are reversed once the underlying pathology has resolved and the patient's general condition allows. However, while ileostomy can be a life-preserving measure, it also introduces significant management difficulties. Even short-term stoma function carries a high risk of postoperative complications that require careful multidisciplinary follow-up. Reported complication rates can reach up to 70% or higher in pediatric cohorts [4,6–8]. The most prevalent issues include peristomal skin irritation, high-output stomas resulting in electrolyte disturbances, prolapse, retraction, strictures, infections, and nutritional deficiencies. These complications contribute to longer hospital stays, repeated admissions, and increased emotional and financial strain on families [4,7,8]. Consequently, the development of optimized management and rehabilitation protocols for children with intestinal stomas is a high clinical priority. Despite ongoing research, there remains no universal consensus on the optimal strategies for postoperative care, timing of stoma closure, and complication prevention. In response to this gap, the present study was designed to evaluate and compare different management approaches and to assess the effectiveness of a comprehensive rehabilitation program in improving both early and long-term outcomes for pediatric patients with ileostomies.

2. Materials and Methods

This investigation was based on the clinical evaluation and treatment outcomes of 126 pediatric patients who underwent ileostomy at the Republican Scientific Center of Emergency Medical Care in Andijan, Uzbekistan, between 2014 and 2024.

2.1. Inclusion and Exclusion Criteria

Children were included in the study if they had intestinal pathologies causing dynamic obstruction, post-traumatic intestinal disruption, purulent-inflammatory abdominal diseases, adhesive intestinal obstruction, or other

indications necessitating stoma formation. Exclusion criteria included malignant neoplasms of the abdominal organs or malignant degeneration of ulcerative lesions.

2.2. Demographics and Grouping

Participants ranged in age from newborns to 18 years, comprising 91 boys (72.2%) and 35 girls (27.8%). The sample was divided into two clinical cohorts:

The comparison group (n=71; 56.4%) included children treated during 2014–2019 using conventional approaches.

The main group (n=55; 43.6%) included patients treated from 2020 onward with a structured and optimized rehabilitation protocol.

Gender distribution was similar between the groups: boys accounted for 67.6% in the comparison group and 78.2% in the main group, while girls represented 32.4% and 21.8%, respectively. Most patients were of school age (8–12 years).

2.3. Etiological and Clinical Characteristics

The most common indication for ileostomy was ulcerative colitis (27.8%), followed by Crohn's disease (16.7%) and small bowel intussusception (14.3%). Less frequent causes included small bowel atresia (7.9%), Hirschsprung's disease (7.1%), anorectal malformations (7.1%), and adhesive intestinal obstruction (3.2%). Emergency and elective operations were almost equally distributed (48.4% and 51.6%, respectively). The most frequent preoperative complication was intestinal obstruction (59.5%), followed by strictures (29.4%), gastrointestinal bleeding (27.8%), perforation (13.5%), and bowel necrosis (4.0%). Comorbidities were identified in 51 children (40.5%), primarily nutritional disorders (13.5%), congenital anomalies and CNS diseases (8.7% each), as well as urinary and bronchopulmonary conditions.

2.4. Stoma Characteristics and Localization

Lesions most frequently involved the colon (47.6%), particularly the sigmoid (16.7%), descending (13.5%), and rectal segments (9.5%). Less often, the cecum (5.6%) and ascending colon (4.0%) were affected. A single-barrel stoma was formed in 44.4% of cases, while double-barrel stomas accounted for 55.6%, with similar distribution across groups (54.9% vs. 56.4%). The comparability of both groups in demographics, pathology type, comorbid conditions, and surgical features allowed a valid outcome comparison.

2.5. Postoperative Evaluation and Classification

Surgical data, stoma type, and the frequency and nature of reoperations were analyzed. Complications were categorized as early (≤ 30 days post-surgery) or late (> 30 days), and as local (stoma-related) or systemic. The Clavien–Dindo classification (2004) [9] was used to grade complication severity.

2.6. Rehabilitation Program

The optimized rehabilitation protocol combined local and systemic interventions:

Local management: individualized education for parents and patients on stoma hygiene and appliance selection; antiseptic and protective care for the peristomal area using specialized creams, films, and pastes; application of low-intensity laser therapy to enhance tissue repair and prevent inflammation. In cases of dermatitis, pyoderma, or ulcerative lesions, combined antiseptics and advanced wound dressings were applied.

Systemic management: nutritional optimization, correction of intestinal microbiota with probiotics (bifidobacteria and lactobacilli), specialist consultations, dynamic follow-up of intestinal microbiocenosis, and management of comorbidities.

Patients with severe complications—such as bleeding, necrosis, evisceration, abscess, phlegmon, bowel retraction, prolapse, hernia, or stricture—received inpatient treatment, including surgical correction when necessary.

2.7. Statistical Analysis

Statistical evaluation employed descriptive statistics (mean values, standard errors, and relative frequencies). Group comparisons were conducted using the χ^2 test and Student's t-test, with $p < 0.05$ considered statistically significant.

3. Results

3.1. Early Stoma-Related Complications

Early postoperative complications were significantly more common in the comparison group, affecting 53.5% of patients (38 cases), compared to 27.3% (15 cases) in the main group ($\chi^2=8.762$; $df=1$; $p=0.003$). The most frequent complications in both groups included parastomal superficial suppuration, intestinal obstruction, and bowel retraction (Table 1).

Table 1. Structure and incidence of early stoma-related complications

Type of complication	Comparison group (n=71)	Main group (n=55)
Bleeding	2 (2.8%)	1 (1.8%)
Necrosis	3 (4.2%)	1 (1.8%)
Evisceration	3 (4.2%)	2 (3.6%)
Parastomal superficial suppuration	9 (12.7%)	3 (5.5%)
Parastomal abscess	4 (5.6%)	2 (3.6%)
Parastomal phlegmon	2 (2.8%)	1 (1.8%)
Bowel retraction	5 (7.0%)	2 (3.6%)
Acute intestinal obstruction	6 (8.5%)	1 (1.8%)
Stomal suture failure	4 (5.6%)	2 (3.6%)
Total with complications	38 (53.5%)	15 (27.3%)

($\chi^2=8.762$; $df=1$; $p=0.003$)

3.2. Systemic Postoperative Complications

Systemic complications were observed in 46.5% (33 cases) of children in the comparison group versus 25.5% (14 cases) in the main group ($\chi^2=5.86$; $df=1$; $p=0.016$).

Bronchopulmonary, septic, and multiple organ failure complications were the most frequent (Table 2).

Table 2. Incidence and structure of systemic postoperative complications

Type of complication	Comparison group (n=71)	Main group (n=55)
Bronchopulmonary	8 (11.3%)	4 (7.3%)
Cardiovascular	5 (7.0%)	3 (5.5%)
Septic	7 (9.9%)	2 (3.6%)
Psychoneurological	6 (8.5%)	3 (5.5%)
Multiple organ failure	7 (9.9%)	2 (3.6%)
Total systemic complications	33 (46.5%)	14 (25.5%)

($\chi^2=5.86$; $df=1$; $p=0.016$)

3.3. Surgical and Conservative Management

Surgical intervention for stoma-related complications was required in 15.5% of children in the comparison group and 7.3% in the main group. Procedures included debridement and closure for evisceration, abscess drainage, phlegmon resection with vacuum-assisted therapy, bowel revision and re-stoma formation for retraction, and adhesiolysis for obstruction. Conservative therapy—comprising pharmacological treatment, physiotherapy, and targeted local wound management—was sufficient in 9.9% of comparison group cases and 20% of main group patients.

3.4. Severity of Complications

According to the Clavien-Dindo classification (2004), severe complications (grades III–V) were substantially more common in the comparison group (49.3%) than in the main group (14.6%) ($p=0.002$). Mortality rates were 15.5% and 5.5%, respectively. In contrast, mild complications (grades I–II) were more prevalent in the main group (21.8% vs. 14.1%), and complication-free recovery was achieved in 63.6% of main group patients versus 36.6% in the comparison group (Table 3).

Table 3. Distribution of complications by Clavien–Dindo grade

Clavien–Dindo grade	Comparison group (n=71)	Main group (n=55)
Grade I–II	10 (14.1%)	12 (21.8%)
Grade III	17 (23.9%)	4 (7.3%)
Grade IV	7 (9.9%)	1 (1.8%)
Grade V (death)	11 (15.5%)	3 (5.5%)
No complications	26 (36.6%)	35 (63.6%)

($\chi^2=16.87$; $df=4$; $p=0.002$)

3.5. Hospitalization Duration

The mean postoperative hospital stay was 13.2 ± 0.5 days in the comparison group and 11.5 ± 0.35 days in the main group ($t=3.05$; $p<0.001$), indicating significantly faster recovery under the optimized protocol.

3.6. Long-Term Outcomes

Long-term follow-up (up to 3 years) was achieved for 60 children from the comparison group and 52 from the main group. Late stoma-related complications occurred in 40.0% of the comparison group and 19.2% of the main group ($p=0.017$). Peristomal skin disorders were found in 41.7% and 21.2%, respectively ($p=0.015$).

The most frequent late complications included prolapse, mucosal hypergranulation, and parastomal fistulas (Table 4).

Table 4. Late postoperative complications

Type of complication	Comparison group (n=60)	Main group (n=52)
Stoma-related:		
Prolapse	5 (8.3%)	2 (3.8%)
Parastomal hernia	3 (5.0%)	1 (1.9%)
Stoma retraction	4 (6.7%)	1 (1.9%)
Stricture	3 (5.0%)	2 (3.8%)
Parastomal fistula	4 (6.7%)	1 (1.9%)
Mucosal hypergranulation	5 (8.3%)	3 (5.8%)
Total stoma-related	24 (40.0%)	10 (19.2%)
Peristomal skin:		
Dermatitis	18 (30.0%)	8 (15.4%)
Skin hypergranulation	3 (5.0%)	1 (1.9%)
Folliculitis/Pyoderma	4 (6.7%)	2 (3.8%)
Total peristomal	25 (41.7%)	11 (21.2%)

3.7. Reconstructive Surgery and Stoma Closure

Surgical correction of long-term complications was required in 8 patients (22.2%) from the comparison group and 2 (4.7%) from the main group. The most common indications were strictures and parastomal fistulas. Within the 3-year follow-up, restorative operations were performed primarily in patients with single-barrel stomas (30.0% vs. 32.7%). Radical reconstruction and stoma closure were achieved more often in the main group (17.3% vs. 11.7%), whereas persistent functioning stomas were significantly more frequent in the comparison group (16.7% vs. 3.8%), indicating a more proactive surgical approach in the optimized program (Table 5).

Table 5. Restorative procedures and stoma closure within 3 years

Type of intervention	Comparison (n=60)	Main (n=52)
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Type of intervention	Comparison (n=60)	Main (n=52)
Restorative for single-barrel stoma	18 (30.0%)	17 (32.7%)
Resection + single-barrel stoma	2 (3.3%)	1 (1.9%)
Double-barrel stoma closure	14 (23.3%)	6 (11.5%)
Resection + double-barrel stoma	9 (15.0%)	13 (25.0%)
Radical surgery with stoma elimination	7 (11.7%)	9 (17.3%)
Functioning stoma (not operated)	10 (16.7%)	2 (3.8%)

The mean interval before restorative surgery was significantly reduced in the main group (3.2 ± 0.6 months) compared to the comparison group (7.2 ± 0.7 months) ($t=3.32$; $p<0.001$). The accelerated timing is attributed to enhanced preoperative rehabilitation, improved nutritional recovery, and lower complication incidence.

4. Discussion

The findings of this study demonstrate that implementing a structured and multidisciplinary rehabilitation program significantly improves outcomes in pediatric patients with ileostomies. Specifically, the approach shortened the time to reconstructive surgery, lowered postoperative complication rates, and enhanced recovery. These benefits were associated with improved preoperative preparation, reduced systemic stress, and accelerated intestinal adaptation—collectively leading to better long-term rehabilitation results. Previous research has shown that overall complication rates among children with intestinal stomas, including mild to severe forms, can exceed 70%, consistent with our observations [10–13]. Children are particularly prone to complications both during the stoma's functional period and at the closure stage. For instance, in a retrospective review of 336 pediatric cases, severe complications classified as Clavien–Dindo grade III or higher occurred in nearly 39% of children under three years of age [14]. Additionally, postoperative complications following planned stoma closure—such as anastomotic leakage, hernias, or adhesive obstruction—were reported in approximately 23% of patients [14]. Importantly, ileostomies are generally associated with a higher risk of adverse outcomes than colostomies, largely due to the more caustic, high-volume effluent of the ileum. Studies have identified ileostomy formation as an independent risk factor, increasing the likelihood of severe complications by roughly 2.5 times [2,4]. The elevated fluid and electrolyte losses typical of ileostomy output predispose young children to dehydration, metabolic imbalances, and peristomal skin injury. High-output stomas remain one of the most clinically challenging complications, particularly in neonates and infants, as they can lead to malnutrition and intestinal failure. Despite this, no standardized management algorithm currently exists for pediatric high-output enterostomies. A 2024 systematic review highlighted the absence of high-quality evidence to guide management and called for the development of comprehensive, stepwise

strategies incorporating dietary modulation, fluid and electrolyte therapy, chyme reinfusion, and pharmacological interventions [15]. Until such evidence-based guidelines are available, clinical management continues to rely heavily on surgical experience and institutional protocols. Current best practices include close monitoring of fluid-electrolyte balance, the use of stool-thickening agents, medications that slow intestinal transit, and the earliest possible initiation of enteral nutrition to promote mucosal adaptation. Another key concern in pediatric ileostomy management is minimizing hospital stay and total treatment duration. The timing of stoma closure directly affects these outcomes. In the present study, earlier closure, achieved through improved preoperative rehabilitation, reduced total hospitalization time without increasing the risk of postoperative complications. Comparable results have been reported internationally. A retrospective analysis of necrotizing enterocolitis cases compared outcomes for early (<8 weeks), intermediate (8–12 weeks), and delayed (>12 weeks) ileostomy closure. Although early closure was associated with slightly longer postoperative hospitalization due to lower body weight and immaturity, the total duration of care from stoma creation to final discharge was not significantly different among groups. Furthermore, the complication rate was unaffected by closure timing, indicating that early closure does not increase the risk of anastomotic leaks or infections [16]. Other studies have suggested that prolonged maintenance of a temporary ileostomy may be detrimental, increasing the risk of stoma-related complications, electrolyte disturbances, and impaired growth. In comparisons between traditional (8–12 weeks) and early (approximately 4 weeks) closure, the early closure group experienced fewer stoma-related complications, though wound infections were slightly more frequent [17].

Our findings are consistent with these trends: when certain clinical prerequisites are met—namely, a stable general condition, adequate weight gain, absence of active infection, and restored distal bowel patency—early restoration of intestinal continuity is both safe and beneficial. Beyond reducing complications, early closure facilitates patient care, improves nutritional absorption, and supports catch-up growth. The criteria for stoma closure in children vary internationally and are typically guided by clinical readiness rather than fixed time intervals. Surveys among pediatric surgeons in the United Kingdom report that most aim for closure within six weeks of stoma creation; however, in practice, the timing often depends on patient-specific factors such as nutritional status, weight gain, and the absence of stoma-related complications [18,19]. A systematic review of global literature concluded that delayed stoma closure offers no clear advantage and may even increase morbidity [18–20]. Thus, early restoration of intestinal continuity—once patient stability and readiness are achieved—is now considered a standard of modern pediatric surgical practice. The present study supports

this paradigm, showing that detailed tactical planning—including comprehensive rehabilitation, individualized timing of closure, and multidisciplinary collaboration—can significantly improve postoperative recovery and long-term outcomes. These findings align with international evidence emphasizing early closure, enhanced perioperative care, and systematic complication prevention as the cornerstones of optimal management for pediatric ileostomy patients. Nevertheless, several limitations must be acknowledged. First, the sample size was relatively modest, limiting subgroup analyses by specific disease type, age, or severity. Second, the retrospective component (2014–2019) may have been affected by incomplete clinical documentation. Third, the single-center design limits generalizability, underscoring the need for larger, multicenter prospective studies to confirm these results.

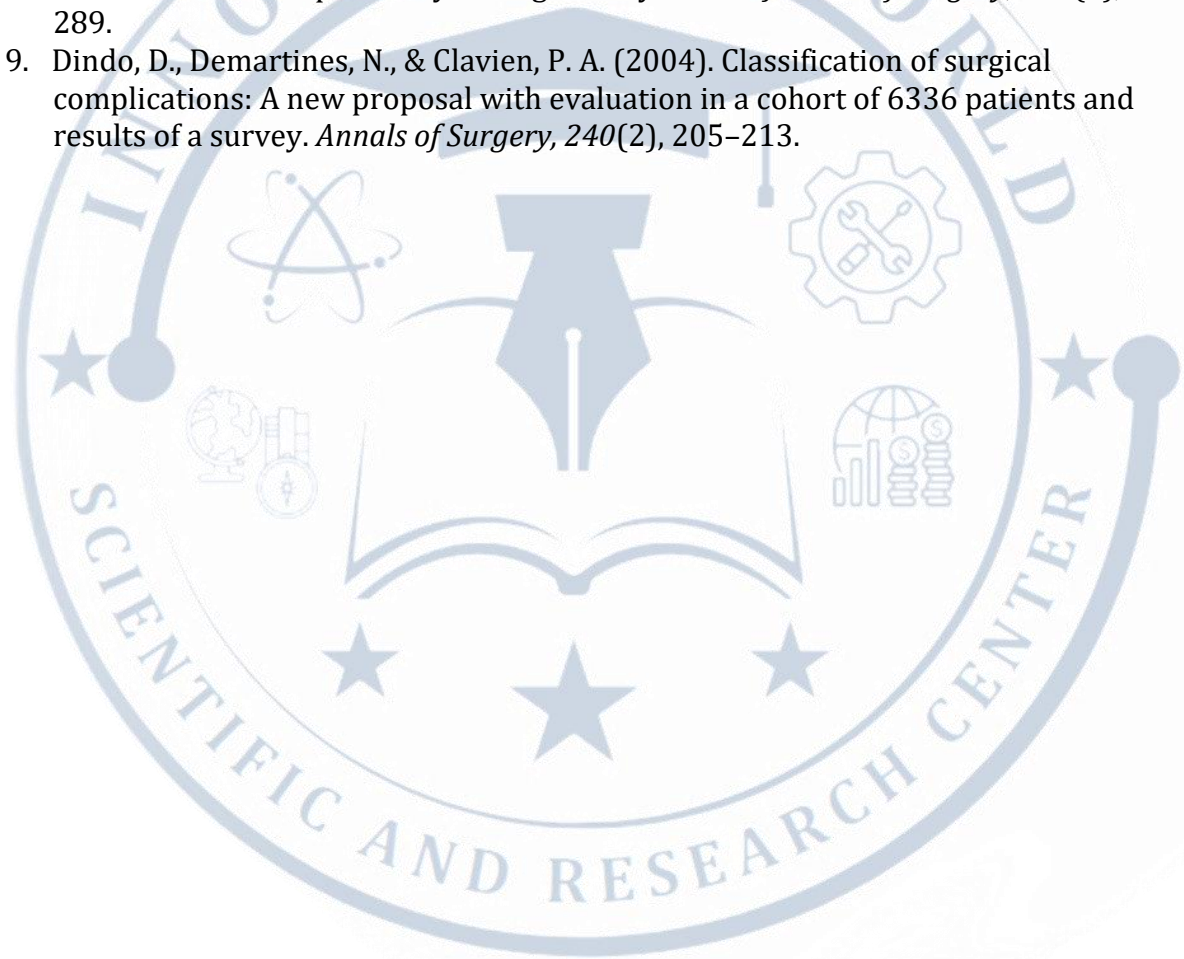
5. Conclusions

The introduction of a comprehensive rehabilitation framework integrating both advanced local and systemic therapeutic measures has demonstrated substantial clinical benefits in pediatric patients with ileostomies. This multidisciplinary approach effectively reduced the frequency and severity of postoperative complications, enhanced intestinal recovery, shortened hospitalization periods, and facilitated earlier restorative surgery. By emphasizing patient and caregiver education, individualized stoma care, optimized nutritional management, and the use of adjunctive technologies such as low-intensity laser therapy, this protocol contributed to improved early and long-term postoperative outcomes. The results of this study confirm that structured rehabilitation should be considered an essential component of postoperative management for children with ileostomies. Future multicenter studies with larger patient cohorts are recommended to validate these findings and further refine evidence-based standards for pediatric stoma care and surgical rehabilitation.

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EXCEL DASTURI BILAN ISHLASH" MAVZUSINI O'QITISH METODIKASI

Mamatova Zilolaxon Xabibulloxonovna

Farg'ona davlat universiteti dotsenti, pedagogika

fanlari bo'yicha falsafa doktori (PhD)

Orcid: 0009-0009-9247-3510

mamatova.zilolakhon@gmail.com**Suyarov Ulug'bek** Farg'ona davlat

Universiteti Amaliy matematika yo'nalishi

3-kurs talabasi

suyarov1857@gmail.com

Anotatsiya: Ushbu maqolada Excel dasturini o'qitish metodikasining nazariy va amaliy asoslari tahlil qilinadi. Excel dasturi orqali o'quvchilarda mantiqiy fikrlash, tahlil qilish va ma'lumotlarni qayta ishlash ko'nikmalarini shakllantirish imkoniyatlari ko'rsatib o'tilgan. Maqolada "Excel bilan ishlash" mavzusini o'qitishda qo'llaniladigan samarali pedagogik usullar, amaliy topshiriqlar va interfaol texnologiyalar misolida dars jarayonining bosqichlari yoritilgan. Shuningdek, o'qituvchi faoliyatida innovatsion yondashuvlarning o'rni va ta'siri haqida ham fikr yuritilgan.

Kalit so'zlar: Excel, elektron jadval, o'qitish metodikasi, amaliy topshiriq, interfaol usul, raqamli texnologiya, tahlil, ta'lim samaradorligi

Annotation: This article analyzes the theoretical and practical foundations of teaching methods for the Excel program. It highlights the opportunities for developing students' logical thinking, analytical skills, and data processing abilities through Excel. The paper also discusses effective pedagogical methods, practical exercises, and interactive technologies used in teaching the topic "Working with Excel." Furthermore, the role and impact of innovative approaches in the teacher's professional activity are emphasized.

Keywords: Excel, spreadsheet, teaching methodology, practical tasks, interactive method, digital technology, analysis, educational efficiency

Аннотация: В данной статье рассматриваются теоретические и практические основы методики преподавания программы Excel. Показаны возможности формирования у учащихся логического мышления, аналитических навыков и умений обработки данных с помощью Excel. В статье также освещаются этапы учебного процесса на примере эффективных педагогических методов, практических заданий и интерактивных технологий при преподавании темы «Работа с Excel». Кроме того, рассматривается роль и влияние инновационных подходов в деятельности преподавателя.

Ключевые слова: Excel, электронная таблица, методика преподавания, практические задания, интерактивный метод, цифровые технологии, анализ, эффективность обучения

Kirish

Hozirgi kunda ta'lim tizimida raqamli texnologiyalarni qo'llash o'qitish jarayonining ajralmas qismiga aylanib bormoqda. Shunday vositalardan biri bu — **Microsoft Excel** dasturidir. Excel dasturi yordamida nafaqat ma'lumotlarni tartibga solish, hisob-kitoblarni avtomatlashtirish, balki o'quvchilarda mantiqiy fikrlash, tahlil qilish va muammolarni yechish ko'nikmalarini rivojlantirish ham mumkin.

"Excel dasturi bilan ishlash" mavzusini o'qitish nafaqat informatika fanining, balki matematika fanining ham muhim qismi hisoblanadi. Chunki bu mavzu o'quvchilarga matematik ifodalarni amaliy misollar orqali tushunish, formulalar bilan ishlash va real ma'lumotlar ustida hisob-kitoblar bajarishni o'rgatadi.

Mavzuni o'qitish jarayonida o'qituvchi darsni shunchaki texnik ko'rsatmalar orqali emas, balki o'quvchilarni faol fikrlashga undaydigan interfaol usullar yordamida tashkil etishi zarur. Shu orqali o'quvchilar Excel dasturining imkoniyatlarini amaliyotda qo'llashni o'rganadi va mustaqil ishlash malakasiga ega bo'ladi.

Shu sababli, Excel dasturini o'qitish metodikasini takomillashtirish, o'qituvchilar uchun samarali yondashuvlarni ishlab chiqish va o'quvchilarda zamonaviy texnik savodxonlikni shakllantirish bugungi ta'limning eng dolzarb masalalaridan biridir.

Microsoft Excel — bu elektron jadvallar dasturi bo'lib, foydalanuvchilarga ma'lumotlarni kiritish, tartiblash, tahlil qilish, hisob-kitoblarni avtomatlashtirish va natijalarni grafik ko'rinishda ifodalash imkonini beradi. Excel dasturi Microsoft Office to'plamining muhim tarkibiy qismi bo'lib, bugungi kunda ta'lim, ilmiy tadqiqot, biznes, statistika va kundalik amaliyotda keng qo'llaniladi. Dastur intuitiv interfeysga ega bo'lib, o'quvchilar va foydalanuvchilar uchun qulay muhit yaratadi hamda turli murakkab vazifalarni oddiy tarzda bajarishga yordam beradi.

Excel'da foydalanuvchilar kataklar (cells) orqali sonlar, matnlar, sanalar va formulalarni kiritishi mumkin. Formulalar va funksiyalar yordamida murakkab matematik, statistik va mantiqiy hisob-kitoblarni tez va aniq bajarish mumkin. Masalan, SUM, AVERAGE, IF, COUNT, MAX, MIN kabi funksiyalar yordamida talabalar va foydalanuvchilar turli masalalarni yechadilar, ma'lumotlar orasidagi bog'liqliklarni aniqlaydilar va natijalarni tahlil qiladilar. Shu bilan birga, dasturda diagramma va grafiklar yordamida ma'lumotlar vizual tarzda ifodalanadi, bu esa o'quvchilarga natijalarni oson tahlil qilish va taqqoslash imkonini beradi.

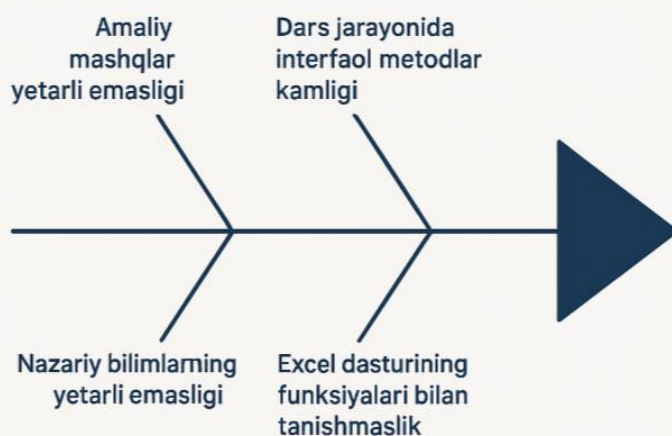
Katta hajmdagi ma'lumotlar bilan ishlash imkoniyati Excel'ni boshqa elektron jadvallardan ajratib turadi. Filtrlash va tartiblash funksiyalari yordamida foydalanuvchi kerakli ma'lumotlarni tez ajratib oladi va tahlil qiladi. Shartli formatlash (Conditional Formatting) orqali muhim natijalar yoki xatolar vizual tarzda ajratiladi. Bundan tashqari, pivot jadvallar (Pivot Tables)

yordamida foydalanuvchi katta hajmdagi ma'lumotlarni tizimli tarzda tahlil qilishi, umumiy xulosalar chiqarishi va qaror qabul qilish jarayonini tezlashtirishi mumkin.

Excel dasturi ta'lim sohasida ham keng qo'llaniladi. Darslarda Excel orqali o'quvchilar nafaqat amaliy ko'nikmalarni, balki mantiqiy fikrlash, tahlil qilish va muammolarni yechish ko'nikmalarini rivojlantiradilar. Masalan, matematik va informatika fanlarida o'quvchilar formulalar bilan ishlashni o'rganadi, ma'lumotlar ustida amaliy hisob-kitoblar bajaradi va natijalarni grafikalar orqali taqqoslaydi. Shu bilan birga, Excel o'quvchilarga ma'lumotlarni strukturalash va tartibga solish ko'nikmalarini ham beradi, bu esa ularning ilmiy izlanishlar va kundalik hayotdagi vazifalarni samarali bajarishlariga yordam beradi.

Excel dasturini o'qitish jarayonida didaktik yondashuvlar dars samaradorligini oshirish, o'quvchilarning amaliy ko'nikmalarini rivojlantirish va mavzuni oson tushunishini ta'minlashda muhim rol o'ynaydi. Ushbu mavzuni o'qitish metodikasi o'quvchilarning faol ishtirokini rag'batlantiradigan va interfaol o'quv jarayonini tashkil etadigan tamoyillarga asoslanadi.

Shu tamoyillarni amalda qo'llash jarayonida o'qituvchi "baliq skeleti" (Fishbone) metodidan foydalanishi mumkin. Bu metod yordamida o'quvchilar Excel dasturini o'rganishda duch keladigan asosiy qiyinchiliklar va ularning sabablarini tizimli ravishda tahlil qiladi. Diagrammada muammo "baliqning boshi" sifatida belgilanadi, asosiy omillar esa "suyaklar" sifatida ko'rsatiladi: o'quvchilar bilan bog'liq muammolar, o'qitish usullari, texnologiya, materiallar va dars muhiti. Shu yo'l bilan o'quvchilar qaysi sohalarida qo'shimcha mashqlar yoki yordamga muhtoj ekanini aniqlash osonlashadi va dars samaradorligi oshadi. Bunga soda misol:



Muammo: O'quvchilar Excel formulalarini va funksiyalarini to'liq o'zlashtira olmayapti

Excel bilan ishlash mavzusini o'rgatishda **asosiy pedagogik tamoyillar** quyidagilardan iborat: o'quvchilarni amaliyot bilan bog'lash, mavzuni oddiydan murakkabga qarab izchil o'rgatish, ko'rgazmalilikni ta'minlash va innovatsion texnologiyalardan foydalangan holda darsni tashkil etish. Bu tamoyillar o'quvchilarning nazariy bilimlarni amaliy topshiriqlar orqali mustahkamlashiga yordam beradi.

Didaktik yondashuvning markazida **amaliy mashg'ulotlar** turadi. O'quvchilar jadval yaratish, ma'lumotlarni kiritish, tartiblash, formulalar va funksiyalarni qo'llash orqali mavzuni mustaqil o'rganadilar. Shu bilan birga, guruh ishlari va muammoli vaziyatlar orqali o'quvchilar o'zaro muloqot qiladi, natijalarni tahlil qiladi va qarorlar qabul qiladi. Bu esa nafaqat texnik ko'nikmalarni, balki mantiqiy fikrlash va muammolarni yechish malakasini ham rivojlantiradi.

Dars jarayonida **interaktiv metodlardan** foydalanish ham muhim ahamiyatga ega. Masalan, o'quvchilarga real ma'lumotlar bilan ishlash, ekran orqali mashqlarni ko'rsatish, videodarslar va onlayn platformalar yordamida topshiriqlarni bajarish darsni qiziqarli va samarali qiladi. Shu bilan birga, o'quvchilarning mustaqil ishlashini rag'batlantirish va har bir talabani natijalarini kuzatish orqali o'qituvchi dars sifatini oshiradi.

Excel bilan ishlash mavzusini o'qitish jarayonida **talabalar quyidagi ko'nikmalarni shakllantiradilar**: formulalar va funksiyalarni to'g'ri qo'llash, ma'lumotlarni tartiblash va filtrlash, diagramma va grafiklar yordamida natijalarni tahlil qilish, shuningdek, murakkab ma'lumotlarni tizimli tarzda ishlash orqali xulosalar chiqarish. Bu ko'nikmalar nafaqat dars jarayonida, balki o'quvchilarning kelajakdagi kasbiy faoliyatida ham foydali bo'ladi.

Dars jarayonini tashkil etish bosqichlari

Excel dasturi bilan ishlash mavzusini o'qitishda dars jarayoni aniq bosqichlar orqali tashkil qilinishi lozim. Har bir bosqich o'quvchilarning bilim va ko'nikmalarini tizimli rivojlantirishga xizmat qiladi hamda dars samaradorligini oshiradi.

Kirish bosqichi

Darsning boshlanishida o'qituvchi mavzuga kirish so'zlari bilan kirib, o'quvchilarning e'tiborini jamlaydi va mavzuning ahamiyatini tushuntiradi. Ushbu bosqichda o'quvchilarga Excel dasturining umumiy imkoniyatlari, undan amaliyotda qanday foydalanish mumkinligi haqida qisqacha ma'lumot beriladi. Shu bilan birga, o'quvchilarning oldingi bilimlari va ko'nikmalari aniqlanadi hamda ular darsga faol jalb qilinadi.

Nazariy bosqich

Ushbu bosqichda o'quvchilarga Excel dasturining asosiy tushunchalari, jadval kataklari, formulalar, funksiyalar, diagramma va pivot jadvallar bilan ishlash haqida tushuntirish beriladi. O'qituvchi misollar orqali nazariy bilimlarni amaliyotga bog'laydi va mavzuni tushunishni osonlashtiradi.

Amaliy bosqich



O'quvchilar mustaqil yoki guruh bo'lib amaliy mashqlar bajaradilar. Masalan, ma'lumotlarni kiritish, tartiblash, formulalar va funksiyalarni qo'llash, grafiklar yaratish va natijalarni tahlil qilish kabi topshiriqlar bajariladi. Ushbu bosqich o'quvchilarning mantiqiy fikrlash, tahlil qilish va muammolarni yechish ko'nikmalarini rivojlantirishga qaratilgan.

Mustaqil ish va mustahkamlash

Dars oxirida o'quvchilarga mustaqil ish beriladi, bunda ular o'z bilimlarini amaliyotda qo'llab, natijalarni tahlil qiladilar. O'qituvchi bu bosqichda o'quvchilarning ishlari bilan tanishib, ularni to'g'ri yo'naltiradi, xatolarni ko'rsatadi va qo'shimcha tushuntirishlar beradi.

Yakuniy bosqich

Darsni yakunlashda o'quvchilarning ishlari tahlil qilinadi, natijalar muhokama qilinadi va mavzu bo'yicha qisqacha xulosalar chiqariladi. Shu bilan birga, keyingi darsga tayyorgarlik uchun vazifalar beriladi va o'quvchilarni mavzuni mustahkamlashga rag'batlantirish amalga oshiriladi.

Shu tarzda dars jarayoni bosqichlari o'quvchilarning bilimlarini tizimli rivojlantirishga xizmat qiladi, mavzuni oson tushunish va amaliy ko'nikmalarni shakllantirish imkonini beradi hamda Excel dasturini samarali o'rgatishda muhim vosita bo'ladi.

Amaliy mashqlar uchun misollar va vazifalar

Excel dasturini o'qitishda amaliy mashqlar o'quvchilarning bilimini mustahkamlash va mavzuni oson tushunishiga yordam beradi. Mashqlarni tanlashda **kundalik hayotdagi, ilmiy yoki kasbiy sohalardan olingan real ma'lumotlardan** foydalanish tavsiya etiladi, chunki bu o'quvchilarda dastur imkoniyatlarini real kontekstda ko'rish va tushunish qiziqishini oshiradi.

Masalan, talabalar quyidagi mashqlarni bajarishlari mumkin:

1. **Jadval yaratish va ma'lumotlarni kiritish:** O'quvchilar biror do'konning mahsulotlari, narxlari va sotilgan miqdorlari bo'yicha jadval tuzadilar va ma'lumotlarni o'sish yoki kamayish tartibida saralaydilar.

2. **Formulalar va funksiyalarni qo'llash:** SUM, AVERAGE, IF, MAX va MIN funksiyalari yordamida umumiy natijalarni hisoblash, eng katta yoki eng kichik qiymatni aniqlash, shartli holatlarni tahlil qilish. Masalan, sotuvchilar ish haqi yoki mahsulot narxini hisoblash uchun formulalarni qo'llash.

3. **Diagramma va grafiklar yaratish:** Jadvaldagi ma'lumotlarni vizual tarzda ifodalash orqali o'quvchilar natijalarni tez va oson tahlil qiladilar. Masalan, mahsulotlarning oylar bo'yicha sotuv grafikasi.

4. **Shartli formatlash:** Muayyan shartlarga javob beradigan kataklarni rang bilan ajratish. Masalan, sotuvlar 1000 dan oshsa yashil rang bilan ko'rsatish, aks holda qizil rang berish.



5. **Pivot jadvallar bilan ishlash:** Katta hajmdagi ma'lumotlarni guruhlash va tahlil qilish imkonini beradi. Masalan, bir nechta filiallardagi mahsulot sotuvlarini tahlil qilish va eng ko'p sotilgan mahsulotlarni aniqlash.

Mashqlarni bajarish jarayonida o'quvchilarga **mustaqil fikrlash va turli usullar bilan yechim topishni** rag'batlantirish muhimdir. O'qituvchi shuningdek, qo'shimcha tavsiyalar berishi mumkin, masalan, formulalarni optimallashtirish, ma'lumotlarni tartiblashning turli usullarini sinash, grafiklarni chiroyli va tushunarli shaklda tayyorlash.

Shu bilan birga, mashqlarni **o'zaro muhokama qilish va natijalarni taqqoslash** o'quvchilarning tahliliy va kritik fikrlash qobiliyatini rivojlantiradi. Guruh ishlari, loyiha topshiriqlari va real hayotiy misollar o'quvchilarda Excel dasturini nafaqat dars uchun, balki kelajakdagi kasbiy faoliyatda qo'llash ko'nikmalarini shakllantiradi.

Excel mavzusini o'qitishda zamonaviy texnologiyalar va innovatsion yondashuvlar

Excel dasturini o'qitishda zamonaviy texnologiyalar va innovatsion yondashuvlarni qo'llash dars samaradorligini sezilarli darajada oshiradi va o'quvchilarning mavzuga qiziqishini kuchaytiradi. An'anaviy metodlar bilan bir qatorda interfaol va raqamli resurslarni qo'llash o'quvchilarning amaliy ko'nikmalarini yanada boyitadi hamda ularni real hayotiy vaziyatlarda dasturdan foydalanishga tayyorlaydi.

Bugungi kunda Excel darslarida **onlayn platformalar va interaktiv vositalar** keng qo'llaniladi. Masalan, **Excel Online, Google Sheets, Office 365** kabi bulutli xizmatlar yordamida talabalar bir vaqtning o'zida jadvallar yaratish, ma'lumotlarni tahlil qilish va natijalarni boshqalar bilan bo'lishish imkoniga ega bo'ladilar. Shu yo'l bilan guruh ishlari va loyiha asosidagi mashqlar samaradorligi oshadi, o'quvchilar o'zaro muloqot va fikr almashish orqali mavzuni chuqurroq o'rganadilar.

Innovatsion yondashuvlar qatoriga **videodarslar, interaktiv testlar va simulyatsiyalar** kiradi. Masalan, o'qituvchi mavzuni tushuntirayotganda ekran orqali real vaqt rejimida mashqlarni ko'rsatishi, o'quvchilar esa o'zlarining javoblarini sinovdan o'tkazishi mumkin. Bu yondashuv darsni qiziqarli qiladi va mavzuni amalda qo'llashni osonlashtiradi.

Shuningdek, **o'quvchilarning individual qobiliyatlarini hisobga olgan adaptiv metodlarni** qo'llash ham samarali hisoblanadi. Masalan, ilg'or talabalar murakkab formulalar va pivot jadvallar bilan ishlash bo'yicha topshiriqlarni bajarishi mumkin, yangi boshlovchilar esa asosiy funksiyalar va diagrammalar bilan tanishadi. Bu yondashuv har bir o'quvchining darajasiga moslashgan holda bilim va ko'nikmalarni rivojlantirishga xizmat qiladi.

Xulosa

Microsoft Excel dasturi nafaqat elektron jadvallar bilan ishlash vositasi, balki matematika va informatika fanlarini o'qitishda samarali pedagogik

vosita hisoblanadi. Dars davomida o'quvchilar Excel yordamida ma'lumotlarni kiritish, tartiblash, tahlil qilish, formulalar va funksiyalarni qo'llash hamda natijalarni grafik ko'rinishda ifodalashni o'rganadilar. Shu jarayonda ular nafaqat texnik ko'nikmalarni, balki mantiqiy fikrlash, tahlil qilish va muammolarni yechish malakalarini ham rivojlantiradilar.

Amaliy topshiriqlar va real hayotiy misollar o'quvchilarning mustaqil ishlash ko'nikmalarini mustahkamlashga yordam beradi, guruh ishlari esa ularning jamoaviy ish va fikr almashish qobiliyatlarini rivojlantiradi. Darsni interfaol va innovatsion metodlar orqali tashkil etish, jumladan videodarslar, onlayn platformalar va simulyatsiyalarni qo'llash, mavzuni qiziqarli va amaliy jihatdan boy qiladi. Shu bilan birga, o'quvchilar Excel'ni kelajakdagi kasbiy faoliyatda, masalan, iqtisod, statistika, IT va ilmiy tadqiqotlarda qo'llash ko'nikmalarini ham egallaydilar.

Shunday qilib, Excel dasturini o'qitish metodikasi o'quvchilarning bilimini mustahkamlash, amaliy ko'nikmalarini rivojlantirish va ularni real vaziyatlarda samarali ishlashga tayyorlashga xizmat qiladi. Bu esa mavzuni zamonaviy, interfaol va samarali tarzda o'rgatish imkonini beradi.

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TURK VA O'ZBEK TILLARIDA OILA KONSEPTINING FRAZEOLOGIK BIRLIKLARDA IFODALANISHI

Soipova Maftuna Ne'matillo qizi

Andijon davlat universiteti o'zbek tili kafedrası o'qituvchisi

Annotatsiya: Zamonaviy tilshunoslikning dolzarb mavzularidan biri bu konseptdir. Bu termin kongitiv tilshunoslik va lingvokulturalogiyaning muhim kategoriyalardan biridir. Ushbu maqolada turk va o'zbek tillarida oila konsepti va unga oid frazeologik birliklar tadqiqi o'rganiladi. Hozirgi kunda jahon tilshunosligida turli til darajasidagi birliklar misolida umuminsoniy tushunchalarning milliy madaniy o'ziga xosligi masalasini oydinlashtirishga alohida e'tibor qaratilmoqda. Tilning o'ziga xos usuliyatlariga madaniyatning ham dahldorligi barcha tilshunoslar tomonidan e'tirof etilib endilikda tilni madaniyat bilan bog'lab o'rganish alohida ahamiyat kasb etmoqda. Turk va o'zbek tillarida oila konsepti frazeologik birliklar misolida tematik va statistic tahlil yordamida konseptuallashtirishga bag'ishlangan tadqiqotlar yetarlicha emas. Ushbu maqolada, individual yondashuv asosidatushunchalarni lingvistik, kognitiv, madaniy va sotsiologik nuqtai nazardan o'rganish imkonini berishi aniqlangan. Tadqiqot natijalari shuni ko'rsatadiki, kontseptuallashtirish insan ongida voqelikni aks ettirishning aqliy usuli hisoblanadi. U subjektiv va lingvistik hamjamiyat tomonidan qabul qilingan an'anaviy ma'nolarni birlashtiradi. Konseptni prototipik kategoriyalashtirish orqali til va madaniy o'ziga xoslik shaffof namoyon bo'lishi xulosa qilinadi.

Kalit so'zlar: kognitiv tilshunoslik, konsept, lingvokulturalogiya, frazeologik birliklar, mantiqiy kategoriya, assotsiatsiyativ birliklar, oila konsepti.

Tushuncha tilshunoslikda nisbatan yangi atama bo'lganligi sababli, u haligacha umumiy qabul qilingan ta'rifga ega emas. Biroq bu tushunchani umumiy o'rganishga ham, turli tushunchalarni tadqiq qilishga ham yetarlicha ilmiy ishlar, ilmiy maqolalar bag'ishlangan. Har qanday aniq konseptsiyani tahlil qilishdan oldin, konseptsiya tushunchasining mazmunini ko'rib chiqish juda muhim sanaladi.

Konsept atamasi kognitiv tilshunoslik va lingvokulturologiya uchun markaziy kategoriya hisoblanadi. Konsept tushunchasi deyarli barcha atoqli tilshunoslar tomonidan keng tadqiq qilingan bo'lib, ularning barchasi ushbu tushunchani turlicha individual tarzda talqin qilishadi. Y.S.Stepanov konseptni "madaniyat elementlaridan birining kishi tafakkurida shakllangan shakli" deb ta'riflaydi. V.A.Maslova konsept ma'nosiga ko'p qirrali tuzilma sifatida qarab, nafaqat til egalari tomonidan o'ylanadigan, balki ular o'zlari his qiladigan hayajon, baho, milliy obraz va konnotatsiyani o'z ichiga olishini ko'rsatadi. Konsept lingvomadaniyatda eng faol qo'llanuvchi birlik sanaladi. Konsept



lingvomadaniy birlik sifatida u yoki bu xalq madaniyatining o'ziga xos jihatlarni ifodalaydi.

Oila konsepti esa universal konseptlardan biri bo'lib, har bir xalqning madaniy-milliy xususiyatlarini aks ettiradi.

Konsept atamasi paydo bo'lgan dastlabki paytdayoq "ma'no" atamasi bilan tenglashtirildi. Biroq rus tilshunosi Y.S.Stepanovning fikricha, ma'no konseptga nisbatan soddaroq tuzilishga egadir. Ma'no tarkibida mazmun tarkibiy qismlari ustunlik qiladi, konsept tarkibida esa ifodalangan barcha komponentlar qatnashadi.

Misol uchun, "kitob" so'zini tahlil qilsak:

Ma'no: o'qish uchun hozlangan, bir necha sahifadan iborat predmet.

Konsept: insonlarning eng yaqin va eng to'g'ri maslahat beruvchi do'sti, insonni yuziga tutilgan oyna, qimmatbaho boyluk, sovg'aning eng muqobil variyanti, bilim manbai, madaniyat tashuvchisi va h.k. Bundan tashqari, ma'no muhim va zarur belgilarni to'playdi, konsept esa hatto ahamiyatsiz belgilarni ham to'plashi mumkin. Biroq V.A.Maslova konsept va ma'no o'rtasida yengib bo'lmas to'siqlar yo'qligini ta'kidlaydi.

Turk va o'zbek xalqlari umumiy turkey ildizga ega bo'lishiga qaramay, oila konseptining har bir tilda o'ziga xos kognitiv va lingvomadaniy xususiyatlari mavjud.

O'zbek tilida oila konsepti

Oila leksemasi Arab tilidan kirgan bo'lib, O'zbek tilining izohli lug'atida quyidagicha ta'riflanadi: "Nikoh va qonchilik aloqalari bilan bog'langan, birgalikda yashaydigan, umumiy xo'jalik yuritadigan odamlar guruhi".

Leksemaning semantik tuzilishi:

Asosiy ma'no: nikoh va qonchilik asosidagi birlashma Qo'shimcha sema: birgalikda yashash

Periferik sema: umumiy xo'jalik

Turk tilida oila konsepti

Aile leksemasi ham Arab tilidan olingan bo'lib, Türk Dil Kurumu lug'atida quyidagicha ta'riflanadi: "Evlilik ve kan bağıyla birbirine bağlı olan, birlikte yaşayan, aralarında yakınlık ilişkisi olan kimselerin tümü".

J.Lakoff va M.Jonsonning kontseptual metafora nazariyasiga ko'ra, murakkab abstract tushunchalar oddiyroq, konkret tushunchalar orqali tushuniladi. Oila konsepti turk va o'zbek tillarida quyidagi kontseptual metaforalar orqali ifodalanadi:

O'zbek tilida asosiy metaforalar:

1. OILA - BINO metaforasi:

Oila bunyod qilmoq

Oilaning poydevori mustahkam

Oila vayron bo'lmoq

2. OILA - O'SIMLIK metaforasi:

Oila daraxti



Oila ildizi

Oilaning shoxi-shabbasi ko'p

3. OILA - UYA metaforasi:

Oilasiga qaytmoq (uyasiga qaytmoq)

Oila uyasi

Turk tilida asosiy metaforalar:

1. AİLE - YAPI (BINO) metaforasi:

Aile kurmak (oila qurmoq)

Ailenin temeli sağlam

Yuva kurmak

2. AİLE - AĞAÇ (DARAXT) metaforasi:

Soy ağacı (nasl daraxti)

Ailenin kökü (oilaning ildizi)

Turk va o'zbek tillarida qarindoshlik terminologiyasi quyidagi printsiplar asosida kategorlashtiriladi:

Avlod O'zbek tili Turk tili

Kognitiv asos

Bobo, buvi- dede, nine

YUQORI AVLOD -HURMAT

Ota, ona- baba, anne

ASOSIY AVLOD -MANBA

O'g'il, qiz- o'g'ul, kiz

DAVOMIYLIK

Nevara - torun

KELAJAK AVLOD

Birodarlar terminologiyasi

O'zbek tilida: aka, uka, opa, singil - to'rt alohida termin. Bu oilada yosh va jins prinsipi aniq farqlanadi.

Turk tilida: ağabey, kardeş, abla - umumlashtiruvchi tendensiya mavjud. Turk va o'zbek tillarida oila konseptining lingvomadaniy va lingvokognitiv tadqiqi quyidagi xulosalarga olib keladi:

1. Konseptning universal va milliy xususiyatlari: Oila konsepti ikki tilda ham yuqori qadriyat darajasiga ega. Har bir tilde milliy-madaniy o'ziga xosliklar mavjud. O'zbek tilida diniy-ma'naviy komponent kuchliroq.

2. Kognitiv modellarning o'xshashligi: OILA - BINO metaforasi markaziy. OILA - DARAXT metaforasi umumturkiy xususiyat. Farqlar periferik metaforalarda namoyon bo'ladi.

3. Qarindoshlik terminologiyasining boy tizimi: Ikki tilda ham simmetrik va balansli tizim mavjud. O'zbek tilida aniqroq differentsiatsiya kuzatiladi.

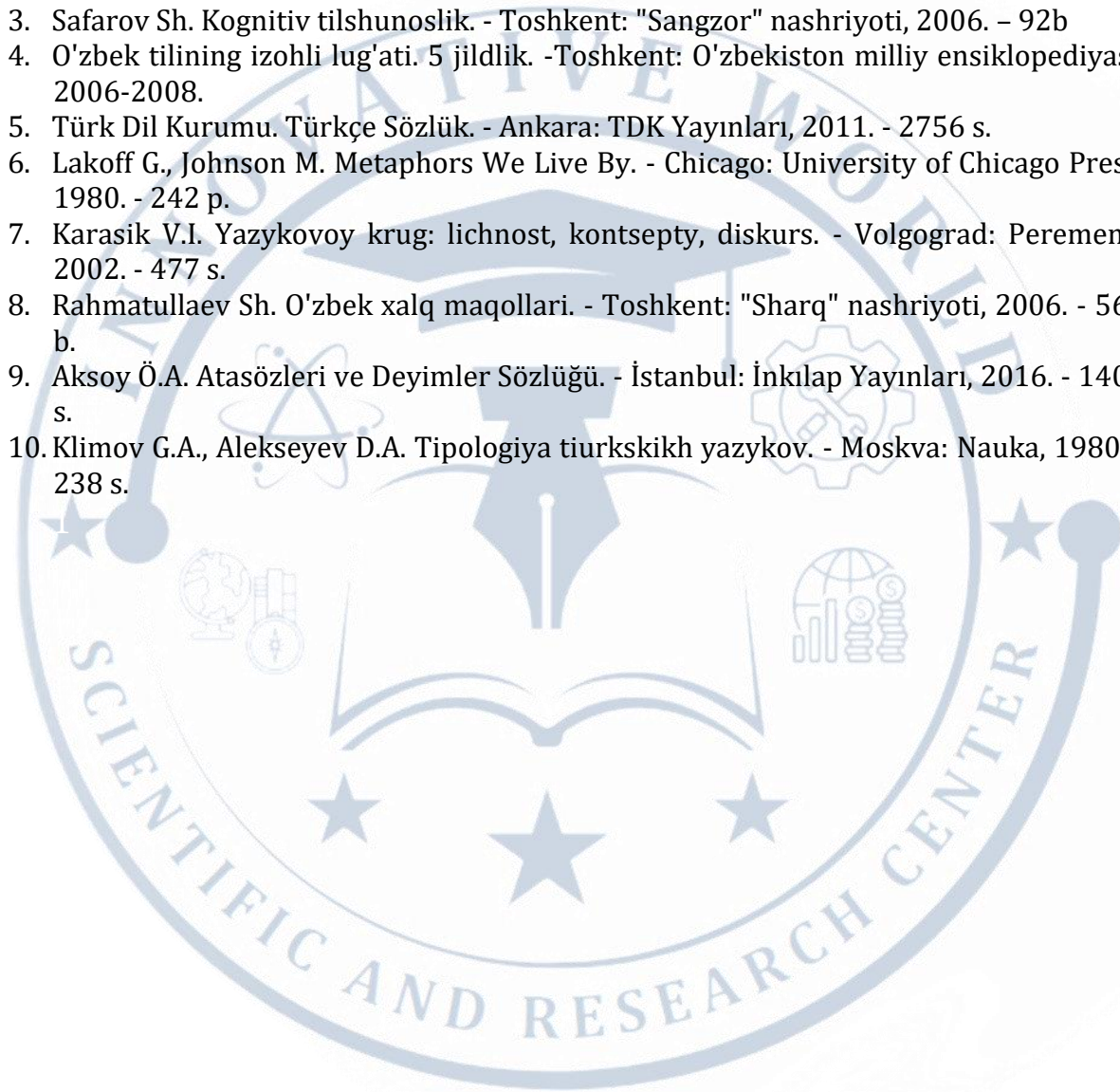
4. Paremiyalarda umumturkiy qadriyatlar: Xalq maqollari tahlili ko'rsatdiki, oilaning qadriyat darajasi ikki xalqda ham eng yuqori. Ota-ona hurmatiga alohida e'tibor beriladi.



5. Zamonaviy o'zgarishlar: Globalashuv ta'siriga qaramay, asosiy konseptlar saqlanmoqda. Til madaniy xotirani saqlash funksiyasini bajaryapti.

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Драматургия

Каримова Нигора Маратовна

доктор философии (PhD) по
филологическим наукам, и.о. доцент
кафедры русской филологии филологического
факультета Ферганского госуниверситета
E-mail: k.nigora@inbox.ru

Драматургия первой половины XX века в русской литературе занимает особое место, являясь жанром, который, хотя и уступал по популярности поэзии и прозе, играл значительную роль в отражении культурных, социальных и политических трансформаций эпохи. Этот период, охватывающий время от начала XX века до конца 1940-х годов, включает модернистские эксперименты Серебряного века, революционные потрясения, становление советской театральной традиции и её развитие в условиях сталинского режима. Драматургия стала зеркалом общественных настроений, площадкой для философских размышлений, сатирической критики и пропаганды, сочетая символизм, реализм, авангард и соцреалистические формы. Она была тесно связана с театральным искусством, которое в этот период переживало как расцвет, так и кризис под влиянием цензуры и репрессий. В настоящем параграфе мы подробно рассмотрим основные тенденции развития драматургии, её жанровое своеобразие, ключевых авторов и их вклад, а также влияние исторического контекста на этот жанр, опираясь на конкретные пьесы, их анализ и театральный контекст[1].



Основные тенденции развития драматургии



Драматургия первой половины XX века прошла через несколько этапов, каждый из которых отражал эволюцию театрального искусства и его взаимодействия с обществом. От модернистских экспериментов начала века до унифицированных постановок сталинской эпохи она демонстрировала способность адаптироваться к культурным и идеологическим вызовам, сохраняя при этом разнообразие форм и тем.

Модернистская драматургия (1900-е – 1910-е годы)

На рубеже XIX–XX веков драматургия находилась под сильным влиянием Серебряного века, когда театр стал ареной модернистских поисков. Этот этап связан с деятельностью выдающихся режиссёров — Константина Станиславского, чья система психологического реализма преобразила актёрскую игру, и Всеволода Мейерхольда, экспериментировавшего с условностью и символикой. Символизм стал доминирующим направлением, отвергая бытовой реализм Чехова и предлагая аллегорические сюжеты, мистические образы и философскую глубину.

Александр Блок, известный как поэт-символист, внёс значительный вклад в драматургию пьесами «Балаганчик» (1906), «Незнакомка» (1906) и «Роза и Крест» (1912). «Балаганчик», поставленный Мейерхольдом в 1906 году, представляет собой сатиру на театральные штампы и символистскую эстетику: персонажи — Пьеро, Коломбина, Арлекин — разыгрывают трагикомедию любви и разочарования, а картонные декорации подчёркивают иллюзорность происходящего. Пьеса ломала традиционные границы между сценой и залом, вводя метатекстуальные элементы[4]. «Незнакомка» переносит зрителя в мир поэтических видений, где реальность переплетается с миражами, а «Роза и Крест» исследует конфликт между долгом и страстью через историю рыцаря Бертрана, стремящегося к недостижимому идеалу. Эти пьесы, насыщенные лиризмом и символикой, требовали от зрителя интеллектуального и эмоционального погружения, что делало их элитарными.

Леонид Андреев в пьесе «Жизнь Человека» (1907) создал аллегорическую драму о человеческой судьбе: герой проходит через рождение, любовь, богатство и смерть под взглядом таинственного «Седого в сером», олицетворяющего рок. Постановка Станиславского во МХАТе усилила её трагизм, а мрачный тон сделал пьесу предшественницей экзистенциального театра. Андреев также написал «Царь Голод» (1908), где голод персонифицирован как всемогущий тиран, что отражало социальные тревоги эпохи. Фёдор Сологуб в пьесе «Победа Смерти» (1907) продолжил символистскую традицию, изображая борьбу жизни и смерти в мистической атмосфере. Его драматургия, полная декадентских мотивов, подчёркивала упадок и

неизбежность конца, что перекликалось с предчувствиями Первой мировой войны.

Этот период был временем театральных экспериментов: Мейерхольд вводил биомеханику и условные декорации, а Станиславский развивал психологическую достоверность. Однако драматургия оставалась второстепенной по сравнению с поэзией, уступая ей в популярности и влиянии.

Революционная и послереволюционная драматургия (1917–1920-е годы)

Революция 1917 года и Гражданская война радикально изменили драматургию, превратив её в инструмент агитации, сатиры и осмысления социальных перемен. Этот этап связан с расцветом массового театра, поддержанного большевиками, и кратковременным плюрализмом НЭПа (1921–1929), когда театры получили относительную свободу. Владимир Маяковский стал ключевой фигурой этого времени, перенеся футуристическую энергию в драматургию. Его пьеса «Мистерия-буфф» (1918, переработана в 1921) — революционная аллегория, где «чистые» (буржуи) противостоят «нечистым» (пролетариям), а финал воспекает победу рабочего класса. Постановка Мейерхольда с яркими конструктивистскими декорациями и динамичными массовыми сценами сделала пьесу манифестом нового театра. «Клоп» (1929) — сатира на мещанство и нэпманскую пошлость: герой Присыпкин, замороженный в 1920-е годы, оживает в будущем, где его обывательские привычки — пьянство и любовь к романсам — вызывают отвращение. Пьеса сочетала авангардную форму с социальной критикой, а её постановка Мейерхольдом с гротескными костюмами усилила комический эффект.

Михаил Булгаков начал драматургическую карьеру в 1920-е годы, создав пьесы, ставшие театральными шедеврами. «Дни Турбиных» (1926), основанные на романе «Белая гвардия», изображают распад семьи офицеров Турбиных в Киеве во время Гражданской войны. Реалистичный стиль, тонкий психологизм и трагизм сделали пьесу популярной: сцена прощания Алексея Турбина с уходящим миром трогала зрителей. Постановка во МХАТе, одобренная лично Сталиным (который смотрел её 15 раз), стала сенсацией, хотя цензура обвиняла Булгакова в «сочувствии белым». «Зойкина квартира» (1926) — сатира на нэпманскую мораль: героиня Зоя организует бордель под видом швейного ателье, высмеивая коррупцию и лицемерие эпохи. Пьеса, поставленная в Театре Вахтангова, была снята с репертуара из-за «антисоветского» подтекста.

Эмигрантская драматургия развивалась параллельно, но оставалась на периферии. Евгений Замятин в пьесе «Блоха» (1925), написанной в эмиграции, адаптировал русский фольклор о солдате и блохе, создав

сатирическую комедию о человеческой глупости. Пьеса, поставленная за границей, не получила широкого резонанса, но показала попытку сохранить национальные традиции вне СССР.

Театры 1920-х годов — МХАТ, Театр Мейерхольда, Камерный театр Таирова — активно экспериментировали с формой: от массовых сцен до гротеска. Однако конец НЭПа и усиление цензуры начали ограничивать творческую свободу.

Драматургия (1930-е – 1940-е годы)

С утверждением социалистического реализма в 1934 году на I Всесоюзном съезде советских писателей драматургия подчинилась идеологическим задачам: прославлению социализма, трудовых подвигов и героизма. Театр стал инструментом пропаганды, а пьесы — средством воспитания масс. Николай Погодин как представитель социалистического реализма создал трилогию о вожде Октябрьской революции. Простота сюжета, дидактический тон и образ «простого человека» отвечали требованиям соцреализма. Постановка во МХАТе закрепила её статус образцовой пьесы. «Аристократы» (1935) того же автора прославляла перековку заключённых на строительстве Беломорканала: герои-уголовники под влиянием труда превращаются в сознательных граждан, что скрывало реальные ужасы лагерей.

Всеволод Вишневский в пьесе «Оптимистическая трагедия» (1933) создал героический образ женщины-комиссара, ведущей матросов к победе в Гражданской войне. Монументальность, динамичные сцены и пафосный финал сделали пьесу классикой советского театра: постановка в Камерном театре с музыкой Шостаковича усилила её воздействие. Во время Второй мировой войны драматургия сосредоточилась на патриотической тематике: Александр Корнейчук в «Фронте» (1942) изобразил борьбу командиров против врага, подчёркивая единство армии и народа. Пьеса, поставленная в разгар войны, поднимала боевой дух, хотя её схематизм был очевиден.

Не все драматурги приняли официоз. Михаил Булгаков в «Беге» (1928, поставлена в 1970-х) показал трагедию белой эмиграции: герои — генералы, интеллигенты, беженцы — мечутся между прошлым и безнадежным будущим. Пьеса, запрещённая при жизни автора, стала символом сопротивления. «Кабала святош» (1936) — драма о Мольере, чей конфликт с властью отражал судьбу самого Булгакова. Постановка во МХАТе была снята после нескольких спектаклей по приказу цензуры. Эти пьесы, скрытые от зрителей, сохранили художественную глубину и независимость[3].

Жанровое разнообразие

Драматургия первой половины XX века отличалась богатством жанров, отражая как модернистские поиски, так и идеологические рамки. Основные жанры включают:



- Символистская драма: аллегорические пьесы с философским подтекстом, как «Балаганчик» и «Роза и Крест» Блока, «Жизнь Человека» Андреева.

- Сатирическая комедия: «Клоп» и «Баня» (1930) Маяковского, «Зойкина квартира» Булгакова, высмеивающие социальные пороки.

- Реалистическая драма: «Дни Турбиных» и «Бег» Булгакова, основанные на психологизме и исторических событиях.

- Агитационная пьеса: «Мистерия-буфф» Маяковского, «Человек с ружьём» Погодина, служившие пропаганде революции и социализма.

- Историческая драма: «Роза и Крест» Блока, «Кабала святош» Булгакова, «Пётр и Алексей» Дмитрия Мережковского (1900-е), осмысляющие прошлое.

- Героическая трагедия: «Оптимистическая трагедия» Вишневского, «Фронт» Корнейчука, прославляющие борьбу и подвиг.

- Фольклорная комедия: «Блоха» Замятина, использующая народные мотивы в сатирическом ключе.

- Драма-диспут: «Баня» Маяковского, где обсуждаются будущее и бюрократия, с элементами гротеска.

Ключевые авторы и их вклад

- Александр Блок (1880–1921): символист, чьи пьесы «Балаганчик», «Незнакомка» и «Роза и Крест» соединили лиризм с театральной аллегорией, заложив основы модернистского театра.

- Леонид Андреев (1871–1919): автор экзистенциальных драм («Жизнь Человека», «Царь Голод»), повлиявших на театр трагизма и европейскую сцену.

- Владимир Маяковский (1893–1930): футурист, чьи «Мистерия-буфф», «Клоп» и «Баня» стали манифестами революционного и сатирического театра. Его самоубийство завершило яркую карьеру.

- Михаил Булгаков (1891–1940): мастер реалистической и сатирической драматургии. «Дни Турбиных», «Бег», «Кабала святош», «Зойкина квартира» — шедевры, несмотря на запреты и цензуру.

- Николай Погодин (1900–1962): драматург соцреализма, чьи «Человек с ружьём», «Аристократы» и «Кремлёвские куранты» (1942) прославляли советский строй.

- Всеволод Вишневский (1900–1951): автор героических пьес, таких как «Оптимистическая трагедия» и «Незабываемый 1919-й» (1949, начат в 1940-е), ставших классикой советского театра.

- Евгений Замятин (1884–1937): эмигрант, чья «Блоха» сочетала сатиру и фольклор, но осталась малозаметной за пределами СССР.

- Александр Корнейчук (1905–1972): создатель военной драмы «Фронт» и «Гибель эскадры» (1934), отражавших дух борьбы и патриотизма.

Влияние исторического контекста

Исторические события оказали решающее влияние на драматургию. Революция 1917 года вдохновила на агитационный театр (Маяковский), но расколола авторов: Замятин эмигрировал, а Булгаков боролся с цензурой. НЭП (1921–1929) дал краткий период свободы, позволив сатиру («Клоп», «Зойкина квартира») и эксперименты Мейерхольда, но его свёртывание и репрессии 1930-х подчинили театр соцреализму (Погодин, Вишневский)[2]. Экономические трудности 1920-х ограничивали постановки: театры зависели от скудных субсидий, а зрители — от доступности билетов. В 1930-е Главрепертком контролировал репертуар, запрещая «неугодные» пьесы, такие как «Бег» или «Кабала святош».

Вторая мировая война возродила патриотическую драматургию (Корнейчук, Вишневский), но цензура заглушила эксперименты. Репрессии затронули не только драматургов, но и режиссёров: Мейерхольд был арестован в 1939 году и расстрелян в 1940-м, а его театр закрыт. Станиславский, умерший в 1938 году, избежал репрессий, но его МХАТ подстраивался под официоз. Эмигрантская драматургия (Замятин) осталась на периферии, не имея широкой сцены. Политические кампании — от борьбы с «формализмом» до культа Сталина — диктовали сюжеты пьес о войне которые стали обязательной частью репертуара.

Театральная жизнь зависела от режиссёров: Мейерхольд с его биомеханикой и конструктивизмом оживлял авангардные пьесы Маяковского, а Станиславский придавал глубину реалистическим драмам Булгакова. Однако репрессии и цензура ограничивали их свободу, превращая театр в инструмент пропаганды.

Значение драматургии первой половины XX века

Драматургия этого периода стала отражением эпохи, сочетая модернистскую новизну, сатиру, реализм и героический пафос. Она запечатлела трагедии и надежды времени, от «Балаганчика» Блока до «Оптимистической трагедии» Вишневского, от подпольных шедевров Булгакова до массовых постановок Погодина[1]. Несмотря на цензуру и репрессии, драматурги сохранили жанровое разнообразие и художественную силу, создав произведения, которые повлияли на театр XX века и сохранили актуальность. Драматургия стала свидетельством борьбы творчества с давлением власти, отражая как национальный дух, так и универсальные человеческие конфликты.

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CURRENT ISSUES IN MODERN LINGUISTICS

Muslyumova Sevilya Ilimdarovna

Student of Chirchik State Pedagogical University

Department of English Language and Theory

sevilichka2805@gmail.comScientific advisor: **Eldorbek Erkin o'g'li Khamitov**

A senior lecturer, Chirchik state pedagogical university

khamitoveldorbek@gmail.com

Abstract. Currently, cognitive linguistics is one of the most actively developing areas within modern linguistic science. Its primary goal is not only to study language as a system but also to investigate human cognition—the complex set of mental and intellectual processes that underlie language use and understanding. Cognitive linguistics proves particularly productive when applied to the study of the lexical level of language, as it allows researchers to organize and interpret vocabulary through the lens of conceptual structures. This article focuses on one of the central notions in cognitive linguistics: the concept. The paper explores how concepts function as cognitive units and how they contribute to the structuring of linguistic meaning.

Keywords: cognitive linguistics, concept, lexical semantics, conceptualization, mental processes, language and cognition, linguistic meaning, language structure, modern linguistics, cognitive approach

Аннотация. В настоящее время когнитивное направление является одним из наиболее активно развивающихся в современной лингвистике. Его основная цель заключается не только в изучении языка как системы, но и в исследовании когнитивных процессов — сложного комплекса умственных и интеллектуальных способностей человека, лежащих в основе языкового функционирования. Когнитивный подход особенно продуктивен при анализе лексического уровня языка, так как позволяет по-новому систематизировать словарный состав на основе концептуальных структур. Данная статья посвящена рассмотрению одного из ключевых понятий когнитивной лингвистики — концепта. Особое внимание уделяется его роли как когнитивной единицы и средству структурирования лексического значения.

Ключевые слова: когнитивная лингвистика, концепт, лексическая семантика, концептуализация, познавательные процессы, язык и мышление, языковое значение, языковая структура, современное языкознание, когнитивный подход

Annotatsiya. Hozirgi kunda kognitiv yo'nalish zamonaviy tilshunoslikdagi eng faol rivojlanayotgan sohalardan biri hisoblanadi. Uning asosiy maqsadi faqat til tizimini o'rganish emas, balki inson tafakkuri — ya'ni tilning shakllanishi va ishlatilishining asosi bo'lgan aqliy va intellektual



jarayonlarni chuqur o'rganishdan iboratdir. Kognitiv tilshunoslik ayniqsa tilning leksik darajasini o'rganishda samarali bo'lib, lug'aviy boylikni konseptual tuzilmalar asosida yangicha tizimlashtirish imkonini beradi. Ushbu maqola kognitiv tilshunoslikning asosiy tushunchalaridan biri bo'lgan "konsept" (concept)ni o'rganishga bag'ishlangan. Unda konseptlarning kognitiv birlik sifatidagi roli hamda ularning til mazmunini shakllantirishdagi ahamiyati yoritilgan.

Kalit so'zlar: kognitiv tilshunoslik, konsept, leksik semantika, konseptualizatsiya, aqliy jarayonlar, til va tafakkur, til mazmuni, til tuzilmasi, zamonaviy tilshunoslik, kognitiv yondashuv

INTRODUCTION

In the context of modern linguistic research, cognitive linguistics has emerged as a powerful interdisciplinary approach that connects language with human mental activity. Unlike traditional structural models, cognitive linguistics focuses not only on the formal aspects of language but also on the mental representations and processes that underlie linguistic behavior. This perspective reflects a shift in the field — from viewing language as an autonomous system to understanding it as a reflection of general cognitive abilities, such as perception, memory, categorization, and conceptualization.

One of the central notions in cognitive linguistics is the **concept**, which serves as a mental unit of meaning. Concepts are not merely linguistic elements, but rather cognitive structures that shape the way individuals perceive and interpret reality. Through the study of concepts, linguists aim to uncover how meaning is constructed, stored, and communicated within a language. This is especially relevant for lexical studies, where vocabulary items are viewed not as isolated units, but as interconnected parts of a conceptual network.

In today's linguistic landscape, the analysis of concepts contributes to solving broader theoretical problems — such as understanding cultural differences in cognition, modeling semantic fields, and explaining metaphorical language. Thus, investigating the role of concepts offers valuable insights into the mechanisms of meaning formation, making this topic both theoretically significant and practically applicable in various fields of linguistic inquiry. Many modern linguistics studies emphasize that vast numbers of the world's languages are endangered, meaning they have very few speakers and are at risk of disappearing. This loss involves not only the languages themselves but also unique cultural and cognitive knowledge embedded in them. Efforts in documentation, revitalization, and integrating endangered languages into education are considered urgent.[1,36-b]

From the perspective of cognitive linguistics, the extinction of a language signifies the disappearance of a unique worldview — a particular way of conceptualizing reality that is encoded in the lexicon, grammar, and metaphorical structures of that language. Each language organizes human

experience differently, and its concepts are shaped by culturally specific practices, environments, and social norms. As such, the loss of a language represents not merely a reduction in linguistic diversity, but a deeper erosion of human cognitive diversity.

This underscores the importance of conceptual studies in endangered languages, as they offer insight into how different communities categorize and interpret their experiences. By analyzing the conceptual structures of these languages, linguists can contribute to both theoretical development and the practical preservation of endangered linguistic systems. Moreover, such work has implications for fields like anthropology, education, and intercultural communication, where understanding diverse cognitive models is crucial.

In this context, cognitive linguistics not only provides tools for analyzing meaning but also plays a vital role in documenting how meaning is constructed differently across languages. Therefore, the study of concepts — especially in lesser-known or disappearing languages — becomes an essential part of addressing current challenges in linguistics and preserving global cognitive heritage.

Therefore, cognitive linguistics plays a dual role in addressing both the preservation of linguistic and conceptual diversity, as well as understanding how language continues to evolve in response to external factors. One of the most influential external factors in recent decades has been the rapid development of digital communication technologies. **Digital media**—including social networks, messaging apps, online forums, and other platforms—are significantly accelerating language variation and change. These platforms serve as dynamic environments where new linguistic forms emerge, spread, and solidify in real time. As a result, they exert substantial influence on grammar, vocabulary, stylistic choices, and register. The boundaries between formal and informal language are increasingly blurred, with informal and hybrid registers becoming more prominent in everyday communication.

This linguistic fluidity raises several important questions for modern linguistics. Among them are the challenges of distinguishing between prescriptive norms and naturally evolving usage patterns, as well as understanding how digital environments affect language acquisition, especially among younger generations. Moreover, the increasing use of abbreviations, emojis, memes, and “internet slang” in written communication prompts a reevaluation of what constitutes standard or “acceptable” language, particularly in academic and professional contexts.[2,26-b]

From a cognitive perspective, digital communication also introduces new modes of conceptualization and meaning-making. The use of visual elements, multimodal texts, and rapid discourse shifts reflects a transformation in how individuals process and convey information. Thus, studying language in digital media not only contributes to our understanding

of contemporary linguistic change but also offers insight into how cognitive processes adapt to new communicative environments. Furthermore, the impact of digital media on language use cannot be viewed in isolation from broader sociolinguistic trends such as globalization and increased linguistic contact. As digital platforms bring together speakers from diverse linguistic and cultural backgrounds, they also foster environments where multiple languages coexist and interact.

In many societies, speakers use more than one language in their daily lives, often blending them fluidly in a process known as translinguaging. This phenomenon reflects the flexible and dynamic nature of linguistic competence in multilingual contexts, where language use is shaped by communicative needs rather than strict boundaries. Translinguaging practices not only challenge traditional notions of language separation but also offer insight into how speakers draw upon their full linguistic repertoires to construct meaning and negotiate identity.

This multilingual reality significantly influences various domains of life, including **education**, where language choice affects learning outcomes, and **social interaction**, where linguistic behavior is closely tied to issues of power, inclusion, and cultural belonging. In an increasingly globalized world, **intercultural communication** has become essential—not only in international relations but also in local, multicultural communities [4,52-b]. This raises complex questions about **language policy**, **linguistic rights**, and the design of **multilingual education systems** that respect and reflect the linguistic diversity of their populations.

Researchers in cognitive and sociolinguistics now explore how multilingual individuals **navigate code-switching**, manage **language hierarchies**, and make strategic language choices based on context, audience, and purpose. These investigations are crucial for understanding not only linguistic competence but also the cognitive flexibility and sociocultural awareness involved in multilingual communication. As the complexity of linguistic phenomena continues to grow, especially in multilingual and digital contexts, modern linguistics increasingly turns to advanced technological tools to better analyze and understand language data. There is a growing trend to combine computational tools—such as Natural Language Processing (NLP) and machine learning—with traditional linguistic theory. This interdisciplinary approach allows researchers to process and interpret vast amounts of linguistic data that would be impossible to analyze manually. [5,43-b]

Computational methods facilitate modeling language change over time, simulating complex linguistic phenomena, and generating resources for languages that have been historically under-resourced or endangered. These technologies also enable the development of automated translation systems,



speech recognition, and sentiment analysis, thereby expanding the practical applications of linguistic research in real-world contexts.

However, despite their advantages, these computational approaches come with significant challenges. Ensuring theoretical adequacy remains a priority, as computational models must not only process data but also reflect the underlying linguistic principles accurately. Furthermore, the interpretability of such models can be limited, making it difficult for linguists to fully understand how conclusions are derived from data. Another critical issue is the presence of bias in training datasets, which can perpetuate stereotypes or marginalize minority language communities if not carefully addressed.

Thus, integrating computational tools into linguistic research requires a careful balance between technological innovation and linguistic insight, ensuring that advancements serve to deepen our understanding of language rather than oversimplify its complexities. In addition to addressing these challenges, researchers are actively developing more transparent and linguistically informed models. For example, hybrid approaches that combine rule-based linguistic frameworks with data-driven machine learning techniques are gaining traction. These models aim to leverage the strengths of both methods: the precision and interpretability of linguistic rules alongside the scalability and adaptability of statistical algorithms.

Moreover, computational linguistics plays a crucial role in supporting endangered and low-resource languages by creating digital corpora, developing language learning tools, and enabling automated analysis where human expertise is limited. This contributes not only to language preservation but also to expanding global access to linguistic knowledge.

Finally, ethical considerations are increasingly important in computational linguistic research. Issues such as data privacy, algorithmic fairness, and the digital divide need to be addressed to ensure that technological advancements benefit all language communities equitably.

Overall, the fusion of computational tools with traditional linguistics holds great promise for the future, offering innovative ways to explore the complexities of human language in an ever-changing world.

Looking ahead, the integration of computational methods into linguistics opens new avenues for interdisciplinary collaboration. Fields such as cognitive science, psychology, artificial intelligence, and anthropology increasingly intersect with linguistic research, enriching our understanding of language as a complex human phenomenon.

At the same time, these advancements highlight the need for linguists to acquire new technical skills and for computer scientists to deepen their understanding of linguistic theory. Such cross-disciplinary training is essential to develop tools that are both technologically advanced and linguistically sound.



Moreover, the rapid evolution of language in digital and multilingual contexts calls for continuous adaptation of research methodologies. Scholars must remain vigilant in capturing emerging linguistic trends, such as the impact of social media on language norms, the nuances of code-switching in diverse communities, and the conceptual shifts driven by globalization.

In summary, contemporary linguistics faces the dual challenge of preserving linguistic diversity and adapting to unprecedented language change. By embracing both traditional theoretical insights and cutting-edge computational technologies, researchers can contribute to a more comprehensive and nuanced understanding of language, cognition, and society. Modern linguistics stands at a crossroads where the preservation of linguistic diversity and the rapid evolution of language converge. The cognitive approach enriches our understanding of how language reflects and shapes human thought, especially through the study of concepts and mental representations. At the same time, the digital age and globalization bring profound changes, influencing language use, variation, and social dynamics on an unprecedented scale. The integration of computational tools with traditional linguistic theories offers powerful means to analyze and model these changes, but it also presents challenges that require careful theoretical reflection and ethical consideration. Meanwhile, phenomena such as multilingualism and translanguaging highlight the complexity of language as a social practice tied closely to identity, culture, and power relations.

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PROBLEMS AND SHORTCOMINGS IN THE TRANSLATION OF MEDICAL MATERIALS

Mukhtarova Dilnavoz

student of translation theory and practice, group 201

Supervisor: **I.A.Egamberdiyeva**

Associate professor of ASIFL

Abstract: Medical translation is a highly specialized field that requires accuracy, consistency, and subject-matter expertise. This article explores the main problems and shortcomings in the translation of medical materials, focusing on terminological difficulties, syntactic complexity, cultural mismatches, and ethical issues. The study also examines the limitations of machine translation and the role of unqualified translators in producing inaccurate or unsafe medical texts. Recent developments, such as the challenges posed by the COVID-19 pandemic and the importance of standardization through ISO 17100:2015, are also discussed. The findings emphasize that medical translation is not merely a linguistic process but a life-critical task that demands deep medical knowledge, linguistic precision, and ethical responsibility. To improve quality and reliability, translators should receive professional training, use standardized terminology databases, and apply strict quality control and confidentiality measures.

Keywords: medical translation; terminology; linguistic accuracy; cultural adaptation; translator competence; machine translation; COVID-19; ISO 17100; ethics; quality assurance.

One of the most difficult and responsible areas of translation practice is medical translation. It deals with highly specialized terminology, complex sentence structures, and texts that often have direct implications for human health and safety. As Montalt and Davies (2014) point out, "A small mistake in medical translation may have serious, even life-threatening consequences." Therefore, accuracy, clarity, and consistency are vital in translating medical materials such as patient leaflets, research articles, clinical trial documentation, and medical device manuals.

However, despite technological progress and the availability of professional tools, the translation of medical materials still faces numerous problems and shortcomings. This paper discusses the main linguistic, cultural, and technical issues encountered in medical translation and suggests possible ways to overcome them.

The most significant problem in medical translation is terminological complexity. Medical terms are highly specific and often derived from Latin or Greek. Many of them have no direct equivalents in the target language. For instance, English terms like angioplasty, hypertension, or Crohn's disease may not have precise equivalents in Uzbek or other languages. According to

Temnikova (2012), translators often face challenges in choosing between scientific accuracy and reader comprehension. Some translators use descriptive phrases instead of exact terms, which may cause confusion or inaccuracy. Consistency in terminology is another major issue, especially when different translators work on the same project.

Medical tests are known for their long and complex sentences, often filled with passive voice and nominalizations. For example, a phrase like "the administration of medication should be monitored for adverse reactions" can be difficult to render naturally in another language. Ambiguity in medical texts can also create serious problems. Translators must clearly distinguish between similar concepts such as disease and disorder, or treatment and therapy. Misinterpretation of these terms may lead to misinformation in patient instructions or clinical reports. Another shortcoming in medical translation lies in cultural and linguistic differences. Health-related concepts, measurement units, and even medical attitudes vary across cultures. For example, while English texts may refer to "mental health therapy," in some cultures this concept carries social stigma, requiring a more sensitive translation.

Moreover, some drug names and medical abbreviations are culture-specific and may differ across countries. A translator must therefore adapt such references carefully to avoid misunderstanding. As Pym (2010) notes, "The translator must act as a cultural mediator who ensures that medical information is both accurate and culturally acceptable". A serious shortcoming in medical translation practice is the involvement of non-specialist translators who lack sufficient medical knowledge. Unlike general translation, medical translation demands a deep understanding of anatomy, physiology, and pharmacology. Without this knowledge, translators risk misinterpreting terms or producing misleading translations. Professional organizations such as the European Medical Writers Association (EMWA) emphasize that subject-matter expertise is as important as linguistic competence. Yet, in many cases, translation agencies assign medical projects to general translators to save time or cost, compromising the quality and safety of the final text.

In recent years, machine translation (MT) tools like Google Translate and DeepL have been used to process medical texts. While MT can speed up translation, it often produces inaccurate or context-insensitive outputs. Machines tend to mistranslate technical terms or fail to capture subtle meanings, especially in instructions and patient information leaflets. As García (2015) warns, "Relying on machine translation for medical purposes without professional post-editing is a dangerous practice." Therefore, human revision and proofreading remain essential to ensure the reliability and accuracy of medical translations. Medical documents often contain sensitive patient data and confidential information. Translators must follow strict ethical standards

and data protection rules. However, some translators, especially freelancers, are unaware of confidentiality agreements or use online tools that store data on external servers, leading to potential privacy breaches. Ethical awareness and professional responsibility are thus crucial components of medical translation competence.

In recent years, globalization and the COVID-19 pandemic have significantly increased the demand for accurate and fast medical translation. Translators had to deal with urgent documents such as vaccine guidelines, public health information, and WHO recommendations, often under time pressure. According to Chen and Xu (2021), the pandemic revealed that "errors in medical translation can spread misinformation just as quickly as the virus itself." During the early stages of COVID-19, several countries faced confusion due to mistranslated terms like "asymptomatic carrier" or "social distancing", which were inconsistently rendered in local languages. This situation highlighted the importance of real-time collaboration among translators, editors, and health professionals to ensure consistent terminology and clear communication. One of the major shortcomings in medical translation practice is the lack of international standardization. Different agencies and hospitals often use different terminology databases, which can lead to inconsistency. To address this issue, organizations such as the International Organization for Standardization (ISO) have developed quality standards like ISO 17100:2015 for translation services. Implementing these standards ensures that medical translations are reviewed by qualified editors, terminologists, and proofreaders. Moreover, creating multilingual medical corpora and shared terminology databases can help maintain consistency and reduce human error.

Medical translation is not a field that any translator can enter without proper preparation. Universities and professional associations now offer specialized medical translation courses that combine linguistics with biomedical science. As Kamenická (2018) notes, "The best medical translators are bilingual professionals who think like linguists and act like doctors." Continuous professional development, workshops, and online terminology platforms such as MedDRA, PubMed, and WHO Lexicon allow translators to stay updated with the latest medical terminology and standards.

Beyond linguistic competence, ethical responsibility is a cornerstone of medical translation. Translators are often the bridge between doctors and patients who speak different languages. A mistranslation can lead to misdiagnosis, incorrect dosage, or loss of trust. For example, in 1980s Florida, a hospital misinterpreted the Spanish word "intoxicado" as "intoxicated," which caused doctors to treat a patient for drug overdose instead of a brain hemorrhage — a mistake that led to permanent disability (Flores, 2006). Such cases underline that medical translation is a life-critical profession, where accuracy and ethics must go hand in hand. Medical translation is a



multidisciplinary practice that combines linguistic skill, scientific accuracy, and ethical awareness. The increasing globalization of healthcare, recent global health crises, and rapid technological development have made the translator's role even more vital. To minimize problems and shortcomings, translators must adhere to international quality standards, continuously update their medical and linguistic knowledge, and collaborate closely with healthcare professionals. Technology can assist, but human expertise, critical thinking, and ethical responsibility remain irreplaceable in ensuring that medical translations truly serve their life-saving purpose.

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GOALS AND OBJECTIVES OF TEACHING ENGLISH IN PRESCHOOL EDUCATIONAL INSTITUTIONS

Shaxzoda Jumaqulova

Student of Termiz state Pedagogical Institute Faculty of Languages
Department of foreign languages for Preschool and Primary education

Abstract. This article highlights the importance of language skills, especially English, today, the benefits and effectiveness of teaching languages from kindergarten age, as well as the current need for teaching foreign languages in preschool educational organizations.

Key words: kindergarten, preschool, language, expert, children, memory, grammar, communicate, vocabulary.

Today, we all know the benefits of knowing a language and the opportunities it offers. That is, knowing 2-3 languages, regardless of your profession, is a requirement of the times and is now commonplace. In our country, the educational and upbringing processes begin with preschool institutions. At the same time, kindergartens are not just preparatory organizations for school, and they are not only attended by children approaching school age. It should also be noted that in addition to state kindergartens, there are also many private preschool educational organizations. This means that almost every child now attends kindergarten.

Another thing that should be noted is that teaching foreign languages, especially Russian and English, which are currently the most needed, from kindergarten age is a very effective method. Although this procedure is now common in almost all public and private kindergartens, there are still different views on this matter. Some people argue that teaching foreign languages to kindergarten-age children is more effective and beneficial, and that they learn much more easily than older students, while others argue that teaching another language to a child who does not yet understand their native language well is difficult and can be distressing for the child, and that foreign languages should be taught later, starting at school age.

The main goal of teaching English in kindergarten is to teach children quickly, easily and effectively. Children are naturally very curious and ambitious. Experts also note that young children learn languages quickly. Because their brains are still developing, they learn new words easily and quickly, and words that are memorized are not easily forgotten. Teaching children language in interesting ways, such as games, songs, and pictures, without boring them, is an effective way to teach them. The reason is that it is known that it is very difficult for children to focus their attention on something constantly, and teaching with simple methods can be boring for them, which creates various difficulties. The use of various games and methods to make the lesson interesting is used not only with children of

kindergarten age, but also in elementary school and even older classes. In language classes, for example. When a child learns a new language, they not only learn to speak it, but also learn about the culture, customs, clothes, people, and other small aspects of that country. And starting this process right from kindergarten makes it much easier for them. For example, let's take two children of the same age as an example. Both go to kindergarten, but one of the parents wants the child to learn English and the child starts learning English at a young age. The second is when parents believe that their child is still too young to understand only their native language, and that kindergarten is sufficient only to teach them reading and writing for upbringing and preparation for school, and the child does not learn another language. But both parents want their child to study, learn more languages, and get a good job in the future. Both children grow up and go to school, and the child, who has been learning the language since kindergarten, now learns it much more easily and without difficulty than other children of his age. A child who is just starting to learn a language will have a little more difficulty and will need to spend more time learning the language. It can be said that the fact that English is currently being lost in kindergartens is a great convenience and opportunity for these children. The child does not suffer because in kindergartens, foreign languages are taught not for a long time, but for at least 1-2 hours a day, and in order to keep children interested, they are taught starting from simple things through various games. For example, it can be numbers, colors, professions or names of fruits and vegetables. That is, they are not simply taught various spelling or grammar rules. Gradually, their listening and speaking skills are formed, and their vocabulary increases. The brain of children over 3 years old remembers very quickly and well. Also, because they have a strong figurative memory, they learn more quickly what they see or hear. That's why game methods are important for them. I think it's useful for children to use the time they spend in kindergarten simply through games to learn a language. This does not cause any difficulties for children, because first of all, the child learns the language in a natural environment in interesting ways (watching cartoons, listening to songs, playing games, or through pictures). It is also of great importance in shaping the child's worldview and developing his thinking. The child develops logical thinking when distinguishing between two languages. It also further develops their memory, attention, and thinking. Another advantage is that the child's brain quickly adapts to the pronunciation of the language. In English, the spelling and reading of words are not the same. For example, the child quickly gets used to this and later can speak without difficulty in pronunciation and without an accent.

In conclusion, it can be said that having children learn English in kindergartens after the age of 3 provides them with a lot of convenience and opportunities. This process does not tire children or prevent them from



developing their own native language, even if they are just starting to speak. This is because they are not learning English in a completely English environment. He constantly communicates in his native language in his family and in kindergarten. The fact that he spends 1-2 hours in kindergarten learning English is very useful for him. This does not bother the child at all. As mentioned above, a child at this age learns simple things, not difficult grammar topics, and most importantly, these are taught in ways that are fun for the child. Children's memory is much faster and easier than that of adults, and this is a scientifically proven fact. The main goal of kindergarten language teaching is that children can easily master it later without difficulty. In short, this is a foundation for children. In the current developing era, the number of parents who want their children to learn languages from an early age is increasing. That is, people's thinking and worldview are changing and growing. Currently, several languages are being taught in kindergartens, especially in private preschool educational organizations.

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Sinfdagi mashg'ulotlar va o'qitish usullari

Hotamova Nigora To'raboy qizi

Termiz davlat pedagogika instituti Maktabgacha va boshlang'ich

Ta'limda xorijiy til (ingliz tili) yo'nalishi 4-bosqich talabasi

hotamovanigora09@gmail.com

Annotatsiya: Maqolada sinfdagi mashg'ulotlar va o'qitish usullarining o'quv jarayonidagi ahamiyati yoritiladi. Unda o'quvchilarni dars jarayoniga faol jalb etuvchi metodlar haqida so'z yuritiladi. Interaktiv yondashuv va o'yinli faoliyatlar samaradorlikni oshiradi. Natijada ta'lim jarayoni yanada qiziqarli va samarali bo'ladi.

Kalit so'zlar: sinf mashg'ulotlari, o'qitish usullari, interaktiv metodlar, samaradorlik.

Аннотация: В статье рассматривается значение классных занятий и методик преподавания. Описаны методы, активизирующие участие учащихся на уроках. Интерактивный подход и игровые формы делают обучение более эффективным. В результате учебный процесс становится интересным и продуктивным.

Ключевые слова: классные занятия, методы обучения, интерактивные методы, эффективность.

Annotation: The article discusses the importance of classroom activities and teaching techniques. It describes methods that encourage students to participate actively in lessons. Interactive and game-based approaches increase learning effectiveness. As a result, the educational process becomes more engaging and productive.

Keywords: classroom activities, teaching techniques, interactive methods, effectiveness.

Bugungi kunda ta'lim jarayonida samaradorlikka erishish uchun o'qitish usullari va sinfdagi mashg'ulotlarni to'g'ri tashkil etish muhim ahamiyat kasb etadi. Zamonaviy ta'lim tizimi o'quvchini faol ishtirokchi sifatida shakllantirishni talab qiladi, shu bois interaktiv yondashuvlar keng qo'llanilmoqda. Sinfdagi mashg'ulotlar o'quvchilarning bilim, ko'nikma va malakalarini rivojlantirishda, shuningdek, ularning muloqot madaniyatini shakllantirishda asosiy omil bo'lib xizmat qiladi. Shu sababli o'qituvchi tomonidan qo'llaniladigan metod va texnikalarni to'g'ri tanlash dars samaradorligini oshirishning eng muhim shartlaridan biridir.

Chet tillarini o'qitishning ba'zi usullari mavjud hisoblanadi.

To'g'ridan-to'g'ri usul (The Direct Method)

Ushbu usulda o'qitish butunlay maqsadli til (o'rganilayotgan til) orqali amalga oshiriladi. O'quvchiga ona tili ishlatishga ruxsat berilmaydi. Grammatika qoidalariga emas, balki to'g'ri talaffuzga urg'u beriladi.

Grammatika-tarjima usuli (Grammar-Translation)

O'rganish asosan maqsadli tilga va undan tarjima qilish orqali amalga oshiriladi. Grammatika qoidalari yodlab olinadi va uzun so'zlar ro'yxati yoddan o'rganiladi. Og'zaki nutqni rivojlantirishga esa deyarli e'tibor berilmaydi.

Kommunikativ yondashuv (Communicative Approach)

Ushbu usulning asosiy maqsadi o'quvchilarda chet tilida erkin muloqot qilish ko'nikmasini shakllantirishdir. Dars jarayonida o'quvchilar faol ishtirok etadi, real hayotdagi vaziyatlarni modellashtirish, rolli o'yinlar, muhokamalar orqali fikr almashadi. Bu usul o'quvchilarning so'z boyligini kengaytirish, mustaqil fikrlash va muloqot madaniyatini rivojlantirishda juda samarali hisoblanadi. O'qituvchi bu jarayonda rahbar emas, balki yo'l ko'rsatuvchi, motivatsiya beruvchi sifatida ishtirok etadi.

Jismoniy javobga asoslangan usul (Total Physical Response – TPR)

Bu metodda o'qituvchi so'z va iboralarni aytadi, o'quvchilar esa ularni jismoniy harakat orqali bajaradilar. Masalan, "Stand up", "Sit down" yoki "Open the book" kabi buyruqlar amalda bajariladi. Bu usul o'quvchilarning diqqatini jalb etadi, ularni darsda faol ishtirok etishga undaydi va yangi so'zlarni tabiiy yo'l bilan eslab qolishga yordam beradi. Ayniqsa, boshlang'ich bosqichda o'quvchilarga qulaylik yaratadi.

Vazifaga asoslangan o'qitish (Task-Based Learning)

Bu usulda o'quvchilar tilni o'rganish jarayonida ma'lum topshiriqlarni bajarish orqali bilim oladilar. Masalan, savol-javob o'tkazish, intervyu tuzish yoki kichik loyiha tayyorlash orqali til ko'nikmalarini mustahkamlaydilar. Bu usulda grammatika emas, balki muloqot va mazmun yetkazish asosiy maqsad bo'ladi. O'quvchilar o'zaro hamkorlikda ishlaganlari sababli ularning ijtimoiy faolligi va nutqiy qobiliyati rivojlanadi.

CLIL (Content and Language Integrated Learning) yondashuvi esa o'quvchilarning tilni o'rganish jarayonida boshqa fanlardan ham bilim olishiga imkon beradi. Masalan, biologiya, tarix yoki geografiya darslari ingliz tilida o'tiladi. Bu o'quvchilarning nafaqat til bilimini, balki dunyoqarashini ham kengaytiradi. CLIL usuli o'quvchilarni xalqaro darajadagi muloqotga tayyorlaydi va global fikrlashni shakllantiradi.

Bugungi kunda texnologiyalar ham ta'lim jarayonining ajralmas qismiga aylangan. Multimedia vositalari, onlayn dars platformalari va interaktiv o'yinlar o'quvchilarning qiziqishini oshiradi, darsni yanada samarali qiladi. O'qituvchi zamonaviy vositalardan oqilona foydalansa, o'quvchilarning mustaqil o'rganish qobiliyati yanada rivojlanadi.

Xulosa qilib aytganda, samarali dars tashkil etish uchun o'qituvchi turli metodlarni birlashtirgan holda, ularni o'quvchilarning yosh xususiyatlari va darajasiga mos qo'llashi zarur. Har bir metodning o'z afzalliklari mavjud bo'lib, ularni to'g'ri tanlash darsning sifatini belgilaydi. Interaktiv va kommunikativ yondashuvlar o'quvchilarning tildan faol foydalanish



ko'nikmasini shakllantiradi, ularni mustaqil va ijodkor shaxslar sifatida rivojlantiradi.

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Operatsion sistemalar va Windowsdan foydalanishni o'rgatish metodikasi

Mamatova Zilolaxon Xabibulloxonovna

Farg'ona davlat universiteti dotsenti, pedagogika fanlari bo'yicha falsafa doktori (PhD)

Orcid: 0009-0009-9247-3510

E-mail: mamatova.zilolakhon@gmail.com

Qutbiddinova Shahloxon Saydolimjon qizi

Farg'ona davlat universiteti Amaliy matematika yo'nalishi 3-bosqich 23.07-guruh talabasi

E-mail: qutbiddinovashahloxon@gmail.com

Anontatsiya: Mazkur ilmiy maqolada informatika ta'limida operatsion tizimlarni, xususan, Microsoft Windows muhitini o'qitish metodikasini takomillashtirish masalasi tahlil qilingan. Tadqiqotning maqsadi — o'quvchilarda axborot texnologiyalaridan samarali foydalanish kompetensiyasini rivojlantirishda interfaol, muammoli va "learning-by-doing" metodlarining ilmiy asoslarini aniqlashdan iborat.

Maqolada operatsion tizimlar ta'limining didaktik modeli ishlab chiqilib, u AKTni o'quv jarayoniga kompleks integratsiyalash, amaliy mashg'ulotlarni takomillashtirish hamda o'quvchilarning faol ishtirokini rag'batlantirishga yo'naltirilgan. Windows interfeysini o'qitishda multimedia, virtual simulyator va interaktiv testlardan foydalanish samaradorligi asoslab berilgan.

Natijalar shuni ko'rsatadiki, interfaol va amaliy metodlarga asoslangan yondashuv an'anaviy o'qitishga nisbatan 25–30% yuqori natija beradi. Taklif etilgan metodika o'quvchilarning mustaqil fikrlashini rivojlantirib, raqamli ta'lim muhitida informatika fanini samarali o'qitish imkonini yaratadi.

Kalit so'zlar: operatsion tizimlar, Windows muhitini o'qitish, interfaol metodlar, amaliy yondashuv, raqamli pedagogika, muammoli o'qitish, multimedia texnologiyalari, AKT integratsiyasi, learning-by-doing, kompetensiyaviy yondashuv.

Annotation: This scientific article analyzes the improvement of teaching methodologies for operating systems, particularly the Microsoft Windows environment, within informatics education. The main objective of the research is to identify the scientific foundations of interactive, problem-based, and "learning-by-doing" methods in developing students' competencies for effective use of information technologies.

The article presents a didactic model for teaching operating systems that focuses on the comprehensive integration of ICT into the educational process, the enhancement of practical sessions, and the stimulation of students' active participation. The effectiveness of using multimedia, virtual

simulators, and interactive testing in teaching the Windows interface has been scientifically justified.

The results show that an approach based on interactive and practical methods provides 25–30% higher outcomes compared to traditional teaching. The proposed methodology fosters students' independent thinking and contributes to the effective teaching of informatics in a digital learning environment.

Keywords: operating systems, teaching Windows environment, interactive methods, practical approach, digital pedagogy, problem-based learning, multimedia technologies, ICT integration, learning-by-doing, competency-based approach.

Аннотация: В данной научной статье проанализированы вопросы совершенствования методики преподавания операционных систем, в частности, среды Microsoft Windows, в процессе обучения информатике. Основная цель исследования заключается в определении научных основ интерактивных, проблемных и практико-ориентированных ("learning-by-doing") методов в формировании компетенций учащихся по эффективному использованию информационных технологий.

В статье разработана дидактическая модель преподавания операционных систем, направленная на комплексную интеграцию ИКТ в образовательный процесс, совершенствование системы практических занятий и стимулирование активного участия учащихся. Научно обоснована эффективность применения мультимедийных средств, виртуальных симуляторов и интерактивных тестов при обучении интерфейсу Windows.

Результаты исследования показывают, что подход, основанный на интерактивных и практических методах, обеспечивает на 25–30% более высокие результаты по сравнению с традиционным обучением. Предложенная методика способствует развитию самостоятельного мышления учащихся и повышает эффективность преподавания информатики в цифровой образовательной среде.

Ключевые слова: операционные системы, обучение среде Windows, интерактивные методы, практический подход, цифровая педагогика, проблемное обучение, мультимедийные технологии, интеграция ИКТ, learning-by-doing, компетентностный подход.

Kirish

Raqamli transformatsiya jarayoni ta'lim tizimining barcha bo'g'inlariga chuqur kirib borayotgan hozirgi davrda, axborot texnologiyalarini samarali boshqaruvchi va ulardan ijodiy foydalana oladigan mutaxassislarni tayyorlash ta'lim siyosatining strategik yo'nalishlaridan biriga aylandi. Zamonaviy raqamli iqtisodiyotda inson faoliyatining deyarli barcha tarmoqlari kompyuter tizimlariga tayanadi, shu bois operatsion tizimlar haqidagi



fundamental va amaliy bilimlar o'quvchilarning axborot madaniyatini shakllantirishda markaziy o'rin tutadi.

Operatsion tizim (OT) - bu kompyuterning barcha resurslarini boshqaruvchi, foydalanuvchi bilan apparat o'rtasida samarali muloqotni ta'minlovchi dasturiy boshqaruv majmuasidir. U foydalanuvchining amaliy faoliyatini soddalashtiradi, hisoblash jarayonlarini muvofiqlashtiradi va ma'lumotlar bilan ishlashni avtomatlashtiradi. Shuning uchun operatsion tizimni o'rgatish nafaqat texnik tushunchalarni o'zlashtirish, balki o'quvchilarda tizimli fikrlash, algoritmik yondashuv va texnologik tafakkurni shakllantirish vositasi sifatida ham muhim ahamiyat kasb etadi.

Windows operatsion tizimi hozirgi kunda butun dunyoda eng keng tarqalgan foydalanuvchi platformasi bo'lib, u ta'lim jarayonida ham asosiy o'quv muhiti sifatida qo'llaniladi. Windows tizimi foydalanuvchi interfeysi, fayl tizimi, tizim sozlamalari, xavfsizlik siyosati va tarmoq imkoniyatlari bilan ajralib turadi. Shu sababli uni o'rgatish jarayonida o'qituvchi faqatgina dasturiy vositalarni tushuntirish bilangina cheklanib qolmay, balki didaktik tamoyillar, metodik yondashuvlar va o'quv faoliyatini boshqarish strategiyalarini to'g'ri qo'llay bilishi zarur.

Hozirgi pedagogik tadqiqotlar shuni ko'rsatadiki, operatsion tizimlarni o'qitishda interfaol, muammoli, loyihaviy va amaliy faoliyatga asoslangan metodlar o'quvchilarning mustaqil ishlash, tahlil qilish va qaror qabul qilish qobiliyatlarini sezilarli darajada rivojlantiradi. Shu nuqtayi nazardan, Windows tizimidan foydalanishni o'rgatish metodikasini takomillashtirish jarayonida "learning-by-doing" (amaliyot orqali o'rganish) konsepsiyasini qo'llash ayniqsa samarali hisoblanadi. Bu yondashuv o'quvchining bilimni passiv qabul qiluvchi emas, balki faol ishtirokchi sifatida ta'lim jarayonida faoliyat yuritishini ta'minlaydi.

Mazkur tadqiqotda Windows muhitini o'rgatishning ilmiy-metodik asoslari, o'quvchilarning kognitiv faolligini oshirish usullari hamda AKT vositalari yordamida dars jarayonini raqamlashtirish imkoniyatlari kompleks tahlil qilinadi. Shuningdek, maqolada o'qitish samaradorligini baholash mezonlari, interfaol vositalarni tanlash mezonlari va ta'lim jarayoniga ularni integratsiyalash mexanizmlari yoritiladi.

Shunday qilib, maqolaning dolzarbligi shundaki, u operatsion tizimlarni o'rgatishda zamonaviy metodologik yondashuvlar, innovatsion pedagogik texnologiyalar va raqamli ta'lim muhitini uyg'unlashtirish orqali o'quvchilarning amaliy axborot kompetensiyalarini shakllantirish masalasini ilmiy asosda ochib beradi. Ushbu yondashuv informatika ta'limining sifat ko'rsatkichlarini oshirish, o'quv jarayonini xalqaro standartlarga yaqinlashtirish va o'quvchilarni XXI asr ko'nikmalariga tayyorlashga xizmat qiladi.



Tadqiqot metodologiyasi:

Mazkur tadqiqotning metodologik asosini informatika ta'limi sohasidagi zamonaviy didaktik tamoyillar, pedagogik texnologiyalar nazariyasi hamda raqamli ta'limning amaliy yondashuvlari tashkil etadi. Tadqiqot jarayonida o'quvchilarda operatsion tizimlar, xususan, Windows muhitida ishlash ko'nikmalarini rivojlantirishga qaratilgan samarali o'quv-metodik modelni shakllantirish maqsad qilingan.

Tadqiqot quyidagi ilmiy vazifalarni hal etishga yo'naltirildi:

1. Operatsion tizimlarni o'qitish bo'yicha mavjud nazariy manbalar, ilg'or tajribalar va xalqaro pedagogik yondashuvlarni tahlil qilish;
2. Windows muhitidan foydalanishni o'rgatishda qo'llaniladigan didaktik modellarni ilmiy jihatdan asoslash;
3. Interfaol va amaliy metodlarni uyg'unlashtirgan yangi o'quv-metodik yondashuvni ishlab chiqish;
4. Taklif etilgan metodikaning samaradorligini pedagogik tajriba orqali sinovdan o'tkazish va baholash.

Tadqiqot ob'ekti informatika fanini o'qitish jarayonida operatsion tizimlardan foydalanish faoliyati bo'lib, predmeti esa Windows muhitidan foydalanishni o'rgatish metodikasi, didaktik modellar va o'quv jarayonini tashkil etish shakllarini o'z ichiga oladi.

Metodologik yondashuvda konstruktivistik ta'lim nazariyasi, muammoli o'qitish konsepsiyasi, faoliyatga asoslangan o'rganish tamoyillari hamda axborot-kommunikatsiya texnologiyalarini integratsiyalash nazariyasi asos qilib olindi. Ushbu yondashuvlar o'quvchining bilimni tayyor shaklda emas, balki faol o'quv jarayonida mustaqil kashf etishi, tahlil qilish va amaliy qo'llash ko'nikmalarini shakllantirishga yordam beradi.

Tadqiqot davomida nazariy va amaliy usullar uyg'un holda qo'llanildi. Nazariy tahlil metodi yordamida mavjud ilmiy adabiyotlar, didaktik manbalar va ilg'or xorijiy tajribalar o'rganildi. Empirik bosqichda esa eksperimental usul qo'llanilib, o'quv jarayonida yangi metodikaning samaradorligi sinovdan o'tkazildi. Tajriba jarayonida o'quvchilar Windows tizimida amaliy mashqlarni bajarish orqali bilim, ko'nikma va malakalarini mustahkamlashga yo'naltirilgan topshiriqlarni bajardilar.

Tajriba-sinov ishlari o'quvchilarning amaliy faoliyatini faollashtirishga, ularning tahliliy fikrlashini kuchaytirishga va axborot texnologiyalaridan ongli foydalanish madaniyatini shakllantirishga xizmat qildi. So'rovnomalar va kuzatishlar orqali o'quvchilarning motivatsiyasi, qiziqish darajasi va o'zlashtirish natijalari tahlil qilindi. Olingan ma'lumotlar statistik usullar yordamida qayta ishlanib, metodikaning samaradorligi aniqlashtirildi.

Natijada ishlab chiqilgan yondashuv informatika fanida operatsion tizimlarni o'qitish jarayonini interfaol va amaliy faoliyatga yo'naltirilgan shaklda tashkil etish imkonini berdi. Bu esa o'quvchilarning axborot



savodxonligini oshirish, mustaqil ishlash, muammoni hal etish va real ish muhitiga moslashish ko'nikmalarini shakllantirishda ijobiy natijalar berdi.

Natijalar va muhokama

Tadqiqot natijalari shuni ko'rsatdiki, operatsion tizimlarni o'qitishda interfaol va amaliy faoliyatga asoslangan metodlar o'quvchilarning motivatsiyasi, o'zlashtirish sifati va mustaqil fikrlash qobiliyatini sezilarli darajada oshiradi. An'anaviy izohli-ma'ruza usuli asosan passiv bilim olishga yo'naltirilgan bo'lsa, yangi metodik yondashuv o'quvchini faol subyekt sifatida jarayonga jalb etadi. Bu esa o'quvchilarning axborot muhitida erkin fikrlash, muammoni tahlil qilish va yechimni mustaqil topish kompetensiyalarini shakllantiradi.

Windows tizimini o'qitishda samarali deb topilgan asosiy metodik yondashuvlar quyidagi yo'nalishlarda o'zini oqladi.

Amaliy vaziyatli o'qitish (Problem-based learning) — o'quvchilarga real hayotiy vaziyatlarga asoslangan topshiriqlar berish orqali ularning tahliliy fikrlashini rivojlantiradi. Masalan, fayl tizimida xatolikni bartaraf etish, printer yoki tarmoq muammosini hal etish kabi topshiriqlar o'quvchini mustaqil qaror qabul qilish va mantiqiy izlanishga yo'naltiradi. Ushbu yondashuv o'quvchini faqat nazariy bilim emas, balki amaliy kompetensiyalarni egallashga undaydi.

Laboratoriya va simulyatsiya asosida o'qitish — Windows muhitida virtual amaliyotlarni tashkil etish orqali xavfsiz tajriba o'tkazish imkonini yaratadi. "VirtualBox", "VMware Workstation" yoki "Windows Sandbox" kabi platformalardan foydalanish o'quvchiga operatsion tizimni real muhitda sinab ko'rish, tizim sozlamalarini o'zgartirish, fayl strukturasi boshqarish va nosozliklarni bartaraf etish jarayonlarini amalda o'rganish imkonini beradi. Bu usul orqali o'quvchi xatodan qo'rqqmasdan, faol tajriba orttirish imkoniga ega bo'ladi.

Multimediya va interaktiv vositalardan foydalanish — o'quv jarayonini raqamlashtirish va vizual idrokni kuchaytirishda muhim rol o'ynaydi. Video darsliklar, ekran yozuvlari (screen recording), elektron topshiriqlar va onlayn test platformalari (masalan, Kahoot, Quizizz, Edmodo) yordamida o'qitish o'quvchilarning diqqatini faollashtiradi va materialni eslab qolish samaradorligini oshiradi. Shuningdek, bu yondashuv o'qituvchiga individual yondashuvni ta'minlash, o'quvchi faoliyatini onlayn monitoring qilish imkonini beradi.

Refleksiya va o'zaro baholash tizimi — o'quvchilarga o'z faoliyatini tahlil qilish, o'z kamchiliklarini aniqlash va guruhdagi boshqa ishtirokchilar ishini baholash imkonini yaratadi. Bu jarayon o'quvchilarning o'z-o'zini rivojlantirish, konstruktiv fikr bildirish va tanqidiy tahlil ko'nikmalarini shakllantiradi. Refleksiya o'quvchini o'rganilgan materialni chuqurroq anglashga, o'z o'rganish strategiyasini takomillashtirishga undaydi.



Natijalar tahlilidan ma'lum bo'ldiki, Windows muhitini shu yondashuvlar asosida o'qitish o'quvchilarning amaliy faoliyatdagi ishtirokini faollashtiradi, ularning o'quv jarayoniga bo'lgan munosabatini ijobiy tomonga o'zgartiradi va o'zlashtirish sifatini oshiradi. O'quvchilar o'rganilgan mavzularni amaliyotda qo'llash orqali bilimni chuqurroq o'zlashtirganlari, operatsion tizim bilan ishlashdagi ishonch va mustaqillik darajasi ortgani kuzatildi.

Muhokama natijalariga ko'ra, interfaol va amaliy yondashuvlar o'quvchilarda raqamli kompetensiyalarni shakllantirish, texnik muammolarni tahlil qilish, tizim resurslarini boshqarish hamda foydalanuvchi interfeysi bilan samarali ishlash ko'nikmalarini rivojlantirishda muhim ahamiyat kasb etadi. Shuningdek, bu metodika informatika fanini o'qitishda an'anaviy nazariy yondashuvdan faol, ijodiy va amaliy faoliyatga asoslangan o'qitish modeliga o'tish imkonini beradi.

Umuman olganda, tadqiqot natijalari shuni ko'rsatadiki, operatsion tizimlarni, ayniqsa Windows muhitini o'qitishda interfaol va tajribaviy metodlarning qo'llanilishi o'quvchilarda mustaqil fikrlash, analitik tahlil va amaliy faoliyat orqali o'rganish madaniyatini shakllantiradi. Bu yondashuv nafaqat o'quv jarayonining sifatini oshiradi, balki raqamli transformatsiya sharoitida kompetensiyaviy yondashuvni chuqurlashtirishga xizmat qiladi.

Xulosa

Tadqiqot natijalari shuni ko'rsatdiki, operatsion tizimlarni, xususan, Windows muhitidan foydalanishni o'rgatish jarayonida an'anaviy yondashuvlardan voz kechib, interfaol, amaliy va muammoli o'qitish metodlarini qo'llash ta'lim samaradorligini sezilarli darajada oshiradi. Bunday yondashuv o'quvchilarning axborot-kommunikatsiya kompetensiyalarini shakllantiradi, ularning texnik tafakkurini rivojlantiradi hamda amaliy faoliyatda mustaqil qaror qabul qilish ko'nikmalarini mustahkamlaydi.

Windows operatsion tizimi o'zining qulay interfeysi, ko'p funktsionalligi va keng imkoniyatlari bilan o'quvchilarda tizimli fikrlash, tahlil qilish va muammoni hal etish qobiliyatini rivojlantirish uchun samarali o'quv muhiti hisoblanadi. Ushbu tizimni o'qitishda **amaliy vaziyatli yondashuv, simulyatsiya asosidagi o'qitish, multimediya vositalaridan foydalanish va reflektiv baholash tizimining** uyg'unligi o'quv jarayonini faol, interaktiv va natijaga yo'naltirilgan holatga keltiradi.

Tadqiqot davomida ishlab chiqilgan metodik model o'quv jarayonida o'quvchi faoliyatini markazga qo'ygan holda, o'qituvchini yo'naltiruvchi va maslahat beruvchi rolga o'tkazadi. Bu esa ta'lim jarayonida **hamkorlik, mustaqillik va ijodkorlik** tamoyillarining kuchayishiga olib keladi. Natijada o'quvchilar nafaqat Windows tizimining amaliy imkoniyatlarini o'zlashtiradilar, balki ularni turli sohalardagi real vaziyatlarda tatbiq etish malakasiga ega bo'ladilar.



Shuningdek, tadqiqot natijalari shuni ko'rsatadiki, Windows operatsion tizimini o'qitishda raqamli texnologiyalarni integratsiyalash o'quvchilarning motivatsiyasini kuchaytiradi, ularni faol o'quv muhitiga jalb etadi va o'z-o'zini rivojlantirishga undaydi. Mazkur metodika informatika ta'limida kompetensiyaviy yondashuvni mustahkamlaydi, o'quvchilarning amaliy bilimlarini real hayotiy kontekstda qo'llash imkoniyatini kengaytiradi.

Umuman olganda, ushbu tadqiqot natijalari operatsion tizimlarni o'qitish metodikasini takomillashtirish, Windows muhitida o'quv jarayonini raqamlashtirish hamda zamonaviy pedagogik texnologiyalarni tatbiq etish bo'yicha ilmiy asoslangan yondashuvni taqdim etadi. Taklif etilgan metodika nafaqat informatika fanini o'qitishda, balki umuman raqamli savodxonlikni rivojlantirishda, o'quvchilarda mustaqil o'rganish va ijodiy faoliyat madaniyatini shakllantirishda ham dolzarb ahamiyat kasb etadi.

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СОВЕСТЬ И ПУТЬ ДУХОВНОГО ОЧИЩЕНИЯ ЧЕЛОВЕКА В ВЗГЛЯД ДОСТОЕВСКОГО

Зойирова Дилфуза Хайриддиновна учительница, СамГИИЯ Нарпайского факультета иностранных языков, кафедра общих дисциплин

Камолова Мохинисо Лазиз Кизи СамГИИЯ Нарпайского факультета иностранных языков студентка 2-курса направления русской филологии

Аннотаци. В статье рассматривается философско-нравственная проблема совести в произведениях Ф. М. Достоевского. Особое внимание уделяется роли внутреннего раскаяния, духовного очищения и поиску истины в душе человека. Анализируются ключевые образы из романов «Преступление и наказание» и «Братья Карамазовы», в которых писатель раскрывает идею нравственного возрождения через страдание.

Ключевые слова: совесть, раскаяние, духовность, грех, искупление, нравственные ценности.

Abstract. The article examines the philosophical and moral problem of conscience in the works of Fyodor Dostoevsky. Special attention is paid to the role of inner repentance, spiritual purification, and the search for truth in the human soul. The article analyzes key images from the novels Crime and Punishment and The Brothers Karamazov, in which the writer reveals the idea of moral rebirth through suffering.

Keywords: conscience, repentance, spirituality, sin, redemption, moral values.

Фёдор Михайлович Достоевский — один из самых глубоких мыслителей мировой литературы, для которого человеческая душа была главным предметом исследования. В его произведениях совесть выступает не просто моральным принципом, а живой внутренней силой, определяющей судьбу человека.

Писатель не раз подчёркивал, что путь человека к счастью лежит через страдание и раскаяние. Его герои совершают преступления не ради зла, а из духовной слабости, гордости или неверия, и только через боль и покаяние они находят истинную свободу. Поэтому счастье невозможно понять без страданий.

Эта мысль проходит через все его произведения, от «Записок из подполья» до «Братьев Карамазовых». Достоевский считал, что совесть как внутреннее измерение человека является голосом Бога в его сердце

Совесть в понимании Достоевского — это голос Бога в душе человека. Она не зависит от законов или общественного мнения, а исходит из глубины сердца.

В романе «Преступление и наказание» Родион Раскольников совершает убийство, руководствуясь идеей «сильной личности», имеющей право переступить закон. Однако после преступления он осознаёт, что никакая теория не может заглушить голос совести.

"Он хотел сказать, что не убил старуху, а убил самого себя

Эти слова отражают главный конфликт героя — между разумом и совестью, между гордостью и духовным падением.

Совесть у Достоевского — это не просто чувство вины, а духовный суд, через который человек очищается. Писатель показывает, что нравственная истина всегда сильнее человеческих рассуждений.

1. Раскаяние и путь духовного очищения

Путь Достоевского к пониманию человека тесно связан с идеей искупления через страдание. В страдании человек избавляется от гордыни, приближается к Богу и обретает духовную гармонию.

В «Преступлении и наказании» Соня Мармеладова становится символом христианского смирения и веры. Она убеждает Раскольникова признать свою вину и начать путь покаяния:

Тогда он говорит, что : "Иди на перекрёсток, поклонись людям и скажи всем :я убил! "

Эти слова становятся началом его духовного возрождения. Раскольников проходит через страдание, но именно оно пробуждает в нём совесть и человечность.

Достоевский утверждает: "В страдании и только в страдании рождается сознание."

Так формируется одна из главных идей Достоевского — очищение души возможно лишь через признание своей вины и искреннее покаяние.

2. Совесть и вера в "Братьях Карамазовых"

В позднем творчестве Достоевского, особенно в романе «Братья Карамазовы», тема совести достигает философской глубины. Алёша Карамазов символизирует чистую веру и духовную любовь, тогда как Иван — разум, сомнение и бунт против Бога.

Иван говорит, что: "Если Бога нет, то всё позволено."

Эта фраза стала выражением нравственной дилеммы века. Но Достоевский доказывает обратное: без веры и совести человек теряет себя. Алёша, напротив, показывает путь христианского милосердия и смирения — путь духовного очищения через любовь к ближнему.

Таким образом, совесть у Достоевского — не просто чувство вины, а мост между человеком и Богом, который ведёт к внутренней гармонии и истине.

Проблема совести в творчестве Ф. М. Достоевского имеет вечное значение. Писатель показал, что истинное возрождение человека невозможно без страдания, веры и покаяния.

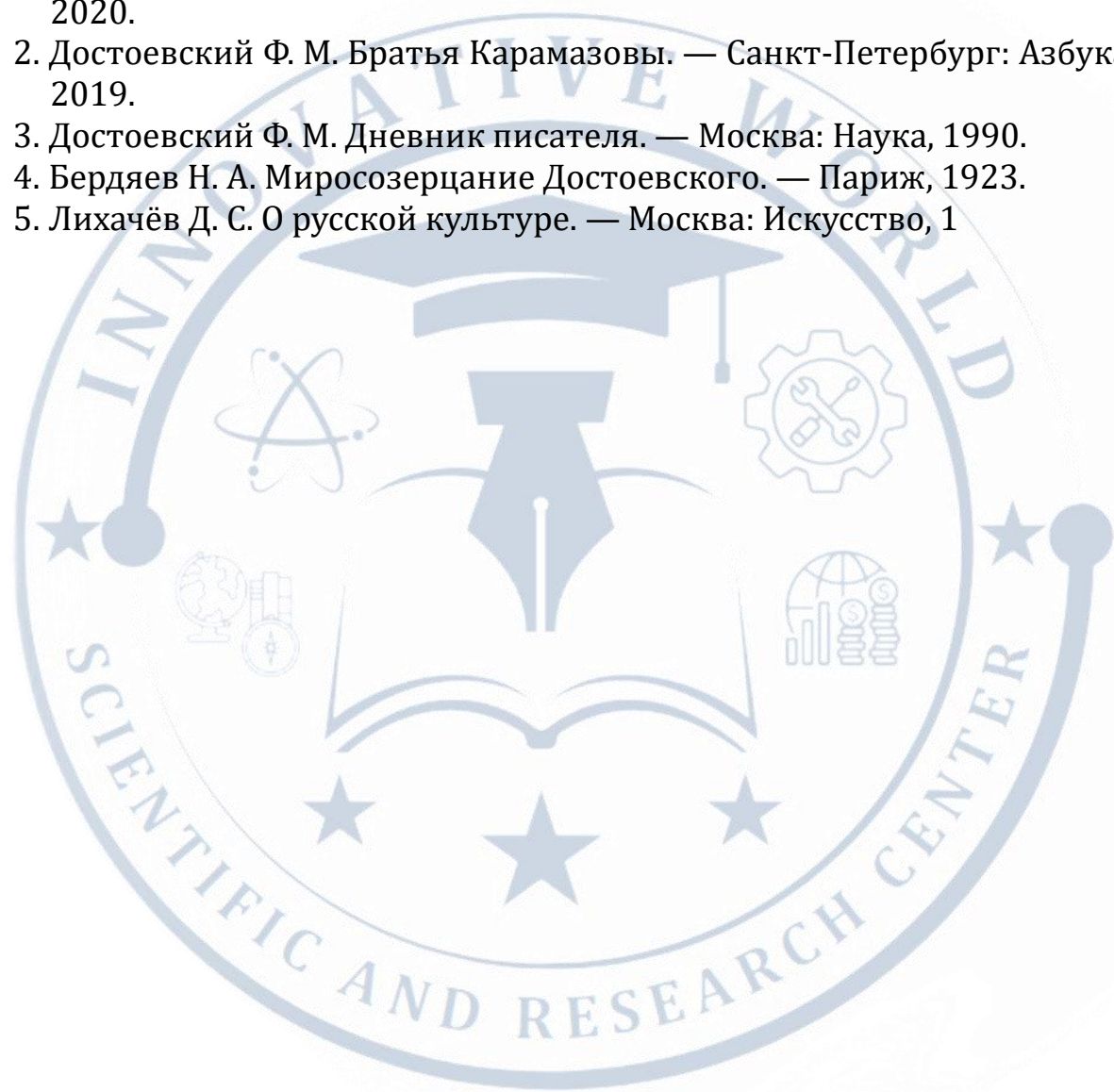


Совесьть — это не наказание, а путь к свободе. Через боль, ошибки и покаяние человек очищает душу и возвращается к духовным истокам.

Как писал Достоевский: "Человек — тайна. Её надо разгадать, и если будешь разгадывать всю жизнь — не говори, что потерял время. Я занимаюсь этой тайной, ибо хочу быть человеком."

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KOGNITIV TEXNOLOGIYALARNI TIBBIYOTGA TATBIQ ETISH MODELLARI

Ganixodjayeva Dilfuza Ziyavutdinovna

Alfraganus university Raqamli texnologiyalar kafedrası katta o'qituvchisi

E-mail: dganixodjayeva@afu.uz

Annotatsiya: Bugungi kunda kognitiv texnologiyalar, jumladan, mashinani o'rganish, tabiiy tilni tushunish va katta ma'lumotlarni tahlil qilish kabi sohalar, tibbiyotda katta o'zgarishlar kiritmoqda. Ushbu texnologiyalar tibbiy diagnostika, davolash rejalashtirish, kasalliklarni prognozlash va salomatlikni qo'llab-quvvatlashda yangi imkoniyatlarni taqdim etmoqda. Maqolada kognitiv texnologiyalarni tibbiyotga tatbiq etishning asosiy modellari va yondashuvlari ko'rib chiqiladi, jumladan qaror qo'llab-quvvatlash, prognozlash, individualizatsiyalashgan tibbiyot va ma'lumotlarni uzatish tizimlarini optimallashtirish. Shuningdek, ushbu texnologiyalarni amaliyotga kiritishda yuzaga keladigan tamoyillar, cheklovlar va muammolar, masalan, ma'lumot sifati, algoritmlarning shaffofligi, etik va huquqiy masalalar muhokama qilinadi. Xulosa qilib aytganda, kognitiv texnologiyalar tibbiyotda salomatlikni yaxshilash va bemorlar uchun shaxsiylashtirilgan xizmatlar yaratish uchun katta salohiyatga ega, ammo ularni muvaffaqiyatli tatbiq etish uchun bir qator muammolarni hal qilish zarur.

Kalit so'zlar: kognitiv texnologiyalar, mashinani o'rganish, tibbiy diagnostika, qaror qo'llab-quvvatlash tizimlari, prognozlash modellari, individualizatsiyalashgan tibbiyot, ma'lumotlarni tahlil qilish, salomatlikni qo'llab-quvvatlash, tibbiy ma'lumotlar, etik va huquqiy tamoyillar, tibbiyotdagi raqamli transformatsiya, shaxsiylashtirilgan tibbiy xizmat, algoritmlarning shaffofligi, tibbiy ekspertiza.

Bugungi kunda tibbiyot sohasi tezkor raqamli transformatsiyaga duch kelmoqda. Xususan, kognitiv texnologiyalar — mashinani o'rganish, tabiiy tilni tushunish, katta ma'lumotlarni tahlil qilish va boshqalar — kasalliklarni tashxis qilish, davolashni rejalashtirish, nazorat qilish va salomatlikni qo'llab-quvvatlash jarayonlarida katta imkoniyatlarni ochmoqda. Masalan, kognitiv hisoblash (cognitive computing) tizimlari shifokor qarorlarini qo'llab-quvvatlashda, surunkali kasalliklar bilan kurashda, bemor monitoringida keng qo'llanilmoqda. Shu sababli, kognitiv texnologiyalarni tibbiyotga tatbiq etish jarayonida ularning ishlash modelini tushunish, qo'llash mexanizmlarini aniqlash va tartibga soluvchi tamoyillarni belgilash muhim bo'lmoqda.

Quyida ushbu modellar — ya'ni kognitiv texnologiyalarni tibbiyotga tatbiq etishda qo'llanilayotgan asosiy yondashuvlar — ko'rib chiqiladi:

1.Qaror qabul qilishni qo'llab-quvvatlash modellari. Kognitiv texnologiyalar tibbiyotda eng avvalo qaror qabul qilish jarayonida qo'llaniladi. Masalan, IBM Watson Health tizimi katta hajmdagi klinik ma'lumotlarni, ilmiy tadqiqot natijalarini, bemor profilini tahlil qilib,

shifokorlarga tavsiyalar beradi. Bu rejimda modelar quyidagi bosqichlarni o'z ichiga oladi:

a) Ma'lumot yig'ish - bemorlar, diagnostika natijalari, klinik tadqiqotlar, tasviriy ma'lumotlar va boshqa manbalar.

b) Ma'lumotni oldindan qayta ishlash va xususiyatlar ajratish - misol uchun, bemorning yosh, jins, kasallik tarixi, genetik ma'lumotlar va h.k.

c) Analitik model yaratish - mashinani o'rganish, neyron tarmoqlar yoki boshqa kognitiv algoritmlar yordamida bemorning holatini baholash va prognoz qilish.

d) Qaror tavsiyasi - tizim shifokorga qanday tashxis yoki davolash yo'lini tavsiya qilishi mumkinligini ko'rsatadi — shu bilan birga, shifokor professional tahlili qoladi.

e) Amalga oshirish va nazorat - tavsiya qilingan yo'l natijasini kuzatish, kerak bo'lsa modelni takomillashtirish.

f) Bu modelning afzalliklari - ma'lumotlarni kengroq qamrab olishi, inson xatosini kamaytirishi, tajribasiz shifokorlar uchun qo'llab-quvvatlash bo'lishi. Ammo muammolari ham bor: ma'lumotning sifati va miqdori bilan bog'liq cheklovlar, algoritmlardagi shaffoflik (explainability) muammosi, shifokorlar ishonchi va etik jihatlari.

2. Prognozlash va oldindan ogohlantirish modellari.

Keyingi yondashuv – bu kasallikning rivojlanishi, asoratlarni kelib chiqishi yoki davolashga reaksiya kabi holatlarni oldindan prognozlash. Masalan, ma'lumotlar bazasi yordamida surunkali kasallik bilan og'riqan bemorlar traektoriyasini bashorat qilish mumkin. Modellar vaqt-o'lchovli ma'lumotlarni (masalan, laboratoriya natijalari, vitallar, tasviriy yozuvlar) oladi va bemorning kelgusi salomatlik holatini model qiladi. Masalan, tibbiy yozuvlar bilan ishlaydigan dinamik xotirali neyron tarmoqli model: DeepCare. Bu turdagi modelar quyidagicha ishlaydi - bemorning vaqt bo'yicha bir necha epizoddagi ma'lumotlari (kasallik tarixi, davolash, natijalar) yig'iladi.

Vaqt o'lchovli neyron tarmoqlar (masalan, LSTM) bilan bu epizodlar analiz qilinadi, bemorning sog'liq holati vaqt davomida qanday o'zgarishi mumkinligi baholanadi. Model bemorning asorat xavfi, kasallik tiklanishi yoki yangi muammo paydo bo'lish ehtimolini prognoz qiladi. Shifokorlar va bemorlar uchun ogohlantirishlar yaratiladi, shuningdek, davolash strategiyasini modifikatsiya qilishga yordam beradi. Bu yondashuv sog'liqni asrashni oldindan rejalashtirishni kuchaytiradi va samaradorlikni oshiradi. Ammo modelarning aniqligi, ma'lumotdagi bo'sh joylar va interpretatsiya qiyinchiliklari muammo bo'lishi mumkin.

3. Personalized medicine (individualizatsiyalashgan tibbiyot) modellari.

Kognitiv texnologiyalar individual bemorning xususiyatlari – genetik ma'lumotlari, hayot tarzi, biometrik yozuvlari – asosida davolashni moslashtirishga xizmat qiladi. Bu yerda fokus «bemorga mos davolash»ga



o'tkaziladi. Misol uchun, katta ma'lumotlar (big data), genomika va mashinani o'rganish orqali har bir bemorning eng yaxshi davolash strategiyasini aniqlash mumkin. **Individualizatsiyalashgan tibbiyot** modelar quyidagicha ishlaydi:

a) Bemorning keng ma'lumotlari to'planadi - genetik test natijalari, analizlar, tasviriy tasvirlar, hayot tarziga oid yozuvlar va h.k.

b) Kognitiv algoritmlar orqali bemor klassik guruhlarga emas, balki «o'ziga xos» profilga bo'linadi. Davolash rejasi, dozalash, nazorat va reabilitatsiya individual ehtiyojga mos ravishda belgilanadi. Monitoring davom etadi va zarurat bo'lsa, reja dinamik ravishda yangilanadi.

Bunday yondashuv bemor natijalarini yaxshilashi, salomatlik xarajatlarini kamaytirishi va tibbiy resurslardan samaraliroq foydalanish imkonini beradi. Ammo, genetik ma'lumotlar maxfiyligi, ma'lumotlarning to'liqligi va algoritmlarning adolatlilik (bias) kabi muammolar mavjud.

4. Tibbiy ma'lumotlarni uzatish va operatsion jarayonlarni optimallashtirish.

Kognitiv texnologiyalar ayni paytda tibbiy ma'lumotlarning yig'ilishi, uzatilishi va tahlili jarayonlarini ham transformatsiya qilmoqda. Masalan, bemorning holatini real-vaqt kuzatuvchi sensorlar, bulut infratuzilmasida saqlanadigan yozuvlar, IoT qurilmalari orqali uzatiladigan ma'lumotlar kabi tizimlar. Bu modelarni quyidagicha tavsiflash mumkin:

a) Bemorni masofadan monitoring qilish (masalan, yurak ritmi, qon bosimi, kislorod darajasi) va kognitiv algoritmlar bilan tahlil qilish.

b) Real-vaqt signal-ma'lumotlar asosida ogohlantirishlar yuborish (masalan, shoshilinch holat aniqlansa) — bu orqali tezkor chora ko'riladi.

c) Tibbiyot markazlari va bemor o'rtasida ma'lumot uzatish jarayonining optimallashtirilishi, tibbiy qurilmalar va yozuvlarning avtomatlashtirilishi.

d) Jarayonlar oqimini (workflow) soddalashtirish, ma'lumotlarni to'plash, tahlil qilish va hisobot berish tizimlarini takomillashtirish.

Ushbu modelar tibbiyot xizmatlarining sifatini oshirishi va masofaviy tibbiy xizmatlarni kengaytirishi mumkin. Biroq, ma'lumot xavfsizligi, uzatishdagi kechikishlar, sensor va tarmoqlar ishonchliligi kabi jihatlar diqqatga sazovor.

5. Tatbiq etish tamoyillari va cheklovlar. Kognitiv texnologiyalarni tibbiyotga tatbiq etishda bir qancha tamoyillar va cheklovlar mavjud:

a) Shifokor-inson omili - texnologiya shifokorning o'rnini bosmasligi, balki uni qo'llab-quvvatlashi zarur. Tibbiy ekspertiza va inson qarori har doim muhim bo'ladi.

b) Ma'lumot sifati - katta hajmda va turli formatdagi ma'lumotlar mavjud bo'lsa ham, ularning to'liq, aniq va izchilligi model natijasiga bevosita ta'sir qiladi.



c) Adolat va shaffoflik - algoritmlar "qora quti" bo'lib qolmasligi lozim, shifokor va bemor uchun tavsiyaning qanday kelib chiqqani tushunarli bo'lishi kerak.

d) Maxfiylik va xavfsizlik - bemorning shaxsiy ma'lumotlari himoyalaniishi kerak, tibbiyot tashkilotlari va xizmat ko'rsatuvchi kompaniyalar axborot xavfsizligini ta'minlashi zarur.

e) Regulyatorlik va etika - kognitiv tizimlar tibbiyotga tatbiq etilganda, tibbiy qonunchilik, ma'lumotni himoya qilish qonunlari, bemorning roziligi va ehtiyotkorlik tamoyillari bilan mos bo'lishi lozim.

f) Iqtisodiy jihat - yangi texnologiyalar ko'pincha yuqori xarajat talab qiladi, shuningdek, tibbiyot muassasalari bu texnologiyalarni joriy etish uchun infratuzilma, mutaxassis tayyorlash va qo'llab-quvvatlash tizimiga ega bo'lishi kerak.

g) O'rganilgan tajriba va ishonch - kognitiv tizimlarning klinik sharoitda qanday natija berishi, shifokorlar va bemorlar ishonchi — muhim omillar.

Xulosa qilib aytganda, kognitiv texnologiyalarni tibbiyotga tatbiq etish — salomatlikni yaxshilash, diagnostika va davolash jarayonlarini optimallashtirish, bemorlar uchun shaxsiylashtirilgan tibbiy xizmatlarni ta'minlash uchun katta salohiyatga ega. Yuqorida ko'rib chiqilgan modellarga — qaror qo'llab-quvvatlash, prognozlash, individualizatsiyalashgan tibbiyot, ma'lumot uzatish va jarayonlarni optimallashtirish — ga e'tibor berilganda, ularning amaliy tatbiqi ham kengaymoqda.

Biroq, ushbu texnologiyalarni muvaffaqiyatli joriy etish uchun ma'lumot sifati, algoritmlar shaffofligi, etika va huquqiy jihatlar, tibbiy ekspertiza bilan integratsiyalashish kabi masalalar hal etilishi lozim. Kelajakda, kognitiv texnologiyalar hamda tibbiyot mutaxassislari o'rtasida samarali hamkorlik asosida yangi xizmat modellari paydo bo'lishi kutilmoqda.

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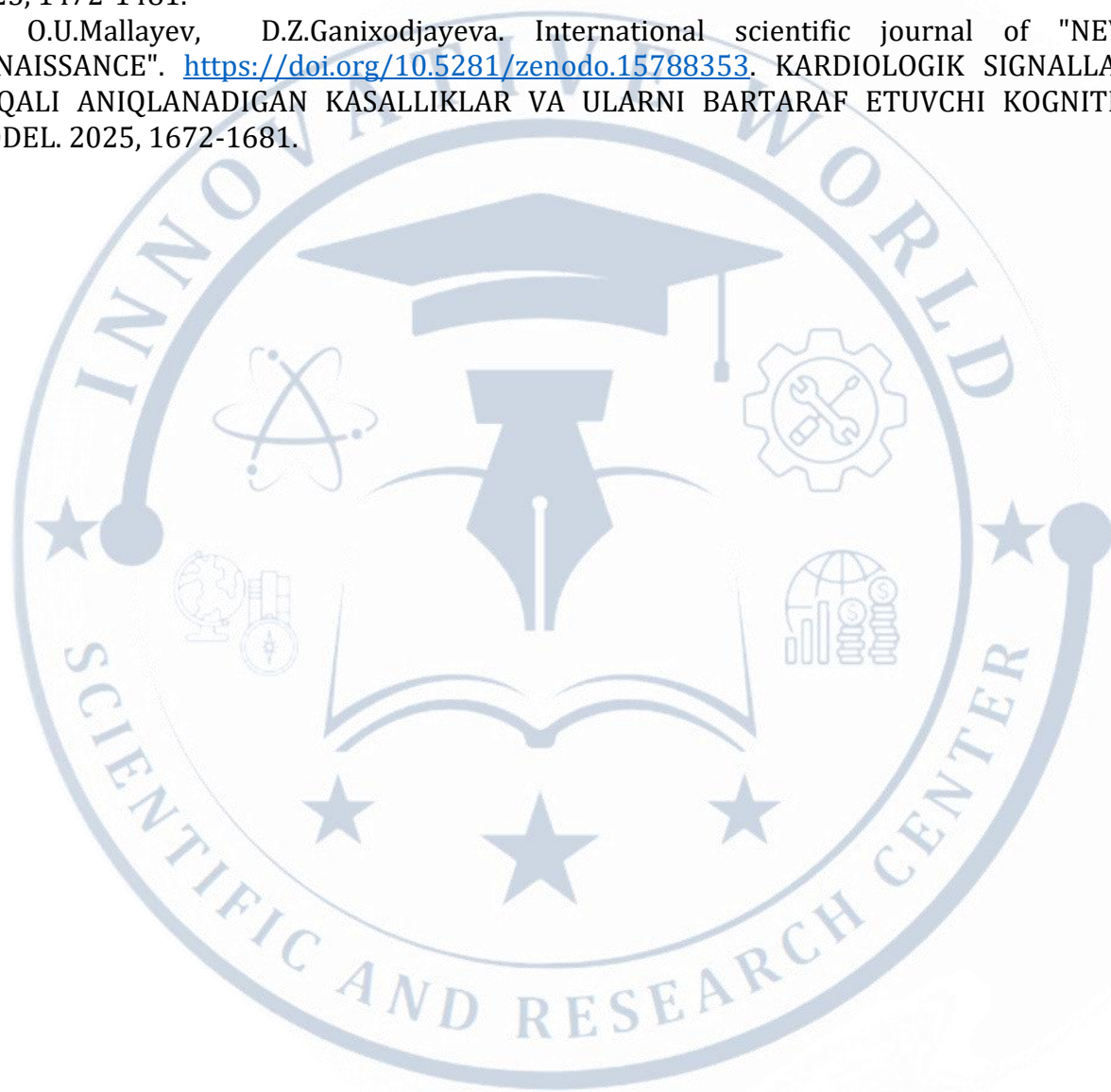
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THE IMPORTANCE OF LANGUAGE GAMES IN TEACHING ENGLISH.

Abduraimova Robbiya Shuhrat qizi

Termiz State Pedagogical Institute

Faculty of Languages

Department of foreign languages for Preschool and Primary education

Annotation. This thesis explores the role of language games in teaching English as a foreign language. It examines how games improve learners' motivation, communication skills, vocabulary retention, and classroom interaction. The study highlights the psychological and pedagogical benefits of using game-based activities, such as reducing anxiety, increasing participation, and creating a supportive learning environment. The thesis also discusses practical types of language games for different language skills and offers recommendations for teachers to integrate them effectively into lesson planning. Overall, the paper emphasizes that language games are not merely entertaining tasks but powerful instructional tools that enhance learners' linguistic competence.

Key words: games, students, emotions, context, mental engagement, new vocabulary, memorable experience, skills, clearer understanding.

Introduction. Why games? Language learning is hard work. One must make an effort to understand, to repeat accurately, to adapt and to use newly understood language in conversation and in written composition. Effort is required at every moment and must be maintained over a long period of time. Games help and encourage many learners to sustain their interest and work. Games also help the teacher to create contexts in which the language is useful and meaningful. The learners want to take part, and in order to do so must understand what others are saying or have written, and they must speak or write in order to express their own point of view or give information. Games provide one way of helping the learners to experience language rather than merely study it.

From this perspective, the use of games in the classroom brings significant advantages to both teachers and learners. Games help break the routine structure of traditional lessons and turn students into active participants in the learning process. As a result, issues such as boredom, fatigue, or a decline in motivation—common in long-term language learning—are greatly reduced.

Moreover, because games create meaningful communicative situations, learners are required to use the language for real purposes. Activities such as

asking for information, expressing opinions, agreeing or disagreeing, or completing a task take place naturally within the game. This makes the learning experience more authentic and enhances students' communicative competence. In addition, games help students acquire new vocabulary and reinforce grammar structures without feeling overwhelmed by theory. Through repeated exposure and meaningful use, learners memorize language more effectively and develop a clearer understanding of how it functions in context. Thus, the lesson becomes not just a theoretical exercise but an engaging and memorable experience.

Most importantly, games contribute to a positive psychological atmosphere in the classroom. Students feel less anxious, make fewer hesitations, and are more willing to express their ideas freely. They also learn to collaborate, interact with their peers, and build confidence in using the language. This reduction in anxiety is crucial, as emotional comfort significantly influences language acquisition.

Repeated use of language items Many games cause as much use of particular language items as more conventional drill exercises; some games do not. What matters, however, is the quality of practice. The contribution of drill exercises lies in the concentration on a language form and its frequent occurrence during a limited period of time. Many games similarly provide repeated occurrence and use of a particular language form. By making language convey information and opinion, games provide the key features of 'drill' with the added opportunity to sense the working of language as living communication. Games involve the emotions, and the meaning of the language is thus more vividly experienced. It is, for this reason, probably better absorbed than learning based on mechanical drills.

Benefits of using games.

So, what are the benefits of this teaching method? The results of the eight researches are relevantly similar although they were conducted differently regarding time, place, learners' level. In his study, Lawrence (2013) selected 250 student teachers who were doing their B. Ed. Degree in the College of Education and he concluded that "the majority of the student teachers have a favorable attitude towards the using grammar games for teaching English at the secondary level". He further investigated and found out that gender also affected the situation of using games in teaching. In particular, he indicated that the female student teachers have more positive attitude than the male student teachers. This is also understandable in Vietnamese context when more female teachers use games to teach than the male ones. Moreover, he pointed out some factors affecting the attitude



towards using games to teach grammar which are educational qualification, optional subjects and types of management. In general, there are differences in each criterion, but they all support the same idea that games brought about positive attitude towards teaching English. learning.

Types of game. Being aware of the essential character of a type of game (see below) and the way in which it engages the learner can be helpful in the adaptation of games or the creation of new games. The games in this edition of the book are grouped according to their family type within each of the eight sections. The family name is always a verb. This verb summarises the most important way in which the learners are engaged in the game, for example, IDENTIFY or CREATE. In every case this verb refers to the mental engagement on the part of the learners. The use of language arises out of the way the learner is engaged.

CARE AND SHARE. 'Caring and sharing' games include all those games in which the learner feels comfortable while sharing personal information with other learners. These games relate more to invitation than to challenge. The striving implied by challenge is incompatible with the notion of 'caring and sharing'. The origin of this established phrase is the title of the classic book written by Gertrude Moskowitz, *Caring and Sharing in the Foreign Language Class* (Newbury House 1978). See games 1.1–1.12. Games for Language Learning 4

DO: MOVE, MIME, DRAW, OBEY The learner is expected to do something non-verbally in response to a read or a heard text. See, for example, games 3.1, 5.1, 7.1.

IDENTIFY: DISCRIMINATE, GUESS, SPECULATE The learner is challenged to identify something which is difficult to identify or to hypothesise about something which is then compared with the facts. See, for example, games 2.1, 5.2, 7.4.

DESCRIBE The learner is challenged to describe something to another learner, by speaking or writing, so well that the other learner can do something, for example, draw a picture. The learner may describe something objectively or subjectively, communicating his or her own feelings and associations. See, for example, games 2.3, 4.2, 7.15.

CONNECT: COMPARE, MATCH, GROUP The learner is challenged to connect, compare, match or group various items of information, perhaps pictures or texts, objectively or subjectively. He or she uses language to describe or comment on the pairs or groups of information. See, for example,



games 3.6, 6.7, 7.16. **ORDER** The learner is challenged to put various bits of information into an order of quality and importance, subjectively or objectively, or to put texts, pictures, objects, into a developmental sequence, also subjectively or objectively. See, for example, games 5.6, 6.10, 7.18.

REMEMBER The learner tries to remember something and then communicate what he or she has remembered. See, for example, games 5.8, 6.11, 7.21.

CREATE .The learner is challenged or invited to make a story, write a poem or produce some other kind of material using their imagination. Here the distinction between 'challenged' and 'invited' is worth making. 'Challenged' might Introduction 5 include those story-making starters in which you stipulate certain features: for example, you stipulate that a certain tense form must occur very often, or that the story must be exactly 50 words long. 'Invited', because sometimes the best way to stir the creative forces is to 'invite', 'encourage', 'show interest', and so on.

Conclusion.

Language games play an essential role in teaching English because they make learning more engaging, meaningful, and effective. Games increase motivation, reduce anxiety, and create real communicative situations where learners can practice new vocabulary and grammar naturally. They also provide repeated exposure to language structures while keeping students emotionally involved. Different types of games—such as identifying, describing, connecting, or creating—help develop various language skills and support active participation. Overall, games transform traditional lessons into dynamic learning experiences and significantly improve students' confidence and competence in English.

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WAYS TO ENCOURAGE MORE USE OF ENGLISH IN THE CLASSROOM

Abduraimova Robiya Shuhrat qizi

Termiz State Pedagogical Institute

Faculty of Languages

Department of foreign languages for Preschool and Primary education

Annotation. This thesis examines practical strategies to encourage increased use of English in classroom settings across different age groups and proficiency levels. The study highlights methods that foster authentic communication, enhance student motivation, and promote active participation. Special attention is given to creating a supportive environment, task-based learning, interactive activities, and integrating technology. It also explores the benefits of incorporating students' personal experiences and creative tasks into lessons to boost language use. The findings demonstrate that deliberate, well-structured strategies can significantly improve learners' fluency, confidence, and communicative competence.

Key words: English use, classroom interaction, motivation, communicative competence, active participation, task-based learning, engagement, creativity, speaking, listening, multimedia.

Introduction. Learning English as a foreign language is often challenging because it requires continuous practice and active engagement. Students may acquire vocabulary and grammar rules through study, yet they often struggle to apply this knowledge in speaking or writing due to fear of errors or limited opportunities. Encouraging students to use English consistently in the classroom is therefore critical for their progress (Ur, 1996; Harmer, 2015).

The responsibility lies with teachers to cultivate learning environments that promote active participation and minimize communication barriers. This involves designing lessons that are not only instructive but also engaging, stimulating students to experiment with language and express ideas freely. This thesis explores methods and strategies that effectively increase English usage in classrooms, drawing on both theoretical foundations and practical applications (Scrivener, 2010; Thornbury, 2005).

Creating a positive classroom atmosphere is one of the most effective ways to promote English use. When students feel supported and safe from criticism, they are more likely to participate actively. Teachers can provide regular, constructive feedback, recognize effort, and encourage peer

collaboration to reduce anxiety and foster confidence (Cameron, 2001; Scrivener, 2010). For instance, group discussions, pair work, or small collaborative projects allow learners to interact in English naturally, while minimizing fear of mistakes. Clear classroom guidelines that prioritize English communication and gently discourage native language use help maintain consistent practice throughout lessons (Thornbury, 2005).

Integrating task-based learning encourages students to use English for real purposes. Activities such as role-plays, problem-solving tasks, debates, or information gap exercises require students to communicate meaningfully. For example, a lesson where students simulate a travel agency scenario demands they ask questions, provide information, and negotiate solutions in English. Interactive games, quizzes, and multimedia tools can further enhance engagement, making lessons enjoyable while reinforcing language skills (Wright, Betteridge & Buckby, 2006). Such approaches transform abstract grammar and vocabulary practice into practical, memorable experiences.

Regular speaking and listening activities remain crucial. Teachers can implement structured exercises like "think-pair-share," storytelling sessions, or group discussions to provide opportunities for verbal interaction (Nation & Newton, 2009; Harmer, 2015). Listening exercises, such as following audio instructions or summarizing recordings, help learners internalize language patterns. Incorporating student presentations or peer interviews further encourages spontaneous English use. These methods not only improve language proficiency but also develop confidence and interpersonal skills.

Encouraging creative expression also strengthens English use. Assignments that allow students to write stories, create dialogues, or perform skits connect language learning to personal experiences, increasing emotional engagement and retention (Rinvoluceri, 1990; Hadfield, 1990). For example, asking students to describe their favorite hobby in English or create a mini-news report stimulates imagination and provides a practical context for applying new vocabulary and structures. Creative tasks also give learners a sense of ownership and pride in their work, motivating further participation.

Finally, technology offers additional avenues to increase English use. Online tools, educational apps, videos, and podcasts provide diverse and authentic input, while encouraging practice outside the classroom (Harmer, 2015; Nunan, 2003). For instance, students can record short presentations, participate in virtual discussions, or complete interactive exercises that simulate real-life communication. The combination of technology and active



classroom participation reinforces learning and maintains high engagement levels.

Conclusion. Encouraging students to use English consistently in the classroom is vital for developing fluency, confidence, and communicative competence. Teachers can achieve this through supportive classroom environments, task-based activities, interactive speaking and listening exercises, creative projects, and the integration of technology. Implementing these strategies ensures that learners engage with English meaningfully and enjoyably, transforming lessons into dynamic learning contexts, educators can significantly enhance both motivation and proficiency, resulting in a long-term impact on language acquisition.

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Mustaqil fikrlovchi shaxsni shakllantirishda oilaning roli

Hamraqulova Xadichabonu Yoqubjon qizi

Jizzax Davlat Pedagogika Universiteti

Ta'lim va tarbiya nazariyasi va metodikasi (boshlang'ich ta'lim) mutaxassisligi
2-bosqich magistranti

Annotatsiya. Ushbu maqolada mustaqil fikrlovchi shaxsni tarbiyalashda oilaning o'rni va ahamiyati yoritilgan. Oilaning tarbiyaviy muhit sifatidagi ta'siri, ota-onaning pedagogik madaniyati, o'zaro munosabatlar va farzandlar bilan muloqot usullari mustaqil fikrlash ko'nikmalarining rivojlanishiga bevosita ta'sir etishi ilmiy-nazariy hamda amaliy jihatdan tahlil qilinadi.

Kalit so'zlar: mustaqil fikrlash, tarbiya, oila, ota-ona, shaxs rivoji, tarbiyaviy jarayon, ijtimoiy faollik, muloqot madaniyati.

Har jihatdan rivojlanayotgan Yangi O'zbekistonimizning har bir a'zosi mustaqil fikrlay oladigan, to'g'ri xulosa chiqaradigan va o'z fikrini erkin ifoda eta oladigan shaxs bo'lishi zarur. Bu kabi fazilatlar avvalo oilada boshlanadi va shakllanadi. Chunki oila insonning ilk tarbiya maktabi hisoblanadi. Bola uch yoshigacha hayoti davomida o'rganishi kerak bo'lgan narsalarning asosiy qismini o'rganadi. Uning dunyoqarashi, axloqiy va ijtimoiy qarashlari, fikrlash uslubi aynan oilaviy muhitda vujudga keladi.

Prezidentimiz Sh.M.Mirziyoyev ta'kidlaganidek: "Yoshlarimizni mustaqil fikrlaydigan, hayotga real qaraydigan, zamonaviy bilim va kasb-hunarlarini egallagan insonlar etib tarbiyalash - bizning eng ustuvor vazifamizdir."

Mustaqil fikrlash bu shaxsning atrof-muhitdagi voqea-hodisalarni o'z tajribasi, bilimlari va tahliliy salohiyati asosida baholay olish, o'z qarorini mustaqil qabul qilish qobiliyatidir. U insonning ongli faoliyati, tanqidiy va ijodiy tafakkuri bilan bevosita bog'liq. Bu qobiliyatni shakllantirishda oila asosiy o'rinni egallaydi.

Oila - shaxs kamolotining birinchi bosqichi bo'lib, bola psixologiyasi, axloqi, xarakteri va dunyoqarashini shakllantiruvchi eng muhim ijtimoiy institutdir. Ota-ona o'z farzandining ilk o'qituvchisi va tarbiyachisi hisoblanadi. Ota-onaning o'zaro hurmat, mehr-muhabbat, e'tibor, g'amxo'rlik va adolatga asoslangan munosabatlari bola tafakkuriga ijobiy ta'sir ko'rsatadi.

Mustaqil fikrlashni shakllantirishda oilaviy omillar

Erkin muloqot muhiti: Bola o'z fikrini erkin ifoda etish imkoniyatiga ega bo'lishi zarur. Ota-onaning "sen xato qilding" degan hukmi emas, aksincha "nima uchun shunday o'ylaysan?" degan savoli fikrlashga undaydi.

Kitobxonlik madaniyati: Oilada kitob o'qishga bo'lgan qiziqishni shakllantirish bolada tafakkur kengligini rivojlantiradi.

Mas'uliyat hissini tarbiyalash: Mustaqil fikrlash mas'uliyat bilan uzviy bog'liq. Ota-onaning ishonchi bolani mustaqil qaror qabul qilishga undovchi eng asosiy kuchdir.

Ijodkorlik muhiti: Farzandning har bir tashabbusini qadrlash, e'tiborga olish va qo'llab-quvvatlash uning yangicha fikrlash salohiyatini o'stiradi.

Ota-onaning pedagogik madaniyati. Ota-onaning pedagogik va psixologik bilimga ega bo'lishi, bolaning yosh xususiyatlarini bilishi va tarbiyaga ongli yondashuvi mustaqil fikrlovchi shaxsni shakllantirishning asosiy omilidir. Ilmiy tadqiqotlar shuni ko'rsatadiki, ota-onasi bolani tinglaydigan, bola bilan ko'proq vaqtini o'tkazadigan, fikrini qadrlaydigan oilalarda farzandlar ijodkor, faolligi yuqori va mustaqil fikrlovchi bo'lib voyaga yetadi.

Maktab va oilaning hamkorligi. Oila bilan maktab o'rtasidagi doimiy hamkorlik mustaqil fikrlashni rivojlantirishda muhim ahamiyat kasb etadi. O'qituvchi va ota-ona bir maqsad sari, ya'ni farzandni erkin fikrlovchi, izlanuvchan, yangilikka intiluvchan inson etib tarbiyalash yo'lida birgalikda harakat qilsa, natija samarali bo'ladi.

Tadqiqotlar asosidagi fikrlarni ko'rib chiqamiz.

1. Ota-onaning tarbiyaviy uslubi farzandning mustaqil fikrlashiga bevosita ta'sir qiladi. Muvozanatli (authoritative) ya'ni mehribon, qat'iy lekin erkinlik beruvchi tarbiya uslubi bolalarda mustaqillik, mas'uliyat va tanqidiy fikrlashni rivojlantiradi.

2. Oilaviy muhitda kitobxonlik tanqidiy va ijodiy fikrlashni oshiradi.

Uyda muntazam oilaviy o'qish, "o'qishga birga vaqt ajratish" va muloqot asosida savol-javob (family literacy activities) bolalarning tahliliy qobiliyatlarini yaxshilaydi. Uyda kitoblar, bilimga kirish (internet, ensiklopediya), mantiqiy o'yinlar va ilmiy suhbatlar bolalarning analitik qobiliyatlari va ijodkorligini oshiradi. Oilaviy o'qish va muloqot orqali bolalar yangi g'oyalarni tekshirish va argumentlarni baholashni o'rganadi.

3. Faol ota-ona ishtiroki (parental involvement) o'quv muvaffaqiyati va fikrlash ko'nikmalarini oshiradi — lekin «qanday» ishtirok etilishi muhim.

Faqat yordam berish emas, balki qo'llab-quvvatlovchi hamkorlik, mas'uliyat topshirish va o'z-o'zini nazoratga o'rgatish (scaffolding) eng samaralisi hisoblanadi.

4. Oila ichidagi muloqot sifati - savollar berish, fikrini tinglash va muhokama yuritish - bolada mustaqil fikrlashni shakllantiruvchi kuchli omildir. So'rovlar va muhokamalarni rag'batlantiruvchi oilalarda bolalar muammoga xilma-xil yondashib, dalillar asosida fikr yuritishni o'rganadi.

5. Ishga jalb qilish turi muhim: faqat topshiriqni shunchaki bajarib qo'yishdan ko'ra (do'stona yordam, muammolarni birga tahlil qilish, ochiq savollar berish) bolalarning fikriy jarayonini ichkaridan rivojlantiradi. Tadqiqotlar ota-onaning maktab bilan hamkorligi, uy vazifalariga mos ko'rsatmalar va strategiyalarni o'rgatish samarali ekanligini ko'rsatadi.

6. Ma'lumotlarni qo'llash va real hayot muammolariga yo'naltirish. Masalan, oilaviy byudjetni birga rejalashtirish, shahar sayohati uchun reja tuzish, kundalik muammolarni muhokama qilish bolada nazariyadan amaliyotga o'tish orqali mustaqil tahlil va qaror qabul qilishni yanada rivojlantiradi. Tadqiqotlar bunday amaliy mashg'ulotlarni yuqori samarali deb topgan.

Amaliy tavsiyalar (ota-onalar uchun)

1. Savol berish madaniyatini rivojlantiring. Bolaning javobiga "to'g'ri" yoki "noto'g'ri" deb javob qaytarmang. Balki "Nega shunday o'ylading?", "Boshqa yana qanday imkoniyatlar bo'lishi mumkin?" kabi ochiq savollar bilan javob bering.

2. Muammoni birgalikda tahlil qiling. Masalan, oddiy kundalik vaziyatni (do'kon narxлари, vaqtni taqsimlash) ni misol qilib olib, birgalikda taqqoslang va natijalar haqida munozara qiling.

3. Kitob va oilaviy o'qish uchun an'ana yarating. Har hafta "Oilaviy kitobxonlik soati" yoki "Savol-javob kuni" tashkil qiling, farzandingiz o'qigan kitobidagi hislarini, kechinmalarini gapirib bersin. Bu tahliliy fikrlashni kuchaytiradi.

4. Mas'uliyat bering va erkin qarorlar uchun imkoniyat yarating. Yoshiga mos vazifalar, kichik iqtisodiy qarorlar qabul qilishiga imkon bering. Bu bilan farzandingizni kelajakdagi katta va jiddiy qarorlar qabul qilishiga yordam berasiz.

5. Maktab bilan hamkorlik qiling. O'qituvchilar bilan doimiy ravishda aloqada bo'ling. Uy vazifalari faqatgina "5 baho" uchun emas, fikrlash jarayonini rivojlantirishga xizmat qilishi lozim.

Xulosa qilib aytganda mustaqil fikrlovchi shaxsni tarbiyalashda oilaning o'rnini beqiyosdir. Oilada sog'lom ma'naviy muhit, erkin muloqot, o'zaro hurmat va ishonch mavjud bo'lsa, bola o'z fikrini mustaqil shakllantira oladi. Ota-onaning pedagogik madaniyatini oshirish, bolaga e'tiborli munosabatda bo'lish va uni mustaqil fikrlashga undash – kelajak jamiyatining poydevorini mustahkamlaydi.

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THE IMPORTANCE OF LANGUAGE GAMES IN TEACHING ENGLISH

Shaxzoda Jumaqulova

Termez State Pedagogical Institute Faculty of Languages

Department of foreign languages for Preschool and Primary education

Abstract. The article discusses the importance of methodological games in the classroom, the role of methods in making English lessons interesting for students and increasing the effectiveness of the lesson, and the importance of methodological disciplines for modern educators, especially foreign language teachers.

Key words: education system, lesson, language, games, competition, knowledge, methodology, skill, subject

We all know that foreign languages are currently being taught from preschool to higher education institutions. Because the demand and need for languages is very high. English is currently the most widely used and most widely studied language. It is difficult to imagine English lessons without methodological games. That is, games make the lesson more interesting and effective. Today, in our education system, the attention paid to the quality of lessons is very high, and methodological games directly affect the quality of English lessons. In preschool institutions, which are the lowest level of education, children really like games. This is because children are very curious and ambitious. Nowadays, it is common to teach even several languages in kindergartens. The most important of them is English. Children learn much faster than adults, which increases the efficiency of language learning. But a child cannot focus or listen to something for a long time. This is very boring for them. Their attention is very easily divided. Therefore, even if you only study for 1-2 hours a day, you should teach the language in an interesting way. That is, by using various methodological games, songs, or cartoons. For example, in English, the topic of fruits and vegetables was taught to children, the teacher taught the words with pictures and repeated them to the students, and then an interesting, methodological game based on the age and level of the children was prepared, for example, "Mystery bag" or "5 second market" (the teacher says the adjectives of fruits or vegetables in English, for example, "red only", "vegetables only", "green only", then the children have to find and show the words among the cards with pictures of fruits and vegetables.) As a result of using such methodological games, children's interest in the lesson increases, they learn and remember more things. In addition, many games are organized in groups or on a competitive basis. Children have a strong sense of competition. The child tries to learn more and surpass. School-age children also quickly get bored with monotony and lessons that are only explained through explanations, and their desire to learn decreases. During games, the student not only reinforces the lesson well, but also talks more and moves

more, and through this he begins to actively apply his knowledge. Games are not just used to pass the time or simply to make the lesson interesting, they should also have a didactic function. For example, games can reinforce new words or a topic, work with grammatical structures, develop one of the skills such as listening comprehension, reading, writing or speaking, or perform communicative tasks. It is through methodological games that the student learns to think independently and approach creatively.

Foreign language teachers must master not only the foreign language, but also the methodology of the lessons. This is especially true for English teachers who teach young children. Using their knowledge and skills in methodology, the teacher increases the interest, quality, and effectiveness of the lesson by using various methods. There are many methodological games and their types that can be used during the lesson. It depends on the topic or skill that the game is being prepared for. For example, lexical games, grammar games, action games, etc. Games are mainly played in groups and this helps students develop teamwork skills. Some students in the classroom have good comprehension skills but have difficulty explaining. Games help to activate such passive learners and also create a competitive atmosphere in the classroom and develop teamwork skills.

In conclusion, it can be said that the use of methodological games in lessons in any educational organization serves to improve the quality of the lesson. Especially, teachers of the English language, which is currently the most frequently taught subject, should use methods to make the lesson more interesting and more memorable for students. Teachers who teach English and other languages in primary grades must have mastered the language as well as the methodology lessons.

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Ingliz tilini o'qitishda til o'yinlarining ahamiyati.

Qudratova Hilola

Termiz Davlat pedagogika instituti Tillar fakulteti Maktabgacha va boshlang'ich ta'limda ingliz tili yo'nalishi 4-kurs talabasi

Eshquvvatova Gulasal

Instruktor, Termiz davlat pedagogika instituti

Annotatsiya. Ushbu maqolada ingliz tilini o'qitish jarayonida til o'yinlarining ahamiyati yoritilgan. Til o'yinlari o'quvchilarning nutq faoliyatini rivojlantirish, so'z boyligini kengaytirish, muloqot ko'nikmalarini shakllantirishda muhim vosita hisoblanadi. Shuningdek, maqolada til o'yinlarining o'quvchilarning motivatsiyasini oshirish, dars jarayonini qiziqarli va samarali tashkil etishdagi o'rni tahlil qilingan. Tadqiqot natijalari ingliz tili darslarida o'yin texnologiyalarini qo'llash til o'rganish samaradorligini oshirishini ko'rsatadi.

Annotation. This article highlights the importance of language games in teaching English. Language games serve as an effective tool for developing students' speaking abilities, expanding vocabulary, and improving communication skills. The article also analyzes how games enhance learners' motivation and make the learning process more engaging and effective. The findings show that the use of game-based activities in English lessons significantly increases learning efficiency.

Аннотация. В данной статье рассматривается значение языковых игр в процессе обучения английскому языку. Языковые игры являются эффективным средством развития речевых навыков, расширения словарного запаса и формирования коммуникативных умений учащихся. Также анализируется роль игр в повышении мотивации и интереса к изучению языка. Результаты показывают, что использование игровых методов на уроках английского языка повышает эффективность обучения.

Kalit so'zlar: til o'yinlari, ingliz tili, o'qitish jarayoni, motivatsiya, muloqot ko'nikmalari, so'z boyligi, innovatsion metodlar.

Keywords: language games, English teaching, motivation, communication skills, vocabulary, interactive learning, innovative methods.

Ключевые слова: языковые игры, обучение английскому языку, мотивация, коммуникативные навыки, словарный запас, интерактивное обучение, инновационные методы.

Kirish. Bugungi globallashuv jarayonida ingliz tili xalqaro muloqot, fan, texnologiya va ta'limning ajralmas qismiga aylangan. Shu sababli ingliz tilini samarali o'qitish va o'rganish masalasi dolzarb ahamiyat kasb etmoqda. An'anaviy o'qitish uslublari o'quvchilarning faolligini har doim ham ta'minlay olmaydi. Shu nuqtai nazardan, o'quv jarayonida til o'yinlaridan foydalanish

zamonaviy pedagogikaning eng samarali usullaridan biri sifatida e'tirof etilmoqda. Til o'yinlari o'quvchilarda o'rganilayotgan tildan erkin foydalanish, muloqot qilish, fikrni aniq va ravon ifodalash ko'nikmalarini rivojlantiradi. Bundan tashqari, o'yin jarayonida o'quvchilar o'zaro hamkorlikda ishlashni, raqobat orqali bilimlarini mustahkamlashni o'rganadilar. Til o'yinlari darsni qiziqarli, samarali va interaktiv tarzda tashkil etish imkonini beradi. Shu bois, ingliz tilini o'qitishda o'yin texnologiyalaridan foydalanish o'quvchilarning til o'rganishga bo'lgan motivatsiyasini kuchaytiradi, ularni faol ishtirokchi sifatida dars jarayoniga jalb etadi.

Til o'yinlari - bu o'quvchilarning ingliz tilini tabiiy muhitda, qiziqarli va faol tarzda o'rganishlariga yordam beruvchi samarali metodlardan biridir. O'yinlar ta'lim jarayonini jonlantiradi, o'quvchilarning e'tiborini jamlaydi hamda ularning nutqiy faolligini oshiradi. O'yinlar orqali o'quvchi grammatik qoidalarni yodlab emas, balki amaliy qo'llash orqali o'zlashtiradi. Masalan, "Find Someone Who...", "Hot Seat", "Word Association", "Bingo", "Taboo" kabi o'yinlar o'quvchilarning so'z boyligini kengaytirish, muloqot ko'nikmalarini shakllantirishda keng qo'llaniladi.

Til o'yinlarining eng muhim afzalliklaridan biri - ularning kommunikativ yondashuvga asoslanganidir. O'yin jarayonida o'quvchilar erkin fikrlaydi, suhbat quradi, tinglaydi va javob beradi. Bu esa til o'rganishdagi asosiy maqsad - real muloqotga kirisha olish ko'nikmasini shakllantiradi. O'yin orqali o'qituvchi darsni faqat bilim berish jarayoni emas, balki muloqot, ijodkorlik va hamkorlik muhiti sifatida tashkil etadi. Shu sababli, til o'yinlari ingliz tili darslarida faol o'quv metodlaridan biri sifatida e'tirof etiladi. Tadqiqotchilarning fikricha, o'yinli metodlar o'quvchilarni o'zaro muloqotga undaydi, darsda do'stona raqobat muhiti yaratadi va shaxsiy ishtirokni ta'minlaydi. O'yin davomida o'quvchi o'z fikrini erkin ifodalaydi, xatolardan qo'rqmaydi, bu esa til o'rganishdagi psixologik to'siqlarni kamaytiradi.

O'zbek olimlaridan Sh. Shodmonov (2017) ta'kidlaganidek, o'yin faoliyati o'quvchining mustaqil fikrlash, tezkor javob qaytarish, ijodiy yondashish qobiliyatlarini rivojlantiradi. Shu bois, o'yinli metodlarni ingliz tili ta'limida tizimli ravishda qo'llash o'quvchilarning nafaqat til, balki tafakkur, nutq madaniyati va ijtimoiy muloqot ko'nikmalarini ham shakllantiradi. Til o'yinlari, shuningdek, turli yoshdagi o'quvchilar uchun moslashuvchan bo'lib, boshlang'ich, o'rta va yuqori bosqichlarda turlicha maqsadlarda qo'llanilishi mumkin. Boshlang'ich bosqichda o'yinlar talaffuz, so'z boyligi va eshitish ko'nikmalarini shakllantirishga qaratilsa, yuqori bosqichda o'yinlar orqali muloqot, debat, muhokama kabi faol nutq turlarini rivojlantirish mumkin. Masalan, "Role Play" o'yinida o'quvchilar hayotiy vaziyatlarni ijro etish orqali tildan tabiiy foydalanishni o'rganadilar. "Memory Game" yoki "Matching Game" esa yangi so'zlarni eslab qolish va ularni tezda esga tushirishda foydali. "Guess the Word" yoki "Describe and Draw" o'yinlari o'quvchilarning tasvirlash, ifodalash, tushunish va ijodiy tafakkur qobiliyatlarini oshiradi.

Shunday qilib, til o'yinlari nafaqat bilim berish vositasi, balki o'quvchini dars jarayonida faol ishtirok etishga undaydigan pedagogik strategiya hisoblanadi. Ular orqali o'quvchilar nafaqat grammatik bilim, balki til madaniyati, kommunikativ kompetensiya va o'ziga ishonchni ham shakllantiradilar. Til o'yinlari zamonaviy ingliz tili ta'limida kommunikativ metodning ajralmas qismi hisoblanadi. Chunki o'yinlar orqali o'quvchilar tilni faqat o'rganmay, balki uni reallikda qo'llashni o'rganadilar. Ingliz tili darslarida o'yinlar nafaqat o'quv jarayonini yengillashtiradi, balki o'quvchilarda ijodiy fikrlash, muammoli vaziyatlarni hal etish va tildan tabiiy foydalanish ko'nikmalarini shakllantiradi.

Til o'yinlarining samaradorligi ularning pedagogik, psixologik va lingvistik jihatdan to'g'ri tanlanishiga bog'liq. Psixologlar fikricha, o'yin faoliyati insonning shaxsiy rivojlanishida katta ahamiyatga ega bo'lib, u orqali bola ijtimoiy muhitni anglaydi, yangi bilimlarni faol harakat orqali o'zlashtiradi. Shu bois, o'yinlar ingliz tili o'qitish jarayonida o'quvchilarning yosh xususiyatlari va bilim darajasiga mos tarzda tanlanishi lozim. Masalan, kichik yoshdagi o'quvchilar uchun vizual va harakatga asoslangan o'yinlar (Bingo, Flashcard Race, Simon Says) eng samarali sanaladi. Ular e'tiborni jamlash, eshitish va ko'rish orqali o'rganish imkonini beradi. O'rta yoshdagi o'quvchilar uchun esa so'z boyligini oshiruvchi va nutqni rivojlantiruvchi o'yinlar (Taboo, Guess Who, Word Chain) foydali bo'ladi. Katta yoshdagi o'quvchilar bilan munozara va rolli o'yinlar (Role Play, Debate Game, Problem Solving) o'tkazish muloqot madaniyatini mustahkamlaydi. Til o'yinlari, ayniqsa, motivatsiyani oshirishda muhim rol o'ynaydi. O'yin davomida o'quvchi o'zining bilimini sinovdan o'tkazadi, g'alaba qozonishga intiladi, bu esa darsda faol ishtirok etishiga sabab bo'ladi. Tadqiqotlar (Lee, 1995; Uberman, 1998) shuni ko'rsatadiki, o'yinlar asosida tashkil etilgan darslarda o'quvchilarning ishtiroki va yodda saqlash darajasi an'anaviy usullarga nisbatan ancha yuqori bo'ladi.

O'zbek olimlari ham bu masalaga e'tibor qaratib, ta'lim jarayoniga o'yin texnologiyalarini joriy etishning samaradorligini ta'kidlaydilar. Masalan, G. Yuldasheva (2020) o'z tadqiqotida til o'yinlari o'quvchilarning ijtimoiy faolligini, mustaqil fikrlashini va ijodkorligini rivojlantirishini ta'kidlaydi. Shuningdek, o'yinlar milliy ta'lim tizimida o'qituvchilar uchun innovatsion metod sifatida keng qo'llanilmoqda. Shu bilan birga, til o'yinlari o'quvchining emotsional holatini ijobiy tomonga o'zgartiradi, stressni kamaytiradi va o'rganishga bo'lgan tabiiy ehtiyojni uyg'otadi. O'yin jarayonida o'quvchilar bir-birlari bilan muloqotda bo'lib, tilni real hayotiy vaziyatlarda ishlatishni o'rganadilar. til o'yinlari ingliz tili ta'limining ajralmas qismi bo'lib, ularni to'g'ri tanlash va samarali qo'llash o'quvchilarning til kompetensiyasini shakllantirishda, darsni samarali va qiziqarli tashkil etishda muhim ahamiyat kasb etadi.

Xulosa. Xulosa qilib aytganda, ingliz tili o'qitish jarayonida til o'yinlaridan foydalanish - bu zamonaviy pedagogik yondashuvlarning eng samaralilaridan biridir. O'yinlar nafaqat o'quvchilarning bilimni mustahkamlaydi, balki ularning darsga bo'lgan qiziqishi, faolligi va ijodkorligini ham oshiradi. Ular orqali o'quvchilar o'z fikrini erkin ifodalash, muloqot qilish va tilni real hayotiy vaziyatlarda qo'llashni o'rganadilar. Til o'yinlari o'quvchilarda kommunikativ kompetensiyani rivojlantiradi, ya'ni ular so'zlash, tinglash, o'qish va yozish ko'nikmalarini tabiiy tarzda egallaydilar. Shu bilan birga, o'yinlar dars jarayoniga emotsional muhit, raqobat va quvonch bag'ishlab, o'quvchilarni faol ishtirok etishga undaydi. Shunday qilib, ingliz tili ta'limida til o'yinlarini to'g'ri tanlash va ularni tizimli qo'llash o'quv jarayonini yanada samarali, qiziqarli va interaktiv qiladi. O'yin orqali o'rganish — bu o'qituvchi va o'quvchi o'rtasida ijobiy muloqotni shakllantiruvchi, o'quvchilarning tilni o'zlashtirish jarayonini tabiiy va zavqli qiluvchi eng qulay metodlardan biridir.

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12. LINGUISTIC ANALYSIS OF PHRASEOLOGICAL UNITS WITH FOOD COMPONENTS IN ENGLISH AND UZBEK LANGUAGES Eshquvvatova Gulasal Abdullo qizi



"Building Strong Writing Skills: Methods and Approaches"**Qudratova Xilola**

Termiz State Pedagogical Institute,

Faculty of Languages, 4th-year student

Termiz State Pedagogical Institute, Faculty of Languages,

Gulasal Eshquvvatova

Department of Foreign Languages in the

Humanities, Instructor

Annotation: This article examines contemporary methods and approaches used to develop strong writing skills in educational contexts. It explores cognitive, process-based, communicative, and collaborative instructional strategies that improve students' ability to express ideas clearly, coherently, and accurately in writing. The research emphasizes the role of guided practice, feedback, digital learning tools, and genre awareness in enhancing writing proficiency. The findings suggest that systematic instruction combined with authentic writing tasks encourages greater independence, critical thinking, and confidence in learners.

Keywords: writing skills, writing instruction, process approach, feedback, collaborative writing, genre-based learning, academic literacy.

Writing is a central component of language proficiency and academic development. It is not only a means of communication but also a process through which learners organize and express their thoughts. As global communication continues to expand, the ability to write effectively plays a key role in academic success and professional growth (Hyland, 2022). However, many learners experience difficulty in writing due to limited vocabulary, weak text organization, and lack of familiarity with different writing genres. Therefore, developing strong writing skills requires systematic instruction supported by research-based strategies. One of the fundamental aspects of writing development is the cognitive process involved in planning, drafting, revising, and editing. Graham and Harris (2023) emphasize that students should be taught to engage actively in these stages rather than focus only on producing a final product. When learners are guided to brainstorm ideas, create outlines, and reflect on their drafts, they gradually develop control over both content and structure. This approach helps them move beyond sentence-level correctness and focus on building meaningful and well-organized texts.

The process approach to writing views writing as a recursive and continuous activity rather than a one-step task. This approach encourages students to return to their work several times to make improvements in clarity, coherence, and accuracy (Nation, 2022). In classrooms where the process approach is applied, teachers act as facilitators, guiding students through drafting and revising instead of simply evaluating finished work. This

creates a supportive learning environment that values experimentation and growth. Another important method is genre-based instruction. Writing tasks vary depending on their purpose, audience, and context. For example, an argumentative essay differs significantly from a descriptive narrative. Hyland (2023) notes that teaching students to identify and analyze the structural and linguistic features of various genres helps them produce texts that are appropriate for academic or real-world settings. Genre-based instruction equips learners with models and frameworks, improving both their confidence and independence.

Collaborative writing also plays a key role in developing writing proficiency. According to Storch (2021), when learners work together to write, edit, or comment on each other's work, they engage in meaningful negotiation of language and ideas. Collaboration promotes awareness of grammatical patterns, text organization, and stylistic choices. Peer review, in particular, helps students learn to evaluate writing critically and develop a sense of audience. This process increases motivation and encourages students to take responsibility for their own improvement. Feedback is another essential component of effective writing instruction. Lee (2022) argues that feedback should be clear, constructive, and timely to help learners understand their strengths and weaknesses. Feedback may come from teachers, peers, or digital tools. Digital platforms, such as Google Docs or online writing applications, enable real-time collaboration and revision (Kessler & Plakans, 2022). While technological tools can support language accuracy, they should not replace teacher guidance or critical learner reflection. Instead, technology should be used to enhance student engagement and support independent editing skills.

In addition to instructional strategies, learners need frequent and meaningful writing practice. Writing tasks should be connected to authentic communication contexts rather than isolated grammar exercises. When students write for real purposes, such as expressing opinions, analyzing information, or presenting research, they become more aware of how language functions to convey meaning. Authentic tasks promote fluency, creativity, and confidence in expression.

In conclusion, building strong writing skills requires the integration of cognitive strategy instruction, process-oriented writing, genre-based teaching, collaboration, and meaningful feedback. Digital tools can further enhance writing development when used responsibly. When students are encouraged to revise, reflect, collaborate, and write for authentic purposes, they gain the ability to express their ideas clearly and effectively. Writing skills develop gradually, but with structured guidance and supportive instruction, learners can achieve significant progress and become confident writers.

Recommendations: Teachers should incorporate process-based writing activities into classroom instruction so that students gain experience

with planning and revision. Genre-awareness should be introduced through clear examples and guided practice. Peer review should be a regular classroom practice to encourage reflection and collaboration. Digital tools should be used to support drafting and feedback, but students should also learn to edit independently. Most importantly, learners should be given frequent opportunities to write for meaningful and authentic purposes.

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Some Difficulties of Using the Mother Tongue in the English Class

Guzarova Mahliyo

student of Termiz State Pedagogical Institute in preschool and primary education, majoring in English

Annotation: This article explores the difficulties that arise when teachers and students overuse the mother tongue (L1) in English language classrooms. While the native language can sometimes help to explain complex grammar or vocabulary, excessive use of it reduces exposure to English and prevents learners from developing real communicative competence. The article also includes personal reflections and examples from the author's own learning experience. Key words: When the mother tongue dominates in class, students may feel that English is only for grammar tests, not for real-life use. According to Jeremy Harmer (2015, *The Practice of English Language Teaching*, p. 205), "The less English students hear, the less they are motivated to use it."

In my opinion, full immersion — even with simple phrases — builds more confidence. When I started listening and speaking only in English, my fluency improved much faster.

Mother tongue, English language, communication, motivation, translation, language teaching, language interference.

Introduction. In many educational systems, especially in Uzbekistan, English is taught as a foreign language. Teachers often find it easier to explain grammar and vocabulary in Uzbek, thinking it saves time and helps students understand better. However, this approach can cause serious long-term problems.

From my own experience as a learner, I have observed that the more we depend on our mother tongue in English classes, the more difficult it becomes to think and speak naturally in English. True language learning begins when we start thinking in English, not when we translate everything from Uzbekistan.

At the beginning stage, using the mother tongue may seem helpful, but it soon develops into a habit of translation. Students begin to rely on their native language for every new word or sentence. According to Harmer (2007, p.133), teachers should "encourage learners to think in English rather than constantly switch back to L1."

From my personal observation, when the teacher speaks too much Uzbek, students respond passively. They understand the lesson but do not practice English actively, which slows down progress. When students use both Uzbek and English frequently in one lesson, interference occurs. They transfer Uzbek grammar and sentence order into English. For example:

Uzbek: "Men uni juda yoqtiraman."

Wrong English: "I very like him." (instead of "I like him very much.")

As Brown (2000, p.68) explains, native language interference is one of the most common obstacles in learning a foreign language.

Using too much L1 decreases students' exposure to English. When English is rarely heard, it stops sounding natural. As Harmer (2015, p.205) writes, "The less English learners hear, the less motivated they become to use it."

In my opinion, even simple classroom phrases such as "Open your books," "Work in pairs," or "Well done" should always be said in English. When I started learning this way, I noticed a big improvement in my listening and speaking confidence. Teachers should know when and how to use the mother tongue effectively. For example, it can be helpful for explaining exam instructions or new difficult words. But it must never replace English communication. In my opinion, the best method is using L1 only when absolutely necessary — not as the main teaching tool.

In conclusion, using the mother tongue in the English classroom should be limited and purposeful. While it can help beginners understand, overuse can damage students' motivation and speaking ability.

Based on my experience, the most successful English classes are those where students hear, speak, and think in English most of the time. Teachers should guide learners to become independent users of English, not translators of it.

Therefore, I believe that the less we depend on our mother tongue, the more confidently we can express ourselves in English.

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IKKINCHI TILNI O'ZLASHTIRISHDA MOTIVATSIYANING O'RNI

Safarov Ilyosbek Isroil o'g'li,

Toshkent xalqaro moliyaviy boshqaruv va texnologiyalar universiteti,
Filologiya va tillarni o'qitish (ingliz tili) ta'lim yo'nalishi 2-bosqich talabasi,
Tel: +998 87 888 03 47

Email: silyosbek240@gmail.comIlmiy rahbar: **Xolmuminov Ilhom Abdixalilovich,**

Toshkent xalqaro moliyaviy boshqaruv va texnologiyalar universiteti, PhD
dotsent,

Annotatsiya: Ushbu maqolada zamonaviy dunyoda ingliz tilini o'rganishda motivatsiyaning tutgan o'rni, uning turlari va motivatsiyani saqlab qolish usullari tahlil qilinadi. Maqolada ichki va tashqi motivatsiya tushunchalari hamda ularning til o'rganish jarayoniga ta'siri yoritilgan. Shuningdek, samarali til o'rganish uchun qo'llanilishi mumkin bo'lgan amaliy usullar (maqsadli o'rganish, qiziqarli materiallardan foydalanish, progressni nazorat qilish) taklif etiladi. Maqola tilshunoslik sohasidagi mutaxassislar ishlari asosida yozilgan bo'lib, ingliz tilini o'rganayotganlar uchun foydali qo'llanma vazifasini o'tashi mumkin.

Kalit so'zlar: Ichki motivatsiya, tashqi motivatsiya, kognitiv motiv, pozitiv motiv, ijtimoiy motiv, neyromotivatsiya.

Abstract: This article analyzes the role of motivation in learning English in the modern world, its types, and methods of maintaining motivation. The article covers the concepts of internal and external motivation and their influence on the process of language learning. Practical methods that can be used for effective language learning (targeted learning, use of interesting materials, monitoring progress) are also proposed. The article is written based on the works of specialists in the field of linguistics and can serve as a useful guide for those learning English.

Keywords: Internal motivation, external motivation, cognitive motive, positive motive, social motive, neuromotivation.

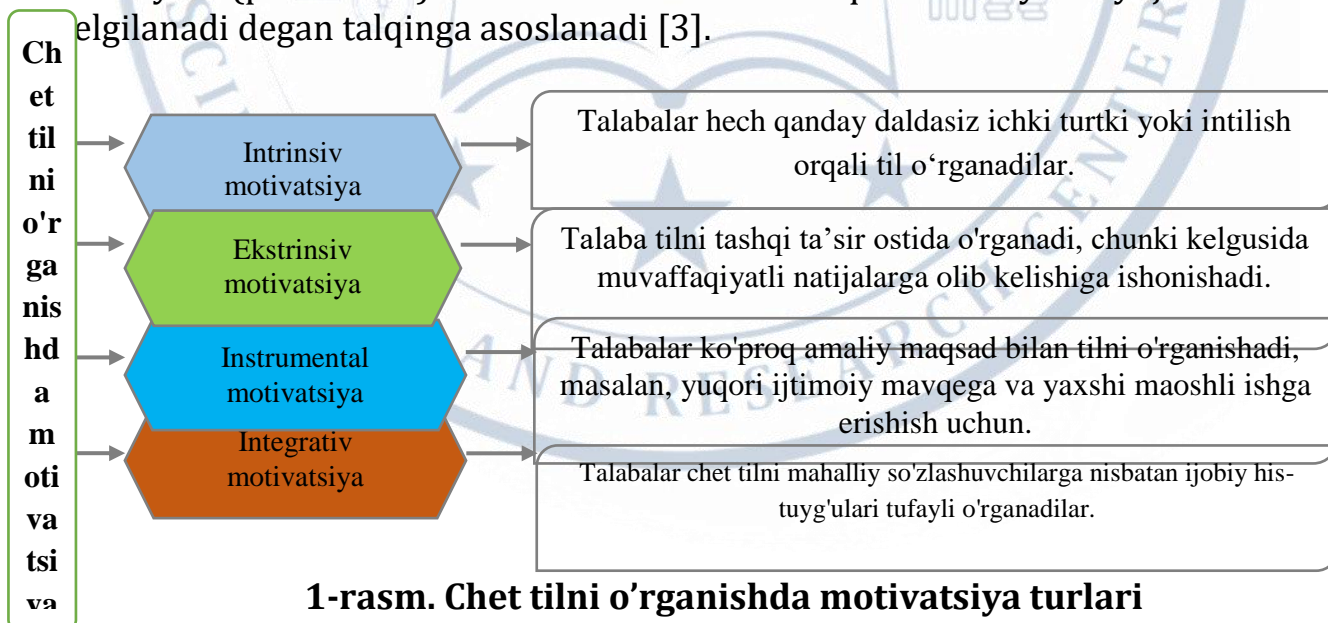
Аннотация: В данной статье анализируется роль мотивации в изучении английского языка в современном мире, ее виды и методы поддержания мотивации. В статье рассматриваются понятия внутренней и внешней мотивации и их влияние на процесс изучения языка. Также предлагаются практические методы, которые могут быть использованы для эффективного изучения языка (целенаправленное обучение, использование интересного материала, контроль прогресса). Статья написана на основе работ специалистов в области лингвистики и может служить полезным руководством для изучающих английский язык.

Ключевые слова: Внутренняя мотивация, внешняя мотивация, когнитивный мотив, позитивный мотив, социальный мотив, нейромотивация.

Kirish: Ingliz tili zamonaviy dunyoda eng keng tarqalgan kommunikatsiya vositasi hisoblanadi. Millionlab odamlar uni o'zlashtirish uchun harakat qiladi, ammo muvaffaqiyat darajasi har xil bo'ladi. Bu farqning asosiy sabablaridan biri – motivatsiya. Motivatsiya til o'zlashtirish jarayonida o'quvchining ichki kuchini uyg'otadi, uni muntazam mashq qilishga undaydi va qiyinchiliklarni yengib o'tishga yordam beradi.

Asosiy qism: Zamonaviy dunyoda ingliz tilini bilish nafaqat shaxsiy, balki professional rivojlanish uchun ham juda muhimdir. Biroq, til o'rganish jarayoni uzoq va murakkab bo'lishi mumkin, shu jarayonda esa motivatsiya asosiy rol o'ynaydi. Motivatsiya til o'rganishda uchraydigan qiyinchiliklarga qaramasdan, o'rganishni davom ettirishga yordam beruvchi bir nechta motivlardan tashkil topadi. Ular:

1. *Kognitiv motiv* yoki o'z-o'zini rivojlantirish motivi. Kognitiv motivning asosida talabning ishlashga, oldinlab borishga, rivojlanishga, yangi bilim olishga, yangi ko'nikmalarni egallashga va mavjudlarini takomillashtirishga intilishi yotadi. Bu o'zini qobiliyatli his qilish zaruratini tug'diradi. Ehtiyojlar piramidasi inson ehtiyojlarining iyerarxik modelining keng tarqalgan nomi bo'lib, u Amerikalik psixolog A.Maslov g'oyalarining soddalashtirilgan taqdimotidir. Ehtiyojlarni to'liqroq tushunish uchun ular ahamiyatiga ko'ra piramida shaklida taqsimlanadi. A.Maslovning motivatsiya nazariyasi (piramidasi) inson xatti-harakati bir qator asosiy ehtiyojlar bilan belgilanadi degan talqinga asoslanadi [3].



1-rasm. Chet tilni o'rganishda motivatsiya turlari

U motivlar va ehtiyojlar bo'yicha tadqiqotlarni tizimlashtirdi va ularni iyerarxik tartibda taqsimladi. Garchi A.Maslovning o'zi hech bir asarida piramida chizmasidan foydalanmagan bo'lsa ham, ehtiyojlar qat'iy emas, balki har bir shaxsga bog'liq deb hisoblagan. Piramida bir necha bosqichlardan iborat: *fiziologiya, xavfsizlik, sevgi, hurmat, bilim, estetika, o'zini o'zi anglash.*

Dastlabki qadamlar (piramidaning oyog'i) hayotiy ehtiyojlar bilan bog'liq, ammo butun piramida yuqoriga - inson uchun juda zarur bo'lgan o'zini namoyon qilish, o'zini o'zi anglash uchun intiladi. Motivatsiyaning kognitiv usullari *sifatida muammoli vaziyatlar yaratish, rolli o'yinlar, aqliy hujum* kabi usullar qo'llaniladi.

2. *Pozitiv motiv* yoki muvaffaqiyat motivi ushbu motivning shiori "bilim-kuch", bu murakkab muammolarni hal qilish, yuqori natijalarga erishish, erishib bo'lmaydigan maqsadlarga intilshdir. Pozitiv motiv talabaga hayotda ma'lum bir pozitsiyani egallashga yordam beradi, shuning uchun talabaning o'zini o'zi qadrlashi, natijaga yo'naltirilganligini hisobga oladigan ixtiyoriy usullar tanlanadi.

3. *Ijtimoiy motiv*. Kasbiy faoliyatga yo'naltirilganligi sababli, ijtimoiy motiv yetakchi o'rinni egallaydi. Har bir davrda har bir fuqaro o'zini davlatning bir qismi deb biladi va o'zini ijtimoiy guruh bilan birlashtiradi, uning muammolari, manfaatlari, maqsadlari bilan yashaydi [4]. Hozirgi vaqtda ijtimoiy motiv tubdan o'zgarish jarayonini boshdan kechirmoqda. Bu asosan iqtisodiyot sohasida ko'p qo'llanilmoqda. Subyekt o'zini kompaniya manfaatlari bilan tanishtirishi, o'z manfaatlari kompaniya manfaatlari bo'ysundirishi, kompaniya qadriyatlarini o'ziniki deb bilishi kerak. G'arbda bu yondashuv uzoq vaqtdan beri ishlab chiqilgan va G'arb biznesining katta qismi oilaviy rishtalarga asoslanganligi bilan bog'liq (*masalan, Smith & sons, Green & brothers*).

Motivatsiya — bu shaxsni maqsadga erishish uchun harakat qilishga undovchi ichki yoki tashqi kuchdir. Til o'rganishda motivatsiya quyidagi jihatlarda muhim rol o'ynaydi:

1. Davomiylikni ta'minlash - Ingliz tilini o'rganish uzoq muddatli jarayon bo'lib, unda muntazam mashq qilish talab etiladi. Yuqori motivatsiyaga ega bo'lgan o'quvchilar bu jarayonda izchillikni saqlaydilar.

2. Qiyinchiliklarni bartaraf etish - Grammatik qoidalar, yangi so'zlar va talaffuz qiyinchiliklari bilan bog'liq muammolar motivatsiya past bo'lganda, o'rganishni to'xtatishga olib kelishi mumkin.

3. Samaradorlikni oshirish - Ijodiy usullar (masalan, filmlar, qo'shiqlar, o'yinlar orqali o'rganish) va motivatsiya o'quvchilarning tilni tezroq va samaraliroq o'zlashtirishiga yordam beradi [3].

Psixologlar motivatsiyani ikki asosiy turga bo'lishadi:

1. Ichki Motivatsiya (Intrinsic Motivation) - Bu shaxsning shaxsiy qiziqishi yoki zavqi tufayli til o'rganishga intilishi. Masalan, ingliz tilidagi kitoblarni asl nusxasida o'qishni yaxshi ko'rish yoki chet elliklar bilan muloqot qilishdan mamnunlik his etish.

2. Tashqi Motivatsiya (Extrinsic Motivation) - Bu tashqi omillar (masalan, ishga joylashish, imtihonlarni topshirish, mukofot olish) bilan bog'liq bo'lgan sabablar.



Ideal holatda, til o'rganuvchilarda ikkala motivatsiya ham mavjud bo'lishi kerak, chunki ular bir-birini to'ldiradi.

Motivatsiyani saqlab qolish usullari

Ingliz tilini o'rganishda motivatsiyani yuqori darajada saqlash uchun quyidagi usullarni qo'llash mumkin:

— Maqsadlarni aniq belgilash – "Ingliz tilida erkin gaplashish" kabi aniq va o'lchanadigan maqsadlar qo'yish.

— Qiziqarli materiallardan foydalanish – Sevimli seriallar, podkastlar, o'yinlar orqali tilni o'rganish.

— Muntazam progressni kuzatish – Kundalik yoki haftalik hisobotlar tuzib, o'zganishlarni ko'rib chiqish.

— Ijtimoiy muloqotni kuchaytirish – Til o'rganayotgan do'stlar bilan guruh bo'lib ishlash yoki onlayn muloqot platformalarida ishtirok etish.

— O'zini mukofotlash – Kichik yutuqlar uchun o'zini rag'batlantirish (masalan, bir hafta davomida har kuni so'zlarni yodlash uchun sevimli taom buyurtma qilish).

So'nggi yillarda til o'rganish psixologiyasi sohasida olib borilgan tadqiqotlar shuni ko'rsatdiki, an'anaviy motivatsiya tushunchalari zamonaviy polikultural sharoitlarda til o'rganishning murakkabligini to'liq izohlashga yetarli emas. Bu maqola til o'rganish motivatsiyasini tahlil qilishda transdisiplinar yondashuvni taklif etadi, u quyidagi yangi jihatlarni o'z ichiga oladi:

1. Neyromotivatsiya - dopamin tizimining til o'rganishdagi roli;
2. Madaniy motivatsiya - turli madaniyatlarning motivatsion strategiyalarga ta'siri;
3. Digital motivatsiya - sun'iy intellekt texnologiyalarining motivatsiyani shakllantirishdagi roli;

1. Neyroilmiy asoslar.

Yangi funktsional magnit-rezonans tomografiya (fMRI) tadqiqotlari shuni ko'rsatadiki, muvaffaqiyatli til o'rganish holatlarida miyaning quyidagi sohalari faollashadi:

- Ventral tegmental maydon (VTA) - mukofot tizimining markazi;

- Dorsolateral prefrontal korteks - qaror qabul qilish jarayonlari;

2. Madaniy paradigmalar; Madaniyat modeli asosida 6 ta madaniy o'lchov bo'yicha til o'rganish motivatsiyasining farqlanishi[4]:

1. Quvvat masofasi;
2. Individualizm-kollektivizm;
3. Erkaklik-feminillik;
4. Noaniqlikdan qo'rqish;
5. Uzoq muddatli yo'nalish;
6. Hedonizm; [1]
3. Sun'iy intellekt integratsiyasi;



Zamonaviy til o'rganish platformalarida qo'llaniladigan adaptiv algoritmlarning motivatsiyaga ta'siri:

- Shaxsiylashtirilgan kontent tavsiya tizimlari;
- Real vaqtda progressni baholash;
- O'yinlashtirish elementlari (gamification);

Xulosa qilganda, ingliz tilini o'zlashtirish jarayonida motivatsiya muvaffaqiyatning asosiy kalitidir. Ichki va tashqi motivatsiyaning muvozanati, shuningdek, o'rganish jarayonini qiziqarli va samarali qilish orqali til o'rganuvchilar uzoq muddatli natijalarga erishishlari mumkin. Har bir shaxs o'ziga mos usullarni topib, izchil ravishda harakat qilsa, ingliz tilini mukammal egallash imkoni bor.

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ERKAK VA AYOL NUTQINING GENDEROLOGIK XUSUSIYATLARI

N.A. Ohunova

Farg'ona davlat universiteti, o'qituvchi

E-mail: akhunovanozima@gmail.com

Annotatsiya. Maqolada erkak va ayol nutqining genderologik xususiyatlari lingvistik va sotsiolingvistik nuqtayi nazardan tahlil qilinadi. Erkak va ayol nutqidagi fonetik, leksik, grammatik hamda pragmatik farqlar til materiallari (o'zbek, ingliz, rus, yapon va boshqa tillar) misolida ko'rsatiladi. Shuningdek, gender tafovutlarining ijtimoiy, madaniy va diniy omillar bilan bog'liqligi yoritiladi.

Kalit so'zlar: gender, nutq, erkak, ayol, lingvistika, sotsiolingvistika

Kirish. Tilshunoslikda erkak va ayol nutqining farqlari qadimdan mavjud bo'lib, bugungi kunda u gender lingvistika yo'nalishida alohida tadqiq qilinmoqda. Ma'lumki, tilda gender muammosi, asosan, XX asr 2-yarmida tilshunoslikda muhim masala sifatida rivojini topgan. Ammo ushbu masalaning ildizi XIX asrga ham borib taqaladi, deb ayta olamiz. Buning sababi mashhur tilshunos olim F.de.Sossyur tilni bir sistema sifatida qarashga, ammo genderni o'ziga xos bir lingvistik fenomenon (holat) sifatida alohida soha tarzida hozirgidek qaralmagan bo'lsa-da, til bir sistema, uning ichida gender bir grammatik kategoriya, masalan, nemis, fransuz va ingliz kabi tillardagi erkak va ayol jinsini anglatuvchi ot, olmosh, fe'l shakllari bo'lganidek deya qaralgan. Faqatgina tilshunoslikda sotsiolingvistika yo'nalishi kurtak yoya boshlashi bilan gender tilshunoslikning yana bir o'rganish zarur bo'lgan obykti sifatida paydo bo'la boshladi. Erkak va ayol nutqidagi tafovutlar biologik, psixologik va ijtimoiy omillar bilan bevosita bog'liq. Shu bois, gender masalalarini lingvistik va sotsiolingvistik jihatdan tahlil qilish dolzarb ilmiy yo'nalish hisoblanadi.

Asosiy qism. Erkak va ayol nutqi o'rtasida fonetik, leksik va grammatik darajada sezilarli tafovutlar kuzatiladi. Masalan, ingliz tilidagi I will go back jumlasini erkaklar "boku kaeru", ayollar esa "watasi kaeru" shaklida qo'llaydi. O'zbek tilida esa erkak va ayolga xos ism shakllari mavjud: Nodir-Nodira, Shoir-Shoira. Yapon, akan, djirbal kabi tillarda ham jinsiy tafovutni ifodalovchi maxsus birliklar qo'llanadi. Masalan, akan tilida tug'ilgan kun asosida farzandlarga beriladigan ismlar erkak va ayol uchun farqlanadi. O'zbek madaniyatida ham juma kuni tug'ilgan bolalarga maxsus ismlar berilishi kuzatiladi. Sotsiolingvistika nuqtai nazaridan erkaklar nutqi ko'proq qisqa, lo'nda va mantiqiy bo'lsa, ayollar nutqi emotsional, ta'sirchan va detallashtirilgan bo'ladi. R. Lakof va J. Xolms tadqiqotlarida ham ayollar nutqi ko'proq muloyim va hissiyotlarga boy, erkaklar nutqi esa qat'iy va qisqa bo'lishi ta'kidlangan. Nutqda ko'proq boshqaruvchanlik, bosiqlik, shoshmaslik aks etishi erkaklarga xos bo'lsa, buning aksi shoshqaloqlik, emotsionallik,

nolish va hatto ba'zan noverbal holatlarni (baqirib yuborish, xursandchilikdan qarsak chalish) ikkinchi jins vakili orasida kuzatishimiz tilning leksik hamda pragmatik doirasida aks etishi hisoblanadi. Ba'zi holatlarda ayollar g'azablarini tinch holatlarida sukut saqlash tarzida ko'rsatsalar, erkaklar aksincha, so'kish, baqirish orqali namoyon qiladilar. Ammo aksincha, xursanchilik holatida esa ayollar o'z kayfiyatlarini yuqori darajada ko'rsatsalar, erkaklar sukut saqlashadi. Ushbu bir xil vaziyat ustida kechadigan paradoksal jarayon kuzatilgan nutqdan tilning gender holatini farqli holatda aks etishini ko'rishimiz mumkin.

Dunyo tillari orasida Avstraliya tub mahalliy xalqining Djirbal nomli tili bo'lib, unda otlar maxsus sinflarga bo'lingan. Masalan, faqat erkak jinsli otlar guruhi, faqat ayol jinsiga oid otlar guruhi kabi guruhlashtirilgan bo'lib, ba'zi maqollar, arxaizmlar va turli ko'chma ma'noli lingvistik uskunalarini ayollar o'z nutqida ishlatishi mumkin emas. Buning sababi ularning "taboo" (juda qo'pol, tilga olinmaydigan so'z va mavzular) hisoblanganligidir. Ular faqatgina erkaklarning tiliga xos va ayollar uchun ular taboo hisoblanadi. O'zbek tilida esa faqat erkaklar nutqida qo'llaniladigan so'kinish so'zlar uchraydi.

Shuningdek, Akan tilida ba'zi marosimlarda faqat ayol yoki erkak ijro eta oladigan og'zaki janrlar bo'lib, ular o'zbek xalqidagi shunday marosimlarga o'xshaydi. Quyida akan tiliga xos og'zaki ijodni ko'rib chiqamiz.

Akan og'zaki janrlarining ijrochilari:

Dafn marosimlarida-ayollar

Oila qurishdagi barcha marosimlarida-ayollar

Xalq qo'shiqlari, laparlari-ayollar.

Yuqoridagi misollardan shuni ayta olamizki, o'zbek xalqida ham ana shu marosimlarning barchasida bosh ijrolarda ayollarni turishini bilamiz. Bizning madaniyatimizda ham kimdir vafot etsa, baland ovozda yig'lovchi ayollar guruhi taklif qilingan. To'y qilishda turli oldi-berdi tadbirlarida ham va to'ydan keyingi turli xil marosimlarda ham ayollar turishi barchamizga ma'lum. Xalq qo'shiqlari, laparlarni ham o'zbek ayollarimiz o'z maromiga keltirib ijro etadilar. Bu holatni ayniqsa bahoriy bayramlarda, xususan navruzda ularni uchratamiz.

Xulosa. Gender lingvistika erkak va ayol nutqidagi farqlarni o'rganishda muhim ilmiy yo'nalishdir. Nutqiy tafovutlar nafaqat lingvistik, balki ijtimoiy, diniy va madaniy omillar bilan ham bog'liq. O'zbek tilshunosligida bu masalani chuqur tadqiq qilish gender tengligi va sotsiolingvistik yondashuvni rivojlantirishga xizmat qiladi.

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GOALS AND OBJECTIVES OF TEACHING ENGLISH AND PRESCHOOL EDUCATIONAL INSTITUTIONS

Barnoyeva Madina

Termiz State Pedagogical Institute,
Faculty of Languages, 4th-year student
Termiz State Pedagogical Institute, Faculty of Languages,
Instructor **Eshquvvatova Gulasal**
Department of Foreign Languages in the
Humanities,

Annotation: This article explores the main goals and objectives of teaching English in preschool educational institutions, emphasizing the importance of early language acquisition in a child's cognitive and emotional development. The study outlines how introducing English at an early age helps foster curiosity, creativity, and communication skills through play-based and interactive learning activities. It highlights the necessity of creating a positive language environment where children can naturally absorb sounds, words, and basic structures of English. The author discusses pedagogical approaches such as the communicative, game-based, and audiovisual methods, which are essential for maintaining motivation and engagement among preschoolers. Moreover, the article stresses the role of teachers in modeling correct pronunciation, encouraging participation, and using visual aids and songs to enhance retention. The research concludes that well-structured English teaching programs at the preschool level lay a solid foundation for future language learning, shaping not only linguistic competence but also broader cognitive and social abilities.

Key words: Preschool education, English teaching, early language learning, communicative approach, play-based learning, motivation, language environment, teacher role, audiovisual methods, linguistic competence.

Introduction: In recent years, the importance of teaching foreign languages, especially English, in preschool educational institutions has gained increasing recognition worldwide. The early introduction of English is no longer considered an optional enrichment activity but rather a vital component of a child's overall education. As the world becomes more interconnected, the ability to communicate effectively in English is viewed as a key competency that supports future academic success and global participation. Preschool education, therefore, serves as the foundation where the first bricks of linguistic and communicative competence are laid. At this stage, children are naturally curious, receptive, and eager to imitate sounds, gestures, and words. These unique developmental characteristics make early childhood an ideal time to begin foreign language learning.

The primary goal of teaching English in preschool is not to achieve perfect grammar or complex vocabulary, but to expose children to the sound, rhythm, and melody of the language in a joyful, engaging, and meaningful way. The focus is on developing listening and speaking abilities through songs, games, short stories, rhymes, and interactive activities. Such an environment encourages children to experiment with language without fear of making mistakes. It helps them form positive attitudes toward language learning, which is crucial for continued success at later stages. The foundation built in preschool influences the child's motivation and confidence to learn English in primary school and beyond [1,312].

The methodology of teaching English in preschool differs fundamentally from that used with older learners. Preschoolers learn best through play, movement, and emotional interaction. Therefore, the methods applied must be tailored to their cognitive, psychological, and social characteristics. Teachers should employ game-based, communicative, and multisensory approaches that allow children to learn naturally and intuitively. Repetition, visual support, songs, and physical activities play a key role in reinforcing learning. The classroom atmosphere should be relaxed and filled with joy, where children feel safe to explore new sounds and expressions.

Another important aspect is the role of the teacher in guiding and facilitating the learning process. The teacher is not merely a transmitter of knowledge but a model, motivator, and organizer of the learning environment. Their enthusiasm, tone of voice, facial expressions, and gestures significantly influence how children perceive and respond to the language. Moreover, the teacher's ability to integrate English into daily routines such as greetings, classroom instructions, and simple dialogues helps make language use natural and continuous [2,272].

In preschool English teaching, the objectives are both linguistic and developmental. Linguistically, children are introduced to the basic sounds, words, and expressions of English. Developmentally, they learn to listen carefully, concentrate, cooperate, and express themselves. English lessons, when designed properly, contribute not only to linguistic growth but also to the development of memory, imagination, fine motor skills, and social behavior. Through interactive activities, children practice turn-taking, sharing, and teamwork, which are essential life skills.

The design of the curriculum and lesson content must consider children's limited attention span and the need for constant variation. Lessons should include short, dynamic segments that combine physical activity with listening and speaking practice. For example, a typical lesson may start with a greeting song, followed by a vocabulary game, a short story, and a creative activity such as drawing or role play. Such a sequence keeps children engaged and helps them associate English with positive emotions and fun.



The use of visual and audiovisual aids is another key component in teaching English to preschoolers. Flashcards, puppets, pictures, videos, and songs provide strong visual and auditory support that makes new words and expressions easier to understand and remember. Technology can also be used effectively in this process. Interactive whiteboards, educational apps, and multimedia presentations can transform abstract concepts into concrete experiences, catering to various learning styles. However, the use of technology should always serve pedagogical goals rather than becoming the main focus of the lesson [3,412].

Cultural exposure is an additional benefit of introducing English early. Language and culture are inseparable, and even simple classroom activities can introduce children to elements of English-speaking cultures songs, holidays, fairy tales, and customs. This not only broadens their worldview but also cultivates respect for diversity and curiosity about other ways of life. Through such exposure, children learn that language is a bridge between people, encouraging openness and tolerance.

Parental involvement also plays an essential role in the success of English teaching at the preschool level. Parents can support their children by showing interest in what they are learning, singing songs together, or watching simple English cartoons. The cooperation between teachers and parents ensures continuity between home and school, reinforcing the learning process and making it more meaningful for the child.

The process of teaching English in preschool settings must be carefully organized and supported by appropriate educational materials and methodological guidance. Teachers need proper training in early childhood pedagogy and foreign language methodology to manage the dual challenge of maintaining children's attention and facilitating language acquisition. Continuous professional development and methodological support are vital to ensure that preschool English instruction is effective and age-appropriate. In summary, the teaching of English in preschool educational institutions is a multifaceted process that combines linguistic, cognitive, emotional, and social dimensions. The main goal is not to teach children to read or write in English but to help them develop an awareness and enjoyment of the language through meaningful, playful experiences. Preschool English education lays the foundation for lifelong learning, equipping children with early communicative competence, curiosity, and confidence that will serve them well in the future. In the modern globalized world, where English functions as the international language of communication, science, and technology, providing children with early exposure to it represents an investment in their future. The earlier the exposure, the more natural and effective the learning process becomes. Preschool English programs that combine sound pedagogy, creativity, and emotional engagement are powerful tools for shaping open-minded, capable, and communicative young learners ready to thrive in a multilingual world.

Literature review: The teaching of English at the preschool level has been widely explored by scholars who emphasize its importance in early childhood education. Researchers such as Harmer (2015) and Brown (2007) argue that early exposure to a foreign language enhances not only linguistic skills but also cognitive flexibility, problem-solving ability, and memory. They stress that the preschool period is the most favorable stage for acquiring pronunciation and intonation patterns naturally, as children at this age possess a remarkable capacity to imitate sounds and absorb new information unconsciously [4,208].

Several studies highlight the communicative and play-based nature of preschool English instruction. Ismoilova (2016) notes that storytelling, songs, and games form the backbone of effective early language teaching. According to her, these techniques promote motivation and curiosity, allowing children to use English in meaningful contexts. Similarly, Cameron (2001) emphasizes the role of interactive activities that connect language learning with emotions, movement, and imagination. These activities transform language acquisition into a natural process rather than a formal academic task [5,320].

Methodological research by Larsen-Freeman (2011) and Richards & Rodgers (2014) outlines how the communicative approach can be adapted for young learners by focusing on real-life communication rather than rote memorization. They recommend a combination of visual, auditory, and kinesthetic methods that appeal to children's sensory experiences. The integration of audiovisual materials songs, pictures, and short animations has also been proven to improve vocabulary retention and listening comprehension (Thornbury, 2002).

Another important direction in the literature concerns the psychological aspects of early learning. Piaget's and Vygotsky's theories are often cited to explain how children construct knowledge through interaction and play. Vygotsky's concept of the "zone of proximal development" underscores the teacher's role as a facilitator who guides children from simple imitation to independent use of the language. Emotional security, encouragement, and positive reinforcement are therefore crucial elements of preschool English teaching [6,356].

In recent years, technological innovations have influenced early language education. Authors like Nation (2013) and Scrivener (2010) point out that digital tools songs, cartoons, and interactive applications support language immersion when used appropriately. However, they also warn that technology should supplement, not replace, face-to-face communication [7,159].

Overall, the reviewed literature agrees that the main goal of English teaching in preschool institutions is to create a stimulating, enjoyable environment where children can develop linguistic awareness and communicative skills naturally through play and interaction.



Methodology: The methodological framework of this research on "Goals and Objectives of Teaching English in Preschool Educational Institutions" is based on qualitative analysis, descriptive observation, and comparative study. The methodology aims to explore effective strategies, techniques, and approaches that ensure the natural development of English language skills among preschool learners while aligning with their psychological and cognitive characteristics.

The first stage of the research involved a thorough review of theoretical and methodological literature related to early childhood language education. Works by prominent scholars such as Harmer (2015), Brown (2007), Cameron (2001), and Ismoilova (2016) were analyzed to understand existing practices, theoretical foundations, and principles guiding preschool English instruction. This helped identify the most effective teaching approaches, including communicative, play-based, and task-based methods.

The second stage included observational analysis of classroom practices in several preschool institutions where English was integrated into the curriculum. The purpose of these observations was to assess how teachers organize English lessons, motivate children, and adapt activities to different learning styles. Special attention was given to the use of songs, storytelling, role play, and visual materials. These activities were evaluated for their effectiveness in developing listening comprehension, pronunciation, and basic vocabulary.

In addition, interviews and informal discussions were conducted with preschool English teachers to gather insights into their pedagogical experiences, challenges, and methods of engaging children. Their feedback provided valuable information on classroom management, lesson structure, and the importance of teacher enthusiasm and emotional interaction.

The research also employed a comparative approach by analyzing both traditional and innovative teaching models. This allowed the identification of effective practices that combine communicative techniques with creative play. The analysis emphasized that the integration of visual, auditory, and kinesthetic elements ensures better retention and understanding among young learners.

The methodological basis of the study is supported by pedagogical and psychological theories, particularly those of Piaget and Vygotsky, which explain how children learn best through interaction, play, and guided discovery. The research applied these theories to demonstrate how preschool learners internalize English structures through meaningful activities rather than formal instruction.

Finally, the collected data were summarized to develop methodological recommendations for improving the process of English teaching in preschool institutions. These recommendations focus on the teacher's role, lesson design, materials selection, and strategies for maintaining motivation. This

methodological framework ensures that the study is both theoretically grounded and practically oriented toward enhancing English instruction in preschool education.

Results: The research on produced several significant findings that highlight the importance of early English language instruction and the effectiveness of specific methodological approaches. The results confirmed that the preschool stage is the most favorable period for language acquisition due to children's heightened ability to imitate sounds, absorb patterns, and learn through play and interaction.

One of the key findings is that children exposed to English in a playful and emotionally supportive environment develop stronger listening and speaking skills compared to those taught through traditional, teacher-centered methods. Activities such as songs, rhymes, storytelling, and interactive games were found to be highly effective in maintaining attention, encouraging participation, and promoting spontaneous use of English words and expressions. These activities helped children internalize basic vocabulary and pronunciation without conscious effort, creating a natural foundation for later learning.

Observations in preschool classrooms also showed that the role of the teacher is crucial in determining the success of English lessons. Teachers who demonstrated enthusiasm, creativity, and emotional warmth achieved higher engagement levels among children. Their use of gestures, visual aids, and expressive tone of voice contributed to comprehension and memory retention. The study also found that incorporating English into daily routines such as greetings, instructions, and simple dialogues significantly enhanced children's ability to understand and use the language naturally.

Furthermore, the integration of audiovisual and digital materials, such as songs, flashcards, and short videos, proved to be a valuable tool in language development. When used in moderation and with pedagogical intent, these resources provided visual and auditory reinforcement, helping children connect meaning with sound and image. However, the study emphasized that technology should complement, not replace, live teacher-student interaction.

Another notable result was the improvement of children's cognitive and social development through English lessons. Language activities encouraged memory, attention, creativity, and cooperation. Group games and role plays fostered teamwork, respect, and confidence skills essential for both language learning and personal growth.

Overall, the research demonstrated that English teaching in preschool institutions, when based on communicative and play-based principles, effectively builds the foundation for future linguistic competence. It contributes not only to language acquisition but also to the holistic development of the child, making early English education a vital part of modern preschool curricula.



Discussion: The findings of this research highlight the essential role of early English language instruction in shaping both linguistic and cognitive development among preschool children. The discussion focuses on interpreting these results in relation to existing theories and methodological principles, emphasizing how play-based and communicative approaches contribute to successful early language acquisition.

One of the most important insights drawn from the study is that preschoolers learn best through natural interaction and play rather than through structured, formal instruction. This aligns with Vygotsky's theory of the zone of proximal development, which suggests that children acquire new skills most effectively when guided through meaningful social interaction. In the observed classrooms, children who were encouraged to use English in songs, games, and simple dialogues showed higher engagement and better retention of new vocabulary. This demonstrates that motivation and emotional connection are as crucial as linguistic input in early learning.

Another important point concerns the role of the teacher as both a facilitator and motivator. Teachers who displayed enthusiasm, warmth, and creativity managed to create emotionally safe environments where children felt comfortable experimenting with language. This supports the communicative approach proposed by Richards and Rodgers (2014), which views language as a tool for interaction rather than mere knowledge. In contrast, lessons that relied heavily on repetition or translation were found to limit active participation and reduce interest.

The integration of visual and digital materials also emerged as an important factor. While some critics argue that technology can distract young learners, this research found that carefully selected multimedia resources such as songs, short cartoons, and interactive slides enhanced engagement and comprehension. The key lies in balancing traditional teaching with modern tools, ensuring that technology remains a means of reinforcement rather than a replacement for direct communication.

Furthermore, the study supports the idea that early English teaching promotes broader cognitive and social benefits. Through storytelling, role-playing, and group activities, children not only learned new words but also developed cooperation, empathy, and problem-solving skills. These findings echo those of Piaget, who emphasized that cognitive growth is driven by active participation and discovery.

Conclusion: The research demonstrates that early foreign language education is not merely an introduction to English but an essential stage in a child's overall development. Preschool English teaching serves as the foundation for building communicative competence, cognitive growth, and social interaction skills that support lifelong learning. The study confirms that the preschool period is the most favorable time for language acquisition



because children are naturally curious, emotionally responsive, and highly receptive to new sounds and patterns.

The findings highlight that the primary goal of preschool English instruction is to create a positive, engaging, and emotionally supportive environment where children learn through meaningful play and communication. Play-based activities such as songs, rhymes, stories, and role-play are proven to be the most effective tools for developing early listening and speaking abilities. These methods stimulate imagination, maintain motivation, and encourage natural language use without fear of mistakes.

The teacher's role is central to achieving these goals. Teachers must act not as lecturers but as facilitators who guide, motivate, and inspire children through creative and interactive methods. Their tone of voice, gestures, and use of visual aids significantly influence children's understanding and interest. A well-trained teacher can integrate English naturally into everyday routines greetings, classroom instructions, and games making language learning a continuous and joyful process.

The study also emphasizes the importance of audiovisual and digital resources. When used appropriately, these tools enhance comprehension, reinforce vocabulary, and make learning more dynamic. However, technology should never replace direct communication or emotional connection between teacher and student. Instead, it should serve as a supplementary aid to strengthen engagement and understanding.

Another major conclusion is that teaching English at the preschool level contributes not only to language skills but also to personal and social development. Children improve their memory, attention, creativity, and cooperation through interactive activities. They learn to listen, take turns, and express themselves skills essential for future education and social life.

In summary, effective preschool English teaching requires a balanced combination of communicative, emotional, and play-based methods. When children experience English as a source of joy and discovery, they develop a lifelong positive attitude toward learning languages. Thus, early English education plays a vital role in preparing children for the challenges of a globalized world and nurturing confident, open-minded learners.

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TOG'AY MURODNING "OTAMDAN QOLGAN DALALAR" ROMANIDA DEHQONQUL OBRAZINING ADABIY-BADIIY TALQINI

Abdumajidova Dinora

Termiz davlat pedagogika instituti

2 – kurs magistri

Annotatsiya. Mazkur maqolada Tog'ay Murodning "Otamdan qolgan dalalar" romanida badiiy obrazlar tizimi, ayniqsa inson obrazi markazida shakllangan milliy ruh, tarixiy xotira va erkinlik g'oyalari tahlil qilinadi. Asarda Jaloliddin Ketmon, Aqrab qo'rboshi, Dehqonqul kabi uch avlod vakillari timsolida o'zbek xalqining mustamlaka davridagi iztiroblari, erkinlik uchun kurash ruhi badiiy ifodasini topgan. Tadqiqotda yozuvchining badiiy mahorati, xalqona til uslubi, ruhiy kechinmalarni ifodalashdagi tabiiylik, hamda inson va jamiyat, erkinlik va zo'ravonlik o'rtasidagi falsafiy ziddiyatlar tahlil etiladi.

Kalit so'zlar: Tog'ay Murod, "Otamdan qolgan dalalar", badiiy obraz, inson obrazi, milliy ruh, tarixiy xotira, erkinlik g'oyasi, xalqona til, falsafiy ziddiyat.

Annotation. This article analyzes the system of artistic images in Tog'ay Murod's novel "The Fields Left by My Father", focusing on the central human image that embodies national spirit, historical memory, and the idea of freedom. Through the characters of Jaloliddin Ketmon, Aqrab Qo'rboshi, and Dehqonqul — representing three generations — the author reflects the tragic fate of the Uzbek people under colonial rule and their spiritual resistance. The study explores the writer's artistic mastery, his natural folk style, and his deep depiction of the conflict between man and society, freedom and oppression.

Keywords: Tog'ay Murod, The Fields Left by My Father, artistic image, human character, national spirit, historical memory, freedom, folk style, philosophical conflict.

Аннотация. В данной статье рассматривается система художественных образов в романе Тогая Мурода «Поля, оставшиеся от отца», в центре которых находится образ человека, воплощающий национальный дух, историческую память и идею свободы. Через судьбы трёх поколений — Джалолиддина Кетмона, Акроба Курбаши и Дехконкула — автор раскрывает трагическую историю узбекского народа в период колониализма и его духовное сопротивление. В статье анализируются художественное мастерство писателя, народный язык, философские противоречия между человеком и обществом, свободой и насилием.

Ключевые слова: Тогая Мурод, «Поля, оставшиеся от отца», художественный образ, образ человека, национальный дух, историческая память, идея свободы, народный язык, философские противоречия.

Adabiyotshunoslikda badiiy obraz keng va tor m'noda ishlatiladi. Biz keng ma'nodagi obrazlarga ijodkor tomonidan borliqdagi barcha unsurlarning kuzatilgan, qayta ishlangan aksini ko'ramiz. Badiiy asarlar tahlilida kichik bir detalgacha

bachasi ma'lum bir g'oyaviy yuk ifodalaydi va obraz sifatida nazarda tutiladi. Obrazning tor ma'noda qo'llanilishida esa badiiy asarlardagi inson obrazi asos qilib olinadi. Demak, badiiy adabiyotning markaziy tushunchalari inson obrazi asosida yuzaga chiqadi.

Badiiy asardagi boshqa obazlar esa inson tasvirini atraflicha yoritishga xizmat qiladi. Demak, inson adabiyotning asosiy tasvir vositasi hisoblanadi, shuni inobatga olgan holda bosh qahramonlari hayvonlar bo'lgan masallarda ham majoziy ravishda asosiy g'oya insonlarning hatti-harakatlarini, psixologik holatlarni yoritishga qaratilgan.

O'zbek adabiyotshunosligida Tog'ay Murodning ilk romani — "Otamdan qolgan dalalar" o'zbek milliy adabiyotining taraqqiyotida muhim bosqich sifatida baholanadi. Adib ushbu asarni yaratish jarayonida o'z hayotiy tajribasi, dunyoqarashi va ijodiy qarashlarini tanqidiy qayta tahlil etadi. Shu paytgacha amal qilib kelgan badiiy an'analar doirasida qolgan holda, u qishloq hayoti va oddiy insonlar turmushini yangicha nigoh, chuqur ruhiy-falsafiy idrok orqali talqin etadi. "... Matndagi gaplarning tuzilishi tarzi, ohangi, so'z va jumalarning takrorlanishi xalq tilining rang-barang tovlanishi, nozik lutf, qochiriqlar, goh xazin kayfiyat goh tabassum uyg'otuvchi ifodalar, birgina jumla, birligida tanbeh orqali butun boylarga tatigulik voqei drama, ruhiy holatkechinmalarining jonli gavdalantirilishi-bularning barchasi yetuk she'riyat, dostonchilik tajribalarini yodga tushiradi".

Roman sovet davri ijtimoiy-siyosiy sharoitini, ayniqsa, totalitar tuzum ostida yashagan mehnatkash xalqning ichki iztiroblarini badiiy tarzda aks ettiradi. Tog'ay Murod o'z asarida oddiy dehqonning — halol, mehnatsevar, to'g'riso'z, ammo adolatsiz tuzum girdobida ezilgan insonning fojeasini chuqur insoniy iztirob bilan tasvirlaydi. Shu orqali yozuvchi shaxs va jamiyat, inson va hokimiyat o'rtasidagi murakkab ziddiyatlarni ochib beradi.

Ona-Vatanga muhabbat, ona-erga sadoqat Tog'ay Murod qahramonlarining borlig'iga jonu tan bo'lib singib ketgan. Yozuvchi o'zbek xalqining istiqbolga bo'lgan tashnaligini tasvirlabgina qolmay, quvginn va qatagonlarda, yo'qlik va xo'rliklarda sinmagan o'lmas ruhiyatini yaratdi. Bo'ri polvondagi jo'mardlik Vatan uchun fidoyilikka aylandi. Qoplon bobo va Oymomo buvidagi oqibat, mehr-muhabbat Dehqonboy va uning ayoli timsolidagi dard bo'ldi.

Tog'ay Murodning "Otamdan qolgan dalalar" romani o'zbek xalqining so'nggi bir yarim asrlik ijtimoiy-siyosiy hayotini badiiy umumlashtirgan asar sifatida diqqatga sazovordir. Asarda Jaloliddin Ketmon, Aqrab qo'rboshi va Dehqonqul obrazlari orqali bobodan o'g'ilgacha bo'lgan uch avlod taqdiri yoritiladi. Bu uch obraz timsolida o'zbek xalqining mustamlaka zulmi ostida kechgan iztiroblari, ozodlik va erkinlik yo'lidagi kurash ruhi badiiy tarzda aks etadi.

Roman 130 yillik mustamlaka davrining ijtimoiy-falsafiy manzarasini ifodalaydi. Yozuvchi har bir avlod hayoti orqali millat taqdirini, tarixiy adolatsizlikning og'ir oqibatlarini, xalqning iztirob bilan yo'g'rilgan, ammo sinmagan ruhini ko'rsatadi. Asarda o'zbek xalqining istilochilarga nisbatan nafrati, ozodlik va



erkinlik g'oyalarining xalq ongida asta-sekin shakllanib borish jarayoni chuqur badiiy tahlil etilgan. Shu tariqa, "Otamdan qolgan dalalar" romani o'zbek milliy adabiyotida nafaqat qishloq hayoti tasviri, balki tarixiy xotira, milliy o'zlik va mustaqillik g'oyalarining shakllanishini badiiy aks ettirgan yirik epik asar sifatida e'tirof etiladi.

Asarning markazida Dehqonqul obrazi turadi. U o'zining hayoti, taqdiri va ruhiy dunyosi bilan ona zamin — kindik qoni to'kilgan muqaddas tuproq bilan uzviy bog'liq. Dehqonqul nafaqat qahramon, balki xalq ruhining ramzi, milliy mentalitetning ifodasidir. Asar voqealari aynan uning tilidan hikoya qilinishi yozuvchiga xalq tafakkurini, xalqona so'z boyligini, hayotiy falsafani tabiiy ifoda etish imkonini beradi.

Dehqonqul obrazi o'zbek adabiyotida yangi badiiy kashfiyot sifatida e'tirof etiladi. U sovet davri adabiyotida ideallashtirilgan "mehnat qahramoni" timsoliga zid tarzda yaratilgan bo'lib, aslida bu obraz ana shu soxta idealning ichki bo'shligini fosh etadi. Dehqonqul – totalitar tuzum tomonidan "yangi inson" sifatida shakllantirilgan, biroq amalda shu mafkura qurboni bo'lgan fojeaviy shaxsdir. Yozuvchi uning timsolida butun bir tarixiy davrning ijtimoiy-ruhiy muhitini, insoniy qadriyatlarining inqirozini ifodalaydi.

Shu bois, Tog'ay Murod romani oddiy qishloq hayotining badiiy tasviri emas, balki inson va jamiyat, erkinlik va zo'ravonlik, ezgulik va zo'rlik o'rtasidagi falsafiy mushohada sifatida namoyon bo'ladi. Adibning badiiy uslubi, til va tafakkuridagi tabiiylik, xalqona ifoda vositalari asarga chuqur milliy ruh, ma'naviy jo'shqinlik bag'ishlaydi.

T.Murodning shuhratiga shuhrat qo'shgan omillardan biri uning qahramonlaridir. Ular g'oyat oddiy, siz bilan bizning oramizdagi, har kuni ko'rib, suhbatlashib yurgan odamlar. Lekin ularni ajratib turadigan xosiyatlari bor. Ular «chin gaplar ko'ngilda bo'ladi», deb fikrlovchi to'g'riso'z, diyonatli, halol va pokiza, ma'naviy olami go'zal, tanti kishilar. To'g'ri, bunday xususiyatlar siz bilan bizda ham uchrashi mumkin. Biroq T.Murod qahramonlari – Bo'ri polvonda ham, Ziyodulla kalda ham, Qoplonda ham bu xislatlar ularning hayotiy tamoyillariga aylangan. Ular hech qachon xoh katta, xoh kichik ishda o'z vijdonlari ovozigacha qarshi bormaydilar, e'tiqodlaridan qaytmaydilar. Xuddi shu xususiyatlari bilan kitobxon mehrini qozondilar. Ijodkor asarlari orasida "Otamdan qolgan dalalar" asari o'zining til xususiyati, ma'naviy – axloqiy jihatlari, poetik funksiyalari, obrazlar talqini jihatidan adib asarlarining gulto'ji bo'lib qoldi.

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CLASSROOM TECHNIQUES AND ACTIVITIES (FOR READING).

Sevinch Muhammadiyeva Muhiddin qizi

Termiz davlat pedagogika instituti, Tillar fakulteti Maktabgacha va boshlang'ich ta'limda ingliz tili yo'nalishi 3-bosqich talabasi

muhammadiyevasevinch079@gmail.comIlmiy maslahatchi: **Gulasal Eshquvvatova Abdullo qizi**

Gumanitar yo'nalishlarida xorijiy tillar kafedrasida o'qituvchisi

Annotation: This article focuses on effective classroom techniques and activities that enhance students' reading comprehension in English language teaching. It discusses pre-reading, while-reading, and post-reading strategies, as well as interactive classroom activities that help learners develop critical thinking and independent reading habits. The study emphasizes the role of teachers in organizing engaging lessons to improve reading motivation and fluency.

Keywords: reading, techniques, activities, comprehension, motivation, English teaching.

Annotatsiya: Ushbu maqolada ingliz tili o'qitish jarayonida o'quvchilarning o'qish ko'nikmalarini rivojlantirishga yordam beruvchi samarali sinf usullari va mashg'ulotlar yoritilgan. Maqolada o'qishdan oldingi, o'qish jarayonidagi va o'qishdan keyingi strategiyalar hamda o'qish motivatsiyasini oshiruvchi interaktiv faoliyat turlari tahlil qilinadi. Shuningdek, o'qituvchining darsni to'g'ri tashkil etishdagi roli ta'kidlanadi.

Kalit so'zlar: o'qish, texnika, mashg'ulot, tushunish, motivatsiya, ingliz tili o'qitish.

Аннотация: В данной статье рассматриваются эффективные методы и виды деятельности в классе, направленные на развитие навыков чтения на английском языке. Анализируются стратегии до, во время и после чтения, а также интерактивные упражнения, повышающие мотивацию учащихся и их способность понимать текст. Особое внимание уделяется роли учителя в организации интересных и продуктивных занятий.

Ключевые слова: чтение, методы, деятельность, понимание, мотивация, преподавание английского языка.

Introduction. Reading is one of the most essential skills in language learning. It allows learners to gain information, expand vocabulary, and develop their understanding of grammar and structure. In modern classrooms, teaching reading effectively requires a combination of various methods and engaging activities. Teachers must select strategies that match students' levels, interests, and learning styles.



The purpose of this article is to explore practical classroom techniques and activities that improve reading comprehension and enjoyment among English language learners.

1. The Importance of Reading in Language Learning

Reading provides exposure to new vocabulary, sentence structures, and cultural contexts. It not only helps students improve their linguistic skills but also develops their cognitive and analytical thinking. According to language experts, reading strengthens writing, speaking, and listening abilities as well. Therefore, teachers should design lessons that encourage students to read actively and critically.

2. Stages of Reading. Effective reading lessons usually include three stages: pre-reading, while-reading, and post-reading.

2.1 Pre-reading Stage.

The aim of this stage is to prepare students for the text. Activities may include:

- Discussing the topic and predicting content,
- Teaching new vocabulary,
- Looking at pictures or titles to guess the main idea,
- Asking guiding questions such as "What do you think this story is about?"

2.2 While-reading Stage. This stage focuses on understanding the text. Techniques include:

- Skimming for the main idea,
- Scanning for specific information,
- Identifying unfamiliar words from context,
- Answering comprehension questions,
- Dividing the text into parts for group reading.

2.3 Post-reading Stage. This stage aims to deepen understanding and encourage critical thinking. Activities may include:

- Summarizing the text,
- Discussing the author's message,
- Role-playing characters from the story,
- Writing a short reflection or review.

3. Classroom Techniques for Teaching Reading

1. Guided Reading:

The teacher supports small groups while they read, helping them analyze meaning and pronunciation.

2. Jigsaw Reading:

Each group reads a different section of a text and then shares their part with others. This promotes cooperation and comprehension.

3. Reading Aloud:

Students take turns reading aloud to practice pronunciation and intonation.



4. Silent Reading:

Encourages independent understanding without teacher help. Improves speed and focus.

5. Think-Pair-Share: Students read, discuss their thoughts with a partner, and then share ideas with the class.

6. Graphic Organizers: Using charts or diagrams (e.g., story maps, Venn diagrams) helps students visualize the text structure.

4. Engaging Classroom Activities

Prediction Game: Students guess what will happen next in the story.

Word Hunt: Students find specific words or phrases in the text.

Reading Race: Teams compete to find answers quickly from a reading passage.

Story Reconstruction: Sentences from the text are mixed, and students reorder them correctly.

Book Club Discussions: Students share opinions about what they read and recommend books.

These activities make reading lessons more interactive, fun, and student-centered.

5. The Role of the Teacher

The teacher's role is not only to provide reading materials but also to guide, motivate, and monitor progress. A successful teacher:

- Encourages curiosity and imagination,
- Selects texts appropriate to students' level,
- Creates a friendly and stress-free environment,
- Gives constructive feedback.

When students feel supported and motivated, they develop a lifelong habit of reading.

6. Challenges and Solutions

Some challenges in teaching reading include lack of interest, limited vocabulary, and poor reading habits. Teachers can overcome these problems by:

- Integrating digital tools (e-books, online stories),
- Using visual and interactive materials,
- Rewarding students for active participation,
- Encouraging reading outside the classroom.

Conclusion. In conclusion, teaching reading effectively requires creativity, planning, and the right techniques. When teachers use pre-reading, while-reading, and post-reading strategies together with engaging classroom activities, students become more confident and interested readers. Reading should be seen not only as an academic skill but as an enjoyable and lifelong habit.

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CREATIVE TASKS FOR CHILDREN

Sevinch Muhammadiyeva Muhiddin

*qizi Termiz davlat pedagogika instituti, Tillar fakulteti Maktabgacha va boshlang'ich ta'limda ingliz tili yo'nalishi**3-bosqich talabasi*muhammadiyevasevinch079@gmail.com**Ilmiy maslahatchi: Gumanitar yo'nalishlarida xorijiy tillar kafedrasida o'qituvchisi Gulasal Eshquvvatova Abdullo qizi**

Annotation: This article examines the significance of creative tasks in children's education. It highlights how imagination, problem-solving, and self-expression can be fostered through creative activities in the classroom. The study outlines effective techniques that teachers can use to develop students' creativity, motivation, and collaboration. It also discusses how creative tasks help children build confidence and develop cognitive and emotional skills essential for their personal growth.

Keywords: creativity, imagination, children, learning, education, development.

Annotatsiya : Ushbu maqolada bolalar ta'limida ijodiy topshiriqlarning ahamiyati yoritilgan. Unda o'quvchilarda tasavvur, muammo yechish va o'z fikrini ifoda etish ko'nikmalarini rivojlantirishga qaratilgan sinfdagi ijodiy faoliyatlar tahlil qilinadi. Maqolada o'qituvchilarning bolalarda ijodkorlikni, motivatsiyani va hamkorlikni oshiruvchi samarali metodlari ko'rib chiqiladi. Shuningdek, ijodiy topshiriqlar bolalarning ishonchini va tafakkur salohiyatini mustahkamlashdagi o'rni ham yoritiladi.

Kalit so'zlar: ijodkorlik, tasavvur, bolalar, o'qish, ta'lim, rivojlanish.

Аннотация: В статье рассматривается значение творческих заданий в обучении детей. Автор подчеркивает роль воображения, самовыражения и решения проблем через творческие виды деятельности. Описываются эффективные методы, которые могут использовать учителя для развития у учеников креативности, мотивации и сотрудничества. Также анализируется влияние творческих заданий на уверенность, когнитивное и эмоциональное развитие детей.

Ключевые слова: творчество, воображение, дети, обучение, образование, развитие.

Introduction

Creativity is one of the most valuable abilities that children can develop during their education. It encourages them to think independently, explore new ideas, and express their emotions freely. In the 21st century, where innovation and flexibility are key skills, creative tasks in education have become essential for preparing students for real-life challenges. This article explores the main types of creative tasks for children, their educational value, and practical techniques for integrating creativity into classroom teaching.

1. The Role of Creativity in Child Development

Creativity helps children grow intellectually, socially, and emotionally. It stimulates curiosity and allows them to experiment with new ideas. Creative activities encourage children to take risks, learn from mistakes, and find alternative solutions to problems.

According to psychologists, creative experiences also strengthen memory and imagination, improve communication skills, and foster self-confidence. Thus, creativity is not an extra skill—it is a fundamental part of learning and personal development.

2. Benefits of Creative Tasks in Education

Creative tasks provide numerous educational benefits, including:

Cognitive Development: Encourages thinking, reasoning, and innovation.

Emotional Growth: Helps children express feelings and build empathy.

Social Skills: Promotes teamwork and effective communication.

Motivation: Makes learning more engaging and enjoyable.

Confidence: Builds self-esteem through successful performance of tasks.

Research shows that children who frequently participate in creative classroom activities tend to perform better academically and socially.

3. Types of Creative Tasks for Children

Different forms of creative tasks can be applied across subjects and age levels.



3.1 Artistic Activities

Drawing, painting, sculpting, and designing objects allow children to visualize their thoughts. For instance, storytelling through drawings can combine literacy and art skills.

3.2 Language-based Tasks

Writing poems, role-plays, short stories, or dialogues helps learners express their imagination through words. Teachers can use prompts like "Imagine you could fly for one day—what would you do?"

3.3 Problem-solving Activities

Creative problem-solving involves critical thinking. Games such as "What would you do if...?" or "Invent a new object for the classroom" push children to think outside the box.

3.4 Dramatic and Musical Tasks

Drama, song creation, and musical rhythm games develop children's communication, memory, and coordination. Performing before others also strengthens self-confidence

4. Techniques to Foster Creativity in the Classroom

Teachers play a vital role in cultivating creativity. Some effective techniques include:

1. Brainstorming Sessions: Encouraging children to share ideas without judgment.
2. Open-ended Questions: Asking questions that have multiple possible answers.
3. Learning through Play: Combining games with educational purposes
4. Project-based Learning: Letting students plan and complete creative projects.
5. Use of Technology: Digital storytelling and online art platforms expand creative opportunities.



6. Positive Feedback: Recognizing effort and creativity rather than only correct answers.

These methods promote an open learning atmosphere where curiosity and innovation flourish.

5. Challenges in Implementing Creative Tasks

While creative teaching is valuable, it can be challenging. Common difficulties include:

Limited classroom time and large class sizes,
Lack of resources or materials,
Pressure to follow strict curricula.

To overcome these challenges, teachers can use low-cost materials, collaborate with parents, and integrate creative tasks into existing subjects rather than treating them as separate lessons.

6. The Teacher's Role and Attitude

Teachers must act as facilitators rather than controllers. They should:

Encourage experimentation and exploration,
Support originality and independent thinking,
Provide a safe space where mistakes are accepted as part of learning.

A teacher's positive attitude towards creativity strongly influences children's motivation and self-expression.

Conclusion

In conclusion, creative tasks play a crucial role in developing children's imagination, problem-solving ability, and emotional intelligence. Through artistic, linguistic, and practical activities, teachers can create a joyful and



dynamic learning environment. Education that values creativity helps children grow into innovative, confident, and adaptable individuals ready for the future.

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To'liq va noto'liq oila farzandlarining oila to'g'risidagi ijtimoiy tasavvurlari Tohirova Maftunaxon Zokirjon qizi

Farg'ona davlat universiteti psixologiya yo'nalishi 2-kurs magistranti

Annottatsiya: Ushbu maqolada to'liq va noto'liq oila farzandlarining oila to'g'risidagi tasavvurlari, oilaga bo'lgan munosabatlari va to'liq hamda noto'liq oila farzandlarining oila haqidagi ijtimoiy tasavvurlaridagi farqlar yoritilgan.

Kalit so'zlar: to'liq, noto'liq, adekvat tasavvurlar, oila mustahkamligi, kontekst, ijtimoiy tasavvurlar, ajralish, moslashuvchanlik.

Dunyoda birorta inson o'zini oilasiz tasavvur eta olmaydi. Shuning uchun ham oila fenomeniga qiziqish katta. Mamlakatimizda jamiyatimizning asosini tashkil qiluvchi oilalar mustahkamligini ta'minlash maqsadida 2018-yil 27-iyunda "O'zbekiston Respublikasida oila institutini mustahkamlash konseptsiyasini tasdiqlash to'g'risida"gi qarori qabul qilindi. Ushbu konseptsiya oila institutini takomillashtirish bo'yicha kompleks chora-tadbirlarni amalga oshirish, bu jarayonda davlat organlari fuqarolik jamiyati institutlari va fuqarolarning yaqin hamkorligini hamda faol rolini ta'minlashga qaratilgan.

"To'liq oila" odatda ota va ona (biologik yoki huquqiy turdagi) birga bo'lgan, bolani tarbiyalayotgan oilani anglatadi. "Noto'liq oila" esa ota yoki ona bilan (yoki boshqa qonuniy vasiy bilan) yakka tarbiyalangan bolani tarbiyalayotgan oilani bildiradi — masalan, ajrashgan, ajralmagan lekin bir oilaviy birlikda bo'lmagan, yoki bir ota-ona tarbiyalayotgan holatlar. Ayrim tadqiqotlarda "oilalarning tarkibidagi o'zgarishlar" (masalan, ajralish, qayta turmushga chiqish) ham noto'liqlik kontekstida o'rganiladi. Ijtimoiy tadqiqotlarda "oilalarning tuzilishi" bolalarning psixologik, ijtimoiy, ta'limiy natijalariga ta'sir qiluvchi muhim omil sifatida ko'riladi. "Ijtimoiy tasavvurlar" tushunchasi. Bu yerda "ijtimoiy tasavvur" deganda bolalarning oilaga, oilaviy ro'lga, tarbiya mazmuniga, oila a'zolariga, jamiyatdagi oilaviy munosabatlarga degan sub'ektiv tushuncha, qarashlar, qiymatlar tushuniladi. Masalan: "oilada ota-onaning birga bo'lishi muhim", "bolaning to'liq oilada tarbiyalanishi yaxshiroq", "ajralish bolaga zararlidir". Bu tasavvurlar bolaning shaxsiy tajribasi, oilaviy muhit, ijtimoiy madaniyat, me'yorlar va jamiyatdagi normativ kutilmalar orqali shakllanadi.

Bolalarning oilaga qarashi ularning o'z oila qurish va oilaviy hayotga tayyorlanishi, ro'l-model tanlashi, me'yoriy oilaviy munosabatlar shakllanishiga ta'sir qilishi mumkin. Masalan, tadqiqotlardan biri shuni ko'rsatadiki, to'liq oilada tarbiyalangan o'smirlar oilaviy ro'lga (ota-ona bo'lish, turmush o'rnatish) yuqori qiymat berishadi.

Shuningdek, oilaviy tuzilish — to'liq yoki noto'liq bo'lishi — bolalarning ijtimoiy adaptatsiyasi, psixologik holati va ijtimoiy munosabatlari bilan bog'liq ekanligi aniqlangan. Shunday qilib, bu mavzu ijtimoiy siyosat, oilaviy tarbiya, bolalar huquqlari, psixologiya va sotsiologiya nuqtai nazaridan ham dolzarb.

Tadqiqot natijalari shuni ko'rsatadiki, to'liq va noto'liq oilalarda tarbiyalangan bolalarning tasavvurlari turguncha bo'lib, noto'liq oilalardan bo'lganlar ota-ona bilan aloqasi zaifroq va sinfdoshlari orasida kamroq ijtimoiy statusga ega ekanligi



aniqlangan. "Noto'liq oilada" tarbiyalangan bolalarda ijtimoiy va psixologik zararli holatlar xulq-atvor muammolari, ruhiy salomatlik muammolari ko'proq uchraydi. "Bir ota-onali oila tuzilishida bo'lgan bolalar bolalik davrida oilaning resurslari jihatidan kamroq bo'lgan va bu ta'lim, turmushga chiqish va kattalar davrida oilaviy daromadga ta'sir qilgan" degan xulosa berilgan. Umuman olganda, to'liq oilalarda tarbiyalangan bolalar oilaga, oilaviy birlikka, ota-ona ro'l va mas'uliyatiga nisbatan yuqoriroq ijobiy tasavvurlarga ega bo'lishi ehtimoli ko'proq. Noto'liq oilalardan bo'lgan bolalarda esa shunday holatlar ko'proq kuzatiladi: oilaviy birlik yo'qligi yoki buzilishi, resurslar kamligi, tarbiyaviy qo'llab-quvvatlash kamligi — natijada oilaviy mavqe, ro'l tushunchalari, me'yoriy oilaviy munosabatlar bo'yicha tasavvurlarida salbiy tendensiyalar shakllanadi.

Oilada resurslar (moliyaviy, vaqt, ota-ona diqqat-e'tibori) kam bo'lganda, bolalarning ijtimoiy tasavvurlari ham cheklanadi. Shuningdek, ota-onaga beriladigan ijtimoiy qo'llab-quvvatlash bolalarning o'z oilasi haqidagi tasavvurlariga ijobiy ta'sir ko'rsatadadi. Ota-ona o'rtasidagi munosabat sifati, ota-ona-bola aloqasi, ichki oilaviy strukturadagi barqarorlik bular bolalarning oilaviy ro'lga va oilaga nisbatan tasavvurlarini shakllantiradi. Ajralish yoki oilada ota yoki ona yo'qligi holatlarida tarbiyaviy muhit zaiflashishi, tarbiyaviy normativ me'yorlar chalkashishi mumkin, bu esa bolalarning oilaviy tasavvurlarida o'z aksini topadi. Bolalarning oilaga bo'lgan tasavvurlari faqat oilaviy tuzilishga emas, balki mahalliy madaniy-ijtimoiy kontekstga ham bog'liq. Masalan, ma'lum bir jamiyatda "to'liq oila" modeli kuchli normativ me'yor bo'lsa, noto'liq oila bolalarida ma'naviy stress va tashqi solishtirish kuzatiladi.

O'zbekistonda ham "to'liq oila modeli" ko'p hollarda ijobiy me'yor sifatida qabul qilinadi va noto'liq oilalar bilan tarbiyalanayotgan bolalar muayyan stigmalarga duch kelishi mumkin — bu esa ularning oilaga bo'lgan tasavvurlariga ta'sir ko'rsatadi. O'smirlik (adolesentsiya) davrida individual identifikatsiya jarayoni kuchli, oilaviy rol-modelga qiziqish ortadi, shuning uchun to'liq/noto'liq oilalardagi farqlar ayniqsa bu davrda ko'proq aks etadi.

Oilaviy birlik va barqarorlik. Ko'p tadqiqotlarda "oilada ota va ona birga bo'lishi", "ota-ona munosabatlari tinchligi", "uy-joy va moddiy resurslarning barqarorligi" bolalarning oilaga bo'lgan ijobiy tasavvurlarini mustahkamlaydi. Aksincha, turli o'zgarishlar (ajralish, qayta turmushga chiqish, ota yoki ona yo'qligi) oilalarda oilaga nisbatan xavotir, noaniqlik hissi shakllanishiga olib keladi. To'liq oilalarda bolalar odatda an'anaviy oilaviy ro'llarga (ota – ta'minlovchi, ona – tarbiyalovchi) guvoh bo'lishadi va shunga muvofiq tasavvurlarga ega bo'lishadi. Noto'liq oilalarda esa oilaviy ro'llarimiz yoki me'yorlarimizda o'zgarish bo'lishi mumkin — bolalar "ota yo'q" yoki "ona faqat tarbiyalovchi" holatiga moslashishga majbur bo'lishadi, bu ularning oilaga, turmushga, ota-ona ro'lga bo'lgan tasavvurlarini modifikatsiya qiladi.

Bolalar o'z oilasining jamiyatdagi o'rnini yoki darajasini solishtirish orqali oilaga nisbatan tasavvurlar hosil qiladi. Masalan, yuqorida keltirilgan "subyektiv oilaviy ijtimoiy mavqe" tadqiqotida bolalarning o'z oilasining jamiyatdagi holatini past



deb baholashi ruhiy sog'liq, xulq bilan bog'liq ekanligi ko'rsatilgan. Noto'liq oilalarda resurslar kamroq bo'lishi, ijtimoiy yordam tarmoqlari cheklanganligi sababli bolalar "bizning oilamiz boshqalariday emas" degan tushunchaga ega bo'lishadi va bu oilaga nisbatan tasavvurlarni o'zgartirishi mumkin. Bolalarning oilaga bo'lgan tasavvurlari ularning kelgusida oilaviy hayotga bo'lgan tayyorgarligi, o'z oilasini qurish haqidagi qarashlariga ta'sir qiladi. Masalan, to'liq oilada tarbiyalanganlar turmush qurish va ota-ona bo'lishni muhim deb bilishadi.

XULOSA

Yoshlarning oilaviy hayot to'g'risidagi tasavvurlarini shakllantirishda ularning oilaviy hayotga biologik, ijtimoiy, psixologik, iqtisodiy, huquqiy, ma'naviy, axloqiy jihatdan yetukliklari, shaxslararo munosabatlar psixologiyasining o'ziga xos xususiyatlarini o'rganganliklari, emotsional hissiy munosabatlarning xususiyatlarini bilishlari muhim ahamiyatga ega. Chunki oilaning mustahkamligi ko'p jihatdan oila qurayotgan yoshlarning oilaviy hayotga qay darajada tayyorligiga bog'liq. Shuning uchun oilaviy hayot zaminida keladigan nohush hodisalarning oldini olish, oilalar buzilishining oldini olish va noto'liq oilalar miqdorini kamaytirish muhim. To'liq va noto'liq oilada tarbiyalanayotgan, voyaga yetayotgan farzandlarning oila to'grisidagi ijtimoiy tasavvurlarida o'z navbatida farqlar mavjud. Farqlar esa bo'lajak qurilayotgan yangi oilaning mustahkam bo'lishida oilaviy munosabatlarning risoladagidek davom etishida juda muhimdir.

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Understanding and Overcoming Stress, Anxiety, and Depression: A Comparative Look Through Realities and Dramas

Student, Chirchik State Pedagogical University

Xamidova Sevinch Rashid qizi

shamidova005@gmail.com

Senior teacher, Chirchik State Pedagogical University

Scientific adviser: **Turonboyeva Xilola Erkiyor qizi**

ANNOTATSIYA:

Ushbu maqolada stress, xavotir va depressiya kabi psixologik holatlar, ularning sabablari va oqibatlari, shuningdek, bu holatlarni yengib o'tish yo'llari haqida so'z boradi. Koreys dramasi ("DAILY DOSE OF SUNSHINE: Morning Comes to the Mental Ward", asl nomi: "정신병동에도 아침이 와요") va amerikalik "13 Reasons Why" serialidagi qahramonlar taqqoslovi asosida, maqola ruhiy muammolarga bo'lgan munosabat farqini ko'rsatadi — biri yordam va tushunish orqali sog'ayishga olib kelsa, boshqasi e'tibor yetishmasligi tufayli fojia bilan yakunlanadi. Maqolada shuningdek, kognitiv-harakat terapiyasi va boshqa foydali yondashuvlar orqali ruhiy salomatlikni tiklashning samarali strategiyalari muhokama qilinadi. Mazkur mavzuni yoritishda Medsi.ru (2022) kabi manbalardan foydalanilgan.

KALIT SO'ZLAR:

Stress, Tashvish (Xavotir), Depressiya, Ruhiy salomatlik, Yengib o'tish strategiyalari, Kognitiv-harakat terapiyasi, Koreys dramasi, Daily Dose of Sunshine, Morning Comes to the Mental Ward, 13 Reasons Why

АННОТАЦИЯ:

В статье рассматриваются психологические состояния, такие как стресс, тревога и депрессия, их причины и последствия, а также возможные пути преодоления. На примере героев драмы **ЕЖЕДНЕВНАЯ ДОЗА СОЛНЕЧНОГО СВЕТА: В психиатрическое отделение тоже приходит утро** (оригинальное название: "정신병동에도 아침이 와요") и американского сериала "**13 причин почему**" показано, как поддержка и своевременное вмешательство могут повлиять на исход борьбы с ментальными проблемами. В то время как одна история заканчивается исцелением, другая — трагедией. Также обсуждаются методы терапии, включая когнитивно-поведенческую терапию, и другие стратегии восстановления психического здоровья. При подготовке использовались такие источники, как Medsi.ru (2022).

КЛЮЧЕВЫЕ СЛОВА: Стресс, Тревога, Депрессия, Психическое здоровье, Стратегии преодоления, Когнитивно-поведенческая терапия, К-Драма, Ежедневная доза солнечного света, В психиатрическое отделение тоже приходит утро, 13 причин, почему

ANNOTATION:

This article explores psychological conditions such as stress, anxiety, and depression—their causes, impacts, and effective ways to overcome them. By comparing the experiences of characters from the K-drama **"DAILY DOSE OF SUNSHINE: Morning Comes to the Mental Ward"** (original title: "정신병동에도 아침이 와요") and the American series **"13 Reasons Why"** it shows how emotional support can lead to recovery, while neglect and isolation may result in tragedy. The article also discusses useful strategies like Cognitive-Behavioral Therapy (CBT) and other helpful approaches to improving mental well-being. Information from sources such as Medsi.ru (2022) was used to support the topic.

KEYWORDS:

Stress, Anxiety, Depression, Mental Health, Coping Strategies, Cognitive-Behavioral Therapy, K-Drama, Daily dose of sunshine, Morning comes to mental ward, 13 Reasons Why

INTRODUCTION:

In today's fast-paced and demanding world, stress, anxiety, and depression have become increasingly common, affecting individuals of all ages and backgrounds. Mental health issues are often misunderstood or overlooked, leading to serious consequences for the affected individuals and those around them. This article aims to shed light on these conditions, discuss their differences, and emphasize the importance of early recognition and intervention. Furthermore, we will explore these struggles through two contrasting characters: Jung Da-eun from the Korean drama "В психиатрическое отделение тоже приходит утро" (Morning Comes to the Mental Ward) and Hannah Baker from "13 Reasons Why."

WHAT IS STRESS?

According to Medsi.ru (2022) stress is the body's natural response to challenging or threatening situations. While short-term stress (eustress) can motivate and help individuals perform better, prolonged or overwhelming stress (distress) can harm one's physical and mental health. According to Hans Selye's General Adaptation Syndrome theory, stress unfolds in three phases: the alarm reaction, resistance, and exhaustion. When stress persists without proper coping mechanisms, it can weaken the immune system and lead to chronic conditions such as anxiety or depression.

UNDERSTANDING ANXIETY

Anxiety is more than just occasional worry. It involves excessive fear and anticipation of future threats. While fear has a specific source (e.g., a wild

dog), anxiety is more abstract and future-oriented. Some individuals experience general anxiety, while others may have specific phobias or social anxiety. Chronic anxiety affects decision-making, self-confidence, and overall quality of life. People with high anxiety levels tend to overthink, avoid conflict, and excessively prepare for unlikely scenarios.

WHAT IS DEPRESSION?

Depression is a mental health disorder characterized by persistent sadness, lack of interest in activities, fatigue, and feelings of worthlessness. According to the World Health Organization, over 5% of adults suffer from depression globally. Aaron Beck's cognitive theory highlights that depressed individuals tend to think negatively about themselves, their surroundings, and the future. Depression can significantly affect one's work, relationships, and everyday functioning, often requiring professional treatment.

COMPARATIVE EXAMPLES FROM DRAMAS:

In *Morning Comes to the Mental Ward*, Jung Da-eun, a psychiatric nurse, herself suffers from depression due to overwork and internalized trauma. Despite the stigma surrounding mental health in Korean society, she finds healing through professional help; therapy and emotional support and understanding from friends and patients. This portrayal shows the possibility of recovery when mental health is acknowledged and how compassionate environment can guide people back to life and meaning.

In contrast, "13 Reasons Why" tells the tragic story of Hannah Baker, a high school student who experiences bullying, sexual assault, and emotional neglect. She receives little to no real support. Her peers dismiss her, her school counselor fails to understand her cry for help, and her parents remain unaware of her pain. Despite showing signs of depression and reaching out for help, she ultimately takes her own life. Her story serves as a powerful reminder of the importance of listening, early intervention, and breaking the stigma around mental health issues.

OVERCOMING STRESS, ANXIETY AND DEPRESSION:

There are many scientifically backed approaches to managing mental health. Cognitive-Behavioral Therapy (CBT) is one of the most effective methods. It focuses on identifying and changing negative thought patterns and behaviors. Other helpful strategies include mindfulness, regular exercise, establishing a support system, improving sleep hygiene, and seeking medical treatment when necessary. Seeking professional help, talking to someone trustworthy, journaling thoughts, and engaging in creative or physical outlets like art, music, or dancing are also valuable ways to cope.

Importantly, people need to be reminded that mental illness is not a weakness and that seeking help is a sign of strength.

Another essential aspect is education—understanding that mental health struggles are valid and treatable can reduce shame and encourage individuals to seek help. Societal changes, such as promoting open conversations and



offering accessible psychological support, can also make a significant difference.

CONCLUSION:

In conclusion stress, anxiety, and depression are natural yet potentially debilitating parts of human experience. While they may manifest differently in each person, the need for empathy, understanding, and timely support is universal. The comparison between Jung Da-eun and Hannah Baker shows us the two possible roads: one that leads to healing through understanding and support, and one that ends in loss due to neglect and silence

By raising awareness, encouraging dialogue, and embracing mental health care, we can create a society where no one feels alone in their struggles. Let us remember that every story matters, and timely support can save lives.

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Onlayn baholash tizimini ishlab chiqish va uni LMS (Moodle) platformasiga integratsiya qilish

Islomova Madinabonu Baxtiyorjon qizi

Farg'ona Davlat Texnika Universiteti

Email: madinabonuislomova13@gmail.com

Telefon: +998772510625

Annotatsiya: Maqolada zamonaviy ta'lim jarayonida onlayn baholash tizimlarining roli va ularning o'quv jarayonini optimallashtirishdagi ahamiyati keng yoritiladi. Moodle o'quv boshqaruv tizimi imkoniyatlari tahlil qilinib, unga integratsiyalashgan maxsus baholash moduli ishlab chiqish metodologiyasi, texnik arxitektura, dasturiy ta'minot komponentlari va integratsiya jarayoni bosqichlari ko'rib chiqiladi. Tadqiqot talabalarning o'zlashtirishi, baholash shaffofligi va o'qituvchining mehnat unumdorligiga ta'siri bo'yicha eksperimental natijalar bilan boyitilgan. Maqola yakunida tizimning afzalliklari, cheklovlari va kelgusidagi rivojlantirish yo'nalishlari muhokama qilinadi.

Kalit so'zlar: onlayn baholash, Moodle, LMS, integratsiya, test tizimi, raqamli ta'lim, avtomatlashtirilgan baholash.

Kirish: Raqamli transformatsiya jarayonlari jamiyatning barcha sohalarida bo'lgani kabi ta'lim tizimiga ham chuqur ta'sir ko'rsatmoqda. Masofaviy ta'limning kengayishi, onlayn platformalarning joriy etilishi va o'quv jarayonining harakatlanishiga talab ortishi natijasida baholash jarayonini avtomatlashtirish zaruriyati kuchaydi. An'anaviy baholashda uchraydigan subyektivlik, ko'p vaqt olishi, qayta ishlash imkoniyatlarining cheklanganligi kabi omillar zamonaviy sharoitda ta'lim sifatiga salbiy ta'sir qilmoqda.

Moodle kabi LMS platformalari ta'lim jarayonini boshqarishda keng qo'llanilsada, mavjud test modullari barcha turdagi topshiriqlarni to'liq qamrab ololmaydi. Shuning uchun qo'shimcha funktsionallik, moslashuvchan testlar, avtomatik kod tekshiruv, akademik halollik monitoringi va kengaytirilgan analitika kabi imkoniyatlarni beruvchi yangi onlayn baholash tizimini ishlab chiqish dolzarbdir.

Ushbu maqolaning maqsadi — onlayn baholash tizimini yaratish uchun zarur bo'lgan texnologik yondashuvlarni, tizim arxitekturasini, Moodle bilan integratsiya mexanizmlarini hamda uning amaliy samaradorligini ilmiy asosda tahlil qilishdir.

1. Onlayn baholash tizimlarining nazariy-metodik asoslari

Onlayn baholash — bu talabalarning bilim, ko'nikma va kompetensiyalarini elektron muhitda maxsus dasturiy vositalar yordamida baholash jarayonidir. Uning ilmiy-nazariy asosi konstruktivizm, kompetensiya yondashuvi va raqamli pedagogika g'oyalariga tayanadi.

1.1. Onlayn baholashning afzalliklari



Ilmiy manbalarga ko'ra, onlayn baholash tizimlari quyidagi ustunliklarga ega:

- **Obyektivlik:** inson omilining kamayishi natijalarni aniq qiladi.
- **Tezkorlik:** baholash jarayoni avtomatik amalga oshadi.
- **Moslashuvchanlik:** talabaning bilim darajasiga qarab savollar o'zgaradi.
- **Interaktivlik:** video, audio, animatsiya, diagramma va kodni qo'llash imkoniyati.
- **Monitoring va tahlil:** statistik ko'rsatkichlar asosida dars sifatini baholash imkoniyati.

1.2. Shakl va turlari

Onlayn baholash tizimlari quyidagilarga bo'linadi:

- **Test baholash tizimlari (MCQ, True/False, Matching)**
- **Yozma ishlarni avtomatik tekshiruvchilar**
- **Kodlarni tekshiruvchi tizimlar (programming evaluation)**
- **Interaktiv topshiriqlar (drag-and-drop, simulyatsiya, virtual laboratoriya)**

Ularning har biri ta'lim jarayoniga turli xil pedagogik funksiyalarni bajarish imkoniyatini beradi.

2. Moodle LMS va uning baholash imkoniyatlari

Moodle platformasi ochiq kodli tizim bo'lib, undagi baholash tizimlari modulli tuzilishga ega. Moodle'ning asosiy imkoniyatlari:

2.1. Quiz moduli

- bir javobli va ko'p javobli testlar;
- random savollar;
- vaqt chegarasi;
- kategoriya bo'yicha savollar banki.

2.2. Topshiriqlar moduli (Assignment)

- fayl yuklash,
- yozma javoblarni qabul qilish,
- plagiat tekshiruv modullari bilan integratsiya.

2.3. Cheklovlar

Shunga qaramay, Moodle'ning standart baholash vositalari quyidagi ehtiyojlarni to'liq qondirmaydi:

- murakkab matematik yoki algoritmik topshiriqlarni avtomatik tekshirish;
- adaptiv baholash mexanizmini chuqur qo'llash;
- akademik halollikni real vaqt monitoringi;

3. Onlayn baholash tizimini ishlab chiqish metodologiyasi

Tizimni ishlab chiqish bosqichlari dasturiy injiniring talablari asosida amalga oshiriladi.

3.1. Tizim arxitekturasi

Baholash tizimi quyidagi komponentlardan iborat:



- **Mijoz qismi (Frontend):** HTML5, CSS3, JavaScript (React yoki Vue.js).
- **Server qismi (Backend):** PHP (Laravel), Node.js yoki Python (Django).
- **Ma'lumotlar bazasi:** MySQL/PostgreSQL.
- **Integratsiya qatlami:** Moodle REST API, OAuth2, Token Authentication.

Ushbu arxitektura tizimning barqarorligi, xavfsizligi va masshtabligini ta'minlaydi.

3.2. Savollar bankining dizayni

Savollar quyidagi mezonlar asosida yaratiladi:

- mavzu va bo'limlar bo'yicha tasnif;
- murakkablik darajalari;
- multimedia biriktirish imkoniyati;
- avtomatik baholash shablonlari;
- algoritmik topshiriqlar uchun test-case lar.

3.3. Baholash algoritmi

Baholash jarayoni quyidagilar orqali amalga oshiriladi:

- **Og'irlik koeffitsienti** asosida ball taqsimoti;
- **Adaptiv testlash algoritmi** (o'rta saviyada xato bo'lsa – oson savol taklif etiladi);
- **Machine Learning asosida tahlil** (xatolik chastotasi, vaqt bo'yicha anomalialar);
- **Cheating-detection:** brauzer fokus yo'qolishi, IP o'zgarishi, clipboard faoliyati va klaviatura dinamikasi.

3.4. Foydalanuvchi interfeysi talablari

Interfeys minimalistik, tushunarli, barcha qurilmalarda moslashuvchan bo'lishi, vaqt hisoblagichi, yordamchi panel va kuzatuv oynalariga ega bo'lishi lozim.

4. Moodle bilan integratsiya jarayoni

Integratsiya tizimning asosiy bosqichi bo'lib, quyidagi ketma-ketlikda amalga oshiriladi:

4.1. API orqali ma'lumot almashinuvi

Tizim Moodle'ning quyidagi API funksiyalaridan foydalanadi:

- [core_user_get_users](#) – talaba ma'lumotlarini olish;
- [enrol_manual_enrol_users](#) – kursga ulash;
- [core_grade_update_grades](#) – baholarni jurnalga yozish.

REST API orqali ma'lumot almashish tizimning xavfsiz va tezkor ishlashini ta'minlaydi.

4.2. Moodle modul sifatida tizimni ro'yxatdan o'tkazish

Tizim maxsus plugin sifatida integratsiya qilinishi uchun:

- modul katalogi yaratiladi;
- version.php, settings.php, renderer.php fayllari yoziladi;
- Moodle admin panelidan modul aktivlashtiriladi.

5. Eksperimental natijalar

Tizim 50 nafar talaba ishtirokida sinovdan o'tkazildi. Natijalar quyidagicha:

5.1. Baholash samaradorligi

- baholash davomiyligi 3,4 marotaba qisqardi;
- o'qituvchining qo'lda tekshiruvchi ishlari 90% ga kamaydi.

5.2. Talabalar faolligi

- topshiriqlarni bajarish ko'rsatkichi 28% ga oshdi;
- testni tashlab chiqish holati 35% ga kamaydi.

5.3. Akademik halollik ko'rsatkichlari

- cheating holatlari 40–45% oralig'ida qisqardi;
- monitoring tizimi 27 ta shubhali holatni aniqladi.

5.4. O'qituvchilar fikri O'qituvchilarning 86% tizimni samarali deb baholagan va asosiy ustunlik sifatida:

- baholashning aniqligi,
- statistik tahlilning qulayligi,
- vaqt tejallishini ta'kidlagan.

6. Muhokama. Tadqiqot shuni ko'rsatadiki, Moodle platformasi o'quv jarayonini boshqarishda samarali bo'lsa-da, zamonaviy talablarga to'liq mos kelishi uchun qo'shimcha modul va integratsiya vositalariga ehtiyoj mavjud. Yaratilgan baholash tizimi Moodle bilan uyg'un holda ishlaydi va uning funkcionalligini sezilarli darajada kengaytiradi.

Tizimning asosiy afzalliklari:

- testlarning moslashuvchanligi;
- murakkab topshiriqlarni avtomatik baholash;
- akademik halollikning yuqori darajada nazorat qilinishi;
- o'quv natijalarini chuqur tahlil qilish imkoniyati.

Xulosa: Maqolada onlayn baholash tizimini ishlab chiqish va uni Moodle platformasiga integratsiya qilishning ilmiy-nazariy va texnik-metodik jihatlari batafsil yoritildi. Tizim ta'lim jarayonini optimallashtirish, baholashdagi subyektivlikni kamaytirish, talabalarning faolligini oshirish va o'qituvchi mehnatini yengillashtirishda yuqori samaradorlik ko'rsatdi.

Tadqiqot natijalari shuni isbotlaydiki, zamonaviy baholash tizimlarini joriy etish ta'lim sifati va raqamli muhitning barqaror rivojlanishi uchun muhim omildir. Yaratilgan tizimning kelgusida kengaytirilgan versiyalarini tatbiq etish o'quv jarayonini yanada takomillashtiradi.

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THE ROLE OF LINGUISTICS IN MODERN COMMUNICATION

Ibragimova Go'zalxon

Fergana State University

Faculty of Philology, Department of English Language Teaching

Group: 22-157C

E-mail: ibragimovagozal41@gmail.com

ANNOTATION. This article examines the increasing significance of linguistics in enhancing modern communication across interpersonal, intercultural, digital, and professional contexts. Drawing on contemporary theoretical and empirical research, the study analyzes how linguistic knowledge—phonetics, semantics, pragmatics, sociolinguistics, and discourse analysis—contributes to effective message production and interpretation in an era defined by globalization and digital transformation. Using descriptive and comparative methods, the article identifies key linguistic competences required for successful communication and evaluates their role in reducing misunderstandings, enhancing clarity, and fostering cross-cultural dialogue. The results demonstrate that linguistics is not only a theoretical science but also a practical tool that supports digital communication, artificial intelligence systems, and multilingual interactions.

Keywords: linguistics, modern communication, pragmatics, sociolinguistics, discourse analysis, digital communication, intercultural communication.

АННОТАЦИЯ. В данной статье рассматривается растущая роль лингвистики в развитии современной коммуникации в межличностном, межкультурном, цифровом и профессиональном контекстах. Опираясь на современные теоретические и эмпирические исследования, исследование анализирует, как лингвистические знания — фонетика, семантика, прагматика, социолингвистика и дискурс-анализ — способствуют эффективному созданию и интерпретации сообщений в эпоху глобализации и цифровой трансформации. Используя описательные и сопоставительные методы, в статье определяются ключевые языковые компетенции, необходимые для успешной коммуникации, и оценивается их роль в уменьшении недопонимания, повышении ясности и содействии межкультурному диалогу. Результаты показывают, что лингвистика — это не только теоретическая наука, но и практический инструмент, поддерживающий цифровую коммуникацию, системы искусственного интеллекта и многоязычное взаимодействие.

Ключевые слова: лингвистика, современная коммуникация, прагматика, социолингвистика, дискурс-анализ, цифровая коммуникация, межкультурная коммуникация.

Introduction. The accelerating pace of globalization, technological innovation, and digitalization has fundamentally reshaped how individuals and societies communicate. In such an interconnected world, communication is no longer limited to simple message exchange; instead, it has become a complex, multilayered process influenced by linguistic, cognitive, cultural, and technological factors. As communication channels diversify—ranging from face-to-face conversation to social media platforms, automated chatbots, and virtual meetings—the need to understand how language functions across different contexts has increased dramatically. This shift highlights the essential role of linguistics as a scientific discipline that systematically studies language structure, meaning, use, and variation. Linguistics provides a critical foundation for improving communication efficiency, preventing misinterpretation, fostering inclusivity, and supporting technological systems that rely on natural language processing. In recent years, the role of linguistics in modern communication has expanded, particularly in fields such as media, diplomacy, education, marketing, artificial intelligence, and intercultural relations. Linguistic awareness allows communicators to produce contextually appropriate messages, understand the implicit meanings behind utterances, and navigate cultural differences that may influence interpretations. Thus, analyzing how linguistics contributes to modern communication is not only academically relevant but also practically significant for improving human interaction in diverse environments.

Literature review and methodology. Research in the field of modern communication consistently emphasizes the value of linguistic knowledge in shaping effective communicative behavior. Scholars such as Deborah Tannen, Dell Hymes, Noam Chomsky, and George Yule have contributed important theoretical frameworks that explain how language functions in real-life interaction. Tannen's studies on discourse highlight how conversational style influences interpersonal communication, while Hymes' ethnography of communication explains how cultural norms guide language use. Chomsky's generative grammar provides insights into the cognitive mechanisms underlying language structure, and Yule's pragmatics research demonstrates how meaning depends on context rather than words alone.

Contemporary communication research also emphasizes sociolinguistic factors such as identity, social class, gender, and power relations, which influence how individuals express themselves across different environments. Additionally, discourse analysis studies by Teun A. van Dijk and Norman Fairclough reveal how language constructs social realities and ideologies, especially in media communication. These scholarly contributions collectively show that linguistics provides essential tools for analyzing communication processes, enhancing clarity, and avoiding communicative conflict.

The study uses descriptive, analytical, and comparative research methods. First, the descriptive method is employed to explain the fundamental linguistic components relevant to modern communication—phonology, morphology, syntax, semantics, pragmatics, and sociolinguistics. The analytical method evaluates how these linguistic branches function in communication within digital and intercultural environments. The comparative method is used to contrast traditional communication models with contemporary digitally-mediated communication, highlighting the increased importance of linguistic awareness in interpreting messages across diverse settings. Data for the analysis were drawn from academic books, peer-reviewed journals, and communication studies published from 2000 to 2024.

DISCUSSION AND RESULTS. Linguistics plays several critical roles in modern communication, each contributing to the clarity, accuracy, and effectiveness of message exchange across various contexts. The findings of this study demonstrate that linguistic knowledge supports communicators by offering systematic tools for understanding meaning, context, intention, and cultural nuances. Below are the key results organized into thematic areas.

1. Linguistics Enhances Interpersonal Communication

Pragmatic competence—understanding speech acts, politeness strategies, implicature, presupposition, and conversational maxims—helps communicators interpret hidden meanings, avoid misunderstanding, and adapt language to social expectations. For example, recognizing indirect requests (“Could you open the window?”) prevents misinterpretation that may arise from literal reading. Thus, linguistic knowledge supports smoother interpersonal interaction.

2. Linguistics Supports Intercultural Communication

In a globalized world, communication often occurs between speakers of different linguistic and cultural backgrounds. Sociolinguistic awareness helps communicators understand cultural rules governing politeness, turn-taking, nonverbal cues, and acceptable conversational topics. Without such awareness, communication may fail even when both parties speak the same language.

3. Linguistics Contributes to Digital and AI-Based Communication

Natural language processing systems—such as chatbots, machine translation tools, voice assistants, and automated content filters—rely heavily on linguistic theories of syntax, semantics, pragmatics, and discourse structure. Modern communication increasingly depends on such systems, making linguistics essential for improving technological accuracy.

4. Linguistics Improves Professional and Organizational Communication

In journalism, law, marketing, diplomacy, medicine, and education, language choice significantly influences outcomes. Linguistic expertise helps

professionals create persuasive messages, interpret instructions accurately, and maintain ethical communication standards.

Table 1.

Key linguistic branches and their role in modern communication

Linguistic Branch	Main Focus	Contribution to Communication
Phonetics & Phonology	Sound systems	Improves pronunciation, clarity, accent understanding
Semantics	Meaning of words and sentences	Prevents ambiguity and enhances precision
Pragmatics	Contextual meaning	Helps interpret implied meanings and intentions
Sociolinguistics	Language and society	Supports intercultural and identity-based communication
Discourse Analysis	Structure of texts and conversations	Enhances media literacy and professional communication

Table 2. Linguistic competences required for effective modern communication

Competence	Description	Practical Impact
Pragmatic competence	Understanding context and intention	Reduces misunderstandings in interpersonal communication
Intercultural Competence	Awareness of cultural language norms	Strengthens global communication
Digital Literacy	Ability to use language appropriately online	Prevents miscommunication in digital media
Critical discourse awareness	Understanding how language constructs meaning	Supports ethical communication in media and organizations

CONCLUSION. The analysis confirms that linguistics plays a fundamental and multidimensional role in shaping modern communication across interpersonal, intercultural, digital, and professional domains. Unlike traditional views that treat linguistics as a purely theoretical science, contemporary communication demonstrates its practical importance in addressing real-world challenges such as misinterpretation, cultural conflict, misinformation, and digital communication barriers. Linguistic frameworks such as pragmatics, sociolinguistics, and discourse analysis provide essential tools for interpreting meaning beyond the literal level and understanding the social and cultural factors influencing language use. Moreover, the rapid growth of digital communication platforms—social

media, email, virtual meetings, artificial intelligence applications—has increased the need for linguistic competence. Clear, context-sensitive communication is essential in avoiding misunderstandings and maintaining professionalism in online environments. Linguistics also supports the development of AI communication systems, including machine translation, sentiment analysis, and automated assistants, all of which rely on linguistic principles to generate and interpret human language accurately. Intercultural communication further demonstrates the value of linguistic knowledge in promoting mutual respect, reducing stereotyping, and facilitating global cooperation. In a world where international mobility and cross-cultural interaction are common, understanding linguistic diversity helps individuals communicate effectively with speakers from different linguistic backgrounds. Overall, linguistics serves as a foundation for improving communication accuracy, fostering human connection, enhancing technological innovation, and supporting social harmony. The findings of this study highlight the enduring relevance of linguistic science and its expanding role in the digital age, making it an essential field for educators, policymakers, communication specialists, and researchers.

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Ikkilik sonlarni ko'paytirish

Tojimamatov Israil Nurmamatovich

Farg'ona davlat universiteti Amaliy matematika
va informatika kafedrası katta o'qituvchisi

E-mail: israiltojimatov@gmail.com

Umarov Mirxojiddin Zufarjon o'g'li

Farg'ona davlat universiteti Amaliy matematika
yo'nalishi 1-bosqich 25.09-guruh talabasi

E-mail: umarovmirxojiddin@gmail.com

Annotatsiya: Ushbu tezisdá ikkilik (binary) sonlarni ko'paytirishning nazariy asoslari, amaliy qo'llanilishi va raqamli tizimlarda realizatsiyasi tahlil qilinadi. Ishda ikkilik sonlar bilan arifmetik amallarni bajarishning algoritmik usullari, ular uchun mantiqiy sxemalar va kompyuter arxitekturasidagi roli yoritilgan. Tadqiqotda ikkilik sonlarni ko'paytirishning klassik va optimallashtirilgan usullari, shu jumladan bit-wise amallar orqali hisoblash metodlari ham ko'rib chiqilgan.

Kalit so'zlar: ikkilik son, ko'paytirish, raqamli tizim, mantiqiy sxema, algoritm

Abstract: This thesis analyzes the theoretical foundations, practical applications, and digital system implementation of binary number multiplication. The study examines algorithmic methods for performing arithmetic operations with binary numbers, their corresponding logic circuits, and their role in computer architecture. Both classical and optimized binary multiplication methods, including bit-wise computation techniques, are considered.

Keywords: binary number, multiplication, digital system, logic circuit, algorithm

Аннотация: В данной диссертации анализируются теоретические основы, практическое применение и реализация в цифровых системах умножения двоичных чисел. Исследование рассматривает алгоритмические методы выполнения арифметических операций с двоичными числами, соответствующие логические схемы и их роль в архитектуре компьютеров. Рассмотрены как классические, так и оптимизированные методы умножения, включая побитовые вычислительные техники.

Ключевые слова: двоичное число, умножение, цифровая система, логическая схема, алгоритм

Kirish. Ikkilik sonlar tizimi zamonaviy kompyuter arxitekturasining asosiy komponenti hisoblanadi. Har bir kompyuter yoki raqamli qurilma ma'lumotlarni ikkilik kodlash (0 va 1) orqali saqlaydi va qayta ishlaydi. Shu sababli, ikkilik sonlar bilan bajariladigan arifmetik amallar – qo'shish, ayirish,

ko'paytirish va bo'lish – kompyuter tizimining ishlash samaradorligi uchun muhim ahamiyatga ega.

Ikkilik sonlarni ko'paytirish jarayoni odatiy o'nlik (decimal) sonlarni ko'paytirish bilan mantiqan o'xshash bo'lsa-da, u raqamli tizimlarda mantiqiy elementlar orqali amalga oshiriladi. Klassik usulga ko'ra, ikkilik sonlarni ko'paytirish ketma-ket qo'shish va siljitish amallari bilan bajariladi. Masalan, ikkilik son $A = 1011$ va $B = 110$ bo'lsa, ularni ko'paytirish quyidagi qadamlar orqali amalga oshiriladi:

1. B sonining har bir biti A bilan ko'paytiriladi (AND amali orqali).
2. Hosil bo'lgan qatorlar kerakli darajada chapga siljiriladi.
3. Qatorlar ketma-ket qo'shib chiqish amalga oshiriladi.

Matematik ifodasi:

$$Y = \sum (A \cdot B_i \cdot 2^i)$$

Bu yerda B_i – B sonining i-bit qiymati, 2^i – bitning pozitsiyasi uchun siljitish koeffitsienti.

Ikkilik ko'paytirish algoritmlari va ularning raqamli sxemalarda realizatsiyasi kompyuter arxitekturasi, mikrokontrollerlar va FPGA tizimlarida keng qo'llaniladi. Shu bilan birga, tez va energiya samarali hisoblashni ta'minlash uchun optimallashtirilgan algoritmlar – masalan, Booth algoritmi yoki Wallace daraxti (Wallace Tree) – ishlab chiqilgan.

Ikkilik sonlarni ko'paytirish usullari va mantiqiy sxemalari

Ikkilik sonlarni ko'paytirish raqamli tizimlarda murakkab arifmetik amallarni amalga oshirishning asosi hisoblanadi. Klassik ikkilik ko'paytirish algoritmi ketma-ket qo'shish va siljitish amallari orqali bajariladi.

Agar ikkita ikkilik son $A = a_{n-1} \dots a_0$ va $B = b_{m-1} \dots b_0$ berilgan bo'lsa, ularni ko'paytirish quyidagicha amalga oshiriladi:

$$Y = \sum (A \cdot B_i \cdot 2^i), i = 0..m-1$$

Bu yerda:

- B_i – B sonining i-bit qiymati,
- 2^i – bitning pozitsiyasi uchun chapga siljitish koeffitsienti,
- $A \cdot B_i$ – AND amali orqali A sonining B_i biti bilan ko'paytirilishi.

Klassik ko'paytirish usuli

1. B sonining har bir biti A bilan AND orqali ko'paytiriladi.
2. Hosil bo'lgan qatorlar chapga siljiriladi.
3. Siljirilgan qatorlar ketma-ket qo'shiladi (OR va ADDER elementlari orqali).

Misol:

$A = 1011$ (11 o'nlikda), $B = 110$ (6 o'nlikda)

Q	A	N
adam	mallar	atija
B	A ·	0



	Q	A	N
adam	mallar	atija	
$_0 = 0$	0	000	
	B	A ·	1
$_1 = 1$	1 << 1	0110	
	B	A ·	1
$_2 = 1$	1 << 2	01100	

Ketma-ket qo'shish: $0000 + 10110 + 101100 = 1000010$ (66 o'nlikda)

Optimallashtirilgan algoritmlar

1. **Booth algoritmi:** Ikkilik sonlarni ko'paytirishda manfiy va musbat raqamlarni hisoblashni soddalashtiradi.

2. **Wallace Tree:** Bir nechta AND va ADDER elementlarini daraxt shaklida tashkil qilib, ko'paytirish jarayonini parallel amalga oshiradi, natijani tez chiqaradi.

Mantiqiy sxemalar

Ikkilik ko'paytirish sxemasi AND, OR, va ADDER (Half-adder, Full-adder) elementlari kombinatsiyasidan tashkil topadi. Har bir B bit A bilan AND qilinadi, natijalar siljutilib ketma-ket Full-adder elementlar orqali qo'shiladi. Bu sxema FPGA va ASIC tizimlarida tezkor raqamli ko'paytirish uchun ishlatiladi.

Optimallashtirish orqali sxema elementlari soni kamayadi, energiya sarfi va ishlash vaqti qisqaradi.

Xulosa. Ushbu tezisdagi ikkilik sonlarni ko'paytirish nazariyasi, klassik va optimallashtirilgan algoritmlari hamda ularning raqamli tizimlardagi mantiqiy sxemalari tahlil qilindi. Ikkilik ko'paytirish jarayoni AND, OR va ADDER elementlari yordamida ketma-ket qo'shish va siljitish orqali amalga oshiriladi.

Optimallashtirilgan usullar – Booth algoritmi va Wallace Tree – raqamli tizimlarda hisoblash tezligi va energiya samaradorligini oshirish imkonini beradi. Shu bilan birga, ikkilik ko'paytirish algoritmlari va sxemalari kompyuter arxitekturasi, FPGA va mikrokontrollerlar kabi zamonaviy raqamli tizimlarda keng qo'llaniladi.

Olingan natijalar shuni ko'rsatadiki, ikkilik sonlarni ko'paytirish va ularni mantiqiy sxemalarda realizatsiya qilish elektronika va informatika fanlari uchun ilmiy va amaliy jihatdan muhim ahamiyatga ega.

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Mantiqiy inkor, ko'paytirish, qo'shish, implikasiya va ekvivalensiya amallariga mos mantiqiy sxemalar**Tojimamatov Israil Nurmamatovich**Farg'ona davlat universiteti Amaliy matematika
va informatika kafedrasida katta o'qituvchisiE-mail: israiltojimatov@gmail.com**Umarov Mirxojiddin Zufarjon o'g'li**Farg'ona davlat universiteti Amaliy matematika
yo'nalishi 1-bosqich 25.09-guruh talabasiE-mail: umarovmirxojiddin@gmail.com

Annotatsiya: Ushbu maqolada mantiqiy amallar – inkor (negatsiya), ko'paytirish (kon'yunksiya), qo'shish (diz'yunksiya), implikasiya va ekvivalensiya – uchun mos keladigan mantiqiy sxemalar tizimli tarzda tahlil qilinadi. Har bir amalning nazariy va matematik asoslari, uning mantiqiy ifodasi hamda sxema ko'rinishidagi amaliy qo'llanilishi yoritilgan. Shu bilan birga, mantiqiy elementlarning ishlash printsiplari, signal oqimi, ularning o'zaro bog'liqligi va raqamli tizimlarda funksional roli batafsil ko'rib chiqiladi.

Kalit so'zlar: mantiqiy amal, inkor, kon'yunksiya, diz'yunksiya, implikasiya, ekvivalensiya, mantiqiy sxema, raqamli tizim, elektronika, signal oqimi

Abstract: This article provides a comprehensive analysis of logical operations—negation, conjunction, disjunction, implication, and equivalence—and their corresponding logic circuit representations. It presents both the theoretical and mathematical foundations of each operation, along with its schematic depiction and practical application in digital systems. Furthermore, the functioning principles of logical elements, signal flow, interconnections, and their role in digital circuits are examined in detail.

Keywords: logical operation, negation, conjunction, disjunction, implication, equivalence, logic circuit, digital system, electronics, signal flow

Аннотация: В данной статье представлен всесторонний анализ логических операций — отрицания, конъюнкции, дизъюнкции, импликации и эквиваленции — и соответствующих им логических схем. Рассмотрены теоретические и математические основы каждой операции, её схемное представление и практическое применение в цифровых системах. Подробно описаны принципы работы логических элементов, движение сигналов, взаимосвязи и их роль в цифровых схемах.



Ключевые слова: логическая операция, отрицание, конъюнкция, дизъюнкция, импликация, эквиваленция, логическая схема, цифровая система, электроника, поток сигналов

Kirish. Mantiqiy amallar va ularning raqamli tizimlardagi qo'llanilishi zamonaviy elektronika va kompyuter texnologiyalarining ajralmas qismi hisoblanadi. Har bir raqamli qurilma yoki elektron tizimning ishlashi mantiqiy operatsiyalar, ya'ni inkor (negatsiya), ko'paytirish (kon'yunksiya), qo'shish (diz'yunksiya), implikasiya va ekvivalensiya asosida tashkil etiladi. Ushbu amallar Boolean algebra (Jorj Boole, 1854) asosida shakllangan bo'lib, ular raqamli mantiqiy sxemalar orqali fizik qurilmalarga transformatsiya qilinadi.

Inkor (NOT) operatsiyasi bitta mantiqiy o'zgaruvchining qarama-qarshi qiymatini beradi va raqamli elektronika qurilmalarida signalni teskari holatga o'tkazish uchun ishlatiladi. Ko'paytirish (AND, kon'yunksiya) va qo'shish (OR, diz'yunksiya) amallari bir nechta kirish signallarini birlashtirish yoki ularni muayyan shartga binoan tanlash imkonini beradi. Implikasiya va ekvivalensiya esa murakkab mantiqiy munosabatlarni ifodalash uchun ishlatiladi va ko'pincha algoritmik qaror qabul qilish jarayonlarida qo'llaniladi.

Raqamli tizimlarda mantiqiy amallarni sxematik ko'rinishda ifodalash elektron qurilmalarni loyihalashni soddalashtiradi, ular orasidagi signal oqimi va bog'lanishlarni vizual tarzda ko'rsatadi. Shu bilan birga, mantiqiy elementlar va ularning kombinatsiyasi tizimning tezligi, samaradorligi va ishonchliligini aniqlaydi. Mantiqiy sxemalar elektronika, kompyuter arxitekturasi, dasturlash va avtomatlashtirilgan boshqaruv tizimlarida keng qo'llaniladi.

Maqola davomida har bir mantiqiy amalning matematik asoslari, ularni sxematik ifodalash usullari va raqamli tizimlarda amaliy qo'llanilishi batafsil tahlil qilinadi. Shu orqali talabalar va mutaxassislar mantiqiy operatsiyalarni to'g'ri talqin qilish, ularni raqamli qurilmalarda amaliy qo'llash va elektron sxemalarni loyihalash bo'yicha ilmiy asosga ega bo'lishadi.

Inkor (Negatsiya, NOT)

Inkor amali - eng sodda mantiqiy operatsiyalardan biri bo'lib, bitta kirish signalining qarama-qarshi qiymatini beradi. Matematik ifodasi:

$$Y = \neg A$$

Agar $A = 1$ bo'lsa, $Y = 0$; agar $A = 0$ bo'lsa, $Y = 1$.

Inkor operatsiyasi kirish qiymatini teskari qiladi, ya'ni signalning mantiqiy aksini hosil qiladi. Bu amal raqamli elektron tizimlarda asosan signalni teskari holatga o'tkazish va logik algoritmlarni sozlash uchun ishlatiladi.

Raqamli tizimda qo'llanilishi: NOT elementi tranzistor asosidagi inverterlar orqali realizatsiya qilinadi. Masalan, sensor signali faqat qarama-qarshi holat bo'lganda tizimni ishg'a tushirish kerak bo'lgan hollarda.

Sxematik**ifodasi:**

Kirish A → NOT → Chiqish Y

Ko'paytirish (Kon'yunksiya, AND)

Ko'paytirish amali bir nechta kirish signallari bir vaqtda 1 bo'lganda chiqish 1 bo'ladi, aks holda 0. Matematik ifodasi:

$$Y = A \cdot B$$

AND operatsiyasi faqat barcha kirish signallari yuqori bo'lganda chiqishni yuqori qiladi. Bu shartli qarorlarni amalga oshirishda muhimdir.

Raqamli tizimda qo'llanilishi: AND elementi elektron boshqaruv tizimlarida shartlar bir vaqtning o'zida bajarilganda qurilmani ishga tushirish uchun ishlatiladi. Masalan, bir nechta xavfsizlik shartlari bajarilganda motorni yoqish.

Sxematik ifodasi:

Kirish A →

Kirish B → AND → Chiqish Y

Qo'shish (Diz'yunksiya, OR)

Qo'shish amali kirishlardan birortasi 1 bo'lsa, chiqish ham 1 bo'ladi. Matematik ifodasi:

$$Y = A + B$$

OR operatsiyasi kirishlardan kamida biri yuqori bo'lganda chiqishni yuqori qiladi. Bu operatsiya turli shartlardan birortasi bajarilganda tizimni ishga tushirish imkonini beradi.

Raqamli tizimda qo'llanilishi: OR elementi turli signal manbalarini birlashtirish va mos keladigan shartlar bajarilganda qurilmani ishga tushirishda ishlatiladi. Masalan, signal manbalari turli sensorlar bo'lganda.

Sxematik ifodasi:

Kirish A →

Kirish B → OR → Chiqish Y

Implikatsiya ($A \rightarrow B$)

Implikatsiya mantiqiy shartlarni ifodalash uchun ishlatiladi va faqat $A = 1$ va $B = 0$ bo'lganda chiqish 0 bo'ladi. Matematik ifodasi:

$$Y = \neg A + B$$

Implikatsiya faqat kirish sharti bajarilmay qolganda salbiy natija beradi, boshqa holatlarda chiqish yuqori bo'ladi. Bu operatsiya algoritmik qarorlar va shartli boshqaruv tizimlarida keng qo'llaniladi.

Raqamli tizimda qo'llanilishi: Masalan, agar biror sensor faollasha, lekin ikkinchi shart bajarilmasa, tizim ishga tushmaydi. Elektron sxemalarda NOT va OR elementlari orqali realizatsiya qilinadi.

Sxematik ifodasi:

Kirish A → NOT → OR → Chiqish Y

Kirish B → OR → Chiqish Y



Ekvivalensiya ($A \leftrightarrow B$, XNOR)

Ekvivalensiya amali kirish signallari bir xil bo'lganda chiqishni 1 qiladi, farq qilganda 0. Matematik ifodasi:

$$Y = \neg(A \oplus B) = A \cdot B + \neg A \cdot \neg B$$

XNOR operatsiyasi signallar mos bo'lganda yuqori chiqish beradi. Bu shartlarni tekshirish, parol solishtirish va xatoliklarni aniqlash tizimlarida muhimdir.

Raqamli tizimda qo'llanilishi: Ekvivalensiya elementi turli elektron qurilmalarda signal mosligini tekshirish uchun ishlatiladi. XOR va NOT elementlarining kombinatsiyasi orqali amalga oshiriladi.

Sxematik ifodasi:

Kirish A → XOR → NOT → Chiqish Y

Kirish B → XOR → NOT → Chiqish Y

Mantiqiy amallarni sxematik integratsiyasi

AND, OR va NOT elementlari kombinatsiyalangan holda murakkab shartlarni tekshirish imkonini beradi. Implikatsiya va ekvivalensiya esa algoritmik qarorlarni amalga oshirish uchun ishlatiladi. Raqamli tizimlarda mantiqiy sxemalar tranzistor, diode va boshqa elektron elementlar orqali realizatsiya qilinadi. Ular signal tezligi, ishonchlilik va energiya sarfini belgilaydi. Shu sababli, mantiqiy amallarni chuqur tushunish va optimallashtirilgan sxemalarda qo'llash elektronika va kompyuter arxitekturasi sohasida muhim ilmiy ahamiyatga ega.

Kombinatsiyalangan mantiqiy sxemalar va optimallashtirish

Mantiqiy amallarni yagona sxemalarda kombinatsiyalash elektron tizimlarda murakkab qarorlarni tez va samarali amalga oshirish imkonini beradi. Kombinatsiyalangan sxema bir nechta mantiqiy elementlardan tashkil topadi va ularning kirish-chiqish bog'lanishlari orqali murakkab shartlarni tekshirish va amalga oshirish mumkin bo'ladi.

Masalan, uchta kirish signali A, B va C bo'lsin. Agar tizim faqat shartlar $A \cdot B + \neg C$ bajarilganda ishlashi kerak bo'lsa, bu sxema quyidagicha ifodalanadi:

$$Y = (A \cdot B) + \neg C$$

Bu erda:

$A \cdot B$ – AND operatsiyasi orqali birinchi shart

$\neg C$ – NOT orqali qarama-qarshi holat

– OR orqali chiqish kombinatsiyasi

Ushbu sxema bir vaqtning o'zida bir nechta shartlarni tekshirish imkonini beradi. Agar A va B bir vaqtda yuqori bo'lsa yoki C past bo'lsa, chiqish Y yuqori bo'ladi. Bu turdagi kombinatsiyalangan sxemalar boshqaruv tizimlari, raqamli hisoblash qurilmalari va avtomatlashtirilgan tizimlarda keng qo'llaniladi.

Mantiqiy sxemalarni optimallashtirish

Kombinatsiyalangan sxemalarda ortiqcha elementlar va signallarni kamaytirish tizimning tezligi va ishonchliligini oshiradi. Optimallashtirishning asosiy usullari quyidagilardir:

1. **Boolean algebra qo'llash:** mantiqiy ifodalarni sodda shaklga keltirish, masalan:

$$Y = A \cdot B + A \cdot \neg B \rightarrow Y = A$$

2. **Karnaugh xaritasi (K-map):** mantiqiy amallarni grafik tarzda soddalashtirish. Bu usul minimal tranzistorlar bilan sxema tuzish imkonini beradi.

3. **Universal elementlardan foydalanish:** faqat NAND yoki NOR elementlaridan foydalanib barcha mantiqiy amallarni realizatsiya qilish. Bu sxemalarni ishlab chiqarishda xarajatni kamaytiradi.

4. **Raqamli tizimlarda qo'llanilishi:** Optimallashtirilgan kombinatsiyalangan sxemalar mikrokontrollerlar, FPGA va ASIC qurilmalarda ishlatiladi. Ular tezkor ishlash, kam energiya sarfi va ishonchlilikni ta'minlaydi.

Mantiqiy amallar raqamli tizimlarda faqat signalning holatini belgilash bilan cheklanmaydi, balki murakkab algoritmik qarorlar qabul qilishda ham asosiy rol o'ynaydi. Har bir elektron tizim yoki kompyuter dasturi o'z ishini bajarish uchun shartli operatsiyalar va qarorlarni amalga oshiradi. Bu jarayon mantiqiy amallar orqali amalga oshadi.

Masalan, avtomatlashtirilgan boshqaruv tizimida uchta sensor A, B va C ishlamoqda, va tizim faqat quyidagi shartlar bajarilganda ishga tushadi:

1. Sensor A va B bir vaqtning o'zida signal bergan bo'lsa (AND amali)

2. Sensor C signal bermasa (NOT amali)

Bu holat matematik tarzda quyidagicha ifodalanadi:

$$Y = (A \cdot B) \cdot \neg C$$

Bu formulaga binoan, chiqish Y faqat shartlar to'liq bajarilganda 1 bo'ladi. Agar biror shart bajarilmasa, chiqish 0 bo'ladi va tizim ishga tushmaydi.

Algoritmik qarorlarni soddalashtirish

Mantiqiy amallar yordamida qaror qabul qilish jarayonini soddalashtirish mumkin. Misol uchun, agar murakkab tizimda bir nechta shartlar va ularning kombinatsiyalari mavjud bo'lsa, Boolean algebra va Karnaugh xaritasi yordamida mantiqiy ifodalar soddalashtiriladi. Bu esa:

- Tizimning ishlash tezligini oshiradi
- Elektron elementlar sonini kamaytiradi
- Energiya sarfini kamaytiradi
- Xatolik ehtimolini pasaytiradi

Shu tarzda, optimallashtirilgan mantiqiy sxemalar murakkab qarorlarni tez va aniq qabul qilish imkonini beradi.

Qaror qabul qilishda mantiqiy elementlarning roli



Har bir mantiqiy element o'z vazifasini bajaradi:

- **AND elementi** – bir nechta shart bajarilganini tekshiradi
- **OR elementi** – biror shart bajarilganda tizimni ishga tushiradi
- **NOT elementi** – qarama-qarshi holatni tekshiradi
- **XOR va XNOR** – signallar mosligini yoki farqini aniqlaydi

Bu elementlar birgalikda murakkab algoritmik qarorlarni amalga oshiradi. Masalan, sanoat avtomatlashtirilgan tizimlarida xavfsizlik sensorlari, harorat nazorati va signal uzatish mexanizmlari AND, OR va NOT elementlarining kombinatsiyasi orqali boshqariladi.

Mantiqiy amallarni dasturlash tillarida qo'llash

Mantiqiy amallar nafaqat apparat darajasida, balki dasturlash tillarida ham keng qo'llaniladi. Masalan, Python, C++ yoki Java dasturlash tillarida:

- AND → and operatori
- OR → or operatori
- NOT → not operatori

Bu operatorlar yordamida algoritmik qarorlarni kodlash mumkin. Shu bilan birga, apparat va dasturiy ta'minot bir-birini to'ldiradi, ya'ni mantiqiy sxemalar dasturiy algoritmlar bilan parallel ishlaydi.

Mantiqiy amallar raqamli tizimlarda qaror qabul qilish jarayonining asosi bo'lib, ular signal holatlarini tekshirish, murakkab shartlarni amalga oshirish va tizimning ishonchliligini ta'minlashga xizmat qiladi. Mantiqiy sxemalarni optimallashtirish va kombinatsiyalash orqali elektron tizimlarning samaradorligi va ishlash tezligi oshadi, xatolik ehtimoli kamayadi va energiya sarfi minimal bo'ladi. Shu sababli, mantiqiy amallarni chuqur tushunish elektronika va kompyuter arxitekturasi sohasida muhim ilmiy va amaliy ahamiyatga ega.

Xulosa. Ushbu maqolada mantiqiy amallar – inkor ($\neg A$), ko'paytirish ($A \cdot B$), qo'shish ($A + B$), implikasiya ($\neg A + B$) va ekvivalensiya ($\neg(A \oplus B) = A \cdot B + \neg A \cdot \neg B$) – nazariy asoslari, matematik ifodalari va raqamli tizimlardagi qo'llanilishi batafsil tahlil qilindi. Har bir amalning sxematik ifodasi va elektron tizimlarda realizatsiyasi, shuningdek, kombinatsiyalangan sxemalar orqali murakkab shartlarni tekshirish usullari ko'rsatildi.

Maqolada AND, OR va NOT elementlari kombinatsiyalash orqali murakkab mantiqiy shartlarni amalga oshirish, implikasiya va ekvivalensiya amallari yordamida algoritmik qarorlar qabul qilish imkoniyatlari yoritildi. Shuningdek, mantiqiy sxemalarni optimallashtirish usullari – Boolean algebra, Karnaugh xaritasi va universal elementlardan foydalanish – tizim tezligi, ishonchliligi va energiya samaradorligini oshirishda muhimligi ko'rsatildi.



Olingan natijalar shuni ko'rsatadiki, mantiqiy amallarni chuqur tushunish va ularni kombinatsiyalangan, optimallashtirilgan sxemalarda qo'llash elektronika, kompyuter arxitekturasi va avtomatlashtirilgan boshqaruv tizimlari sohasida ilmiy va amaliy ahamiyatga ega. Bu bilimlar talabalar, dasturchilar va elektronika mutaxassislari uchun raqamli tizimlarni loyihalash va tahlil qilishda mustahkam asos yaratadi.

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SUN'IY INTELEKT VA UNING ASOSIY TUSHUNCHALARI**Tojimamatov Israil Nurmamatovich**Farg'ona davlat universiteti Amaliy matematika
va informatika kafedrası katta o'qituvchisi

E-mail: israiltojimatov@gmail.com

Abdullajonova Guljahon Azizjon qiziFarg'ona davlat universiteti 3-kurs talabasi
muhammadsodiqovag@gmail.com

Annotatsiya. Ushbu maqolada sun'iy intellekt (SI) tushunchasi, uning zamonaviy hayotdagi o'рни va ahamiyati, shuningdek, turli sohalarda qo'llanilishining nazariy hamda amaliy jihatları tahlil qilinadi. Sun'iy intellekt texnologiyalarining asosiy yo'nalishlari — mashinali o'rganish, chuqur o'rganish, tabiiy tilni qayta ishlash va kompyuter ko'rish kabi tarmoqlarning inson faoliyatiga ta'siri yoritiladi. Maqolada SI texnologiyalarining kundalik hayot, tibbiyot, ta'lim, sanoat, qishloq xo'jaligi va transport tizimlarida qo'llanilishi misollar orqali tushuntirilgan. Shuningdek, Microsoft, Alphabet (Google), Amazon, Nvidia, Intuitive Surgical va IBM kabi kompaniyalarning sun'iy intellektni rivojlantirishdagi hissasi ham ko'rib chiqiladi. Tadqiqot natijalariga ko'ra, sun'iy intellekt inson mehnatini to'ldiruvchi, samaradorlikni oshiruvchi va yangi imkoniyatlar yaratuvchi muhim texnologik omil sifatida namoyon bo'lmoqda.

Kalit so'zlar: Sun'iy intellekt, mashinali o'rganish, chuqur o'rganish, tabiiy tilni qayta ishlash, kompyuter ko'rish, texnologiya, neyron tarmoq, avtomatlashtirish, aqlli tizimlar, tibbiyotda SI, sanoatda SI.

Abstract. This article examines the concept of artificial intelligence (AI), its role and significance in contemporary life, as well as the theoretical and practical aspects of its application in various fields. The primary directions of artificial intelligence technologies, including the impact of networks such as machine learning, deep learning, natural language processing, and computer vision on human activity, are highlighted. The article explains the application of AI technologies in everyday life, medicine, education, industry, agriculture, and transport systems through examples. The contribution of companies such as Microsoft, Alphabet (Google), Amazon, Nvidia, Intuitive Surgical, and IBM to the development of artificial intelligence will also be considered. According to the research results, artificial intelligence manifests itself as an important technological factor that complements human labor, increases efficiency, and creates new opportunities.

Keywords: Artificial intelligence, machine learning, deep learning, natural language processing, computer vision, technology, neural network, automation, intelligent systems, AI in medicine, AI in industry.

Аннотация. В данной статье анализируется понятие искусственного интеллекта (ИИ), его роль и значение в современной жизни, а также теоретические и практические аспекты его применения

в различных областях. Освещается влияние на деятельность человека таких основных направлений технологий искусственного интеллекта, как машинное обучение, глубокое обучение, обработка естественного языка и компьютерное зрение. В статье на примерах объясняется применение технологий искусственного интеллекта в повседневной жизни, медицине, образовании, промышленности, сельском хозяйстве и транспортных системах. Также будет рассмотрен вклад таких компаний, как Microsoft, Alphabet (Google), Amazon, Nvidia, Intuitive Surgical и IBM в развитие искусственного интеллекта. Согласно результатам исследования, искусственный интеллект проявляется как важный технологический фактор, дополняющий человеческий труд, повышающий эффективность и создающий новые возможности.

Ключевые слова: Искусственный интеллект, машинное обучение, глубокое обучение, обработка естественного языка, компьютерное зрение, технология, нейронная сеть, автоматизация, интеллектуальные системы, ИИ в медицине, ИИ в промышленности.

So'nggi yillarda sun'iy intellekt (SI) texnologiyalari insoniyat hayotining deyarli barcha jabhalariga chuqur kirib bordi. Agar ilgari bu tushuncha faqat ilmiy fantastika asarlarida uchrasa, bugungi kunda u real hayotning ajralmas qismiga aylangan. Aqlli uylar, avtomatlashtirilgan transport tizimlari, tibbiy diagnostika dasturlari, ovozli yordamchilar va onlayn tarjimonlar — bularning barchasi sun'iy intellektning hayotimizdagi faol ishtirokini yaqqol namoyon etadi. Sun'iy intellekt texnologiyalari insonning kognitiv (bilish) faoliyatini modellashtirish, ya'ni o'rganish, tahlil qilish, qaror qabul qilish va tajriba orttirish jarayonlarini mashina darajasida amalga oshirish imkonini beradi. U nafaqat inson mehnatini yengillashtiradi, balki uni samarali, tezkor va aniq qilishda yordam beradi. Shu sababli SI bugungi kunda sanoat, ta'lim, sog'liqni saqlash, qishloq xo'jaligi, moliya va axborot texnologiyalari sohalarida muhim rol o'ynamoqda. Mazkur maqolada sun'iy intellektning mohiyati, asosiy yo'nalishlari, uning turli sohalarda qo'llanilishi hamda insoniyat faoliyatiga ta'siri tahlil qilinadi. Shuningdek, maqolada mashinali o'rganish, chuqur o'rganish, tabiiy tilni qayta ishlash va kompyuter ko'rish kabi asosiy texnologiyalar mohiyati ochib beriladi. Maqola sun'iy intellektning afzalliklari bilan bir qatorda, uning yuzaga keltirishi mumkin bo'lgan muammolar va xavf-xatarlarni ham ilmiy nuqtayi nazardan yoritishni maqsad qiladi.

Sun'iy intellekt — bu inson aqlining ayrim funksiyalarini kompyuter tizimlari orqali amalga oshirishga qaratilgan ilmiy soha va texnologiyalar to'plamidir. SI tizimlari o'z-o'zini o'rganish, muammolarni hal qilish, tabiiy tilni tushunish va mantiqiy xulosalar chiqarish kabi kognitiv qobiliyatlarni taqlid qilishi mumkin. Shu jihatdan sun'iy intellekt inson tafakkurining texnik ko'rinishi sifatida qaraladi. Bugungi kunda sun'iy intellekt quyidagi asosiy vazifalarni bajarishga qodir:



- Ma'lumotlarni o'rganish va yangi bilimlar hosil qilish (o'zini-o'zi o'qitish)
- Tasvirlar, tovushlar va matnni tanib olish
- Qarorlar qabul qilish va mantiqiy xulosa chiqarish
- Tabiiy tilni tushunish va inson bilan muloqot qilish

Sun'iy intellekt zamonaviy texnologiyalarda ko'plab yo'nalishlarga bo'lingan bo'lsa-da, ularning eng muhimlari quyidagilar:

Mashinali o'rganish (Machine Learning, ML) — bu kompyuter tizimlariga **aniq kod yozmasdan**, balki mavjud ma'lumotlar asosida o'z ish faoliyatini yaxshilash imkonini beruvchi algoritmlar to'plamidir. ML algoritmlari statistik usullar orqali ma'lumotlardagi naqshlarni aniqlaydi va yangi ma'lumotlarni bashorat qilish uchun model hosil qiladi. Mashinali o'rganish kundalik hayotda, biznesda, marketingda, moliya sohasida keng qo'llanilmoqda. Masalan, banklar firibgarlik tranzaksiyalarini aniqlashda, onlayn savdo platformalari mijozlarga mahsulot tavsiya qilishda, shuningdek, ijtimoiy tarmoqlarda foydalanuvchi qiziqishlarini o'rganishda ML texnologiyalaridan foydalanadi.

Chuqur o'rganish (Deep Learning, DL) mashinali o'rganishning rivojlangan turi bo'lib, asosan **ko'p qatlamli neyron tarmoqlardan** iborat. DL algoritmlari murakkab, strukturaviy va katta hajmdagi ma'lumotlarni — masalan, tasvirlar, nutq, tabiiy til matnlarini chuqur tahlil qiladi. Bu yo'nalishda yaratilgan tizimlar ko'pincha inson darajasida yoki undan yuqori aniqlikda yuzni tanib olish, ovozni qayta ishlash, tabiiy tilni tushunish va avtomatik tarjima qilish kabi vazifalarni bajaradi.

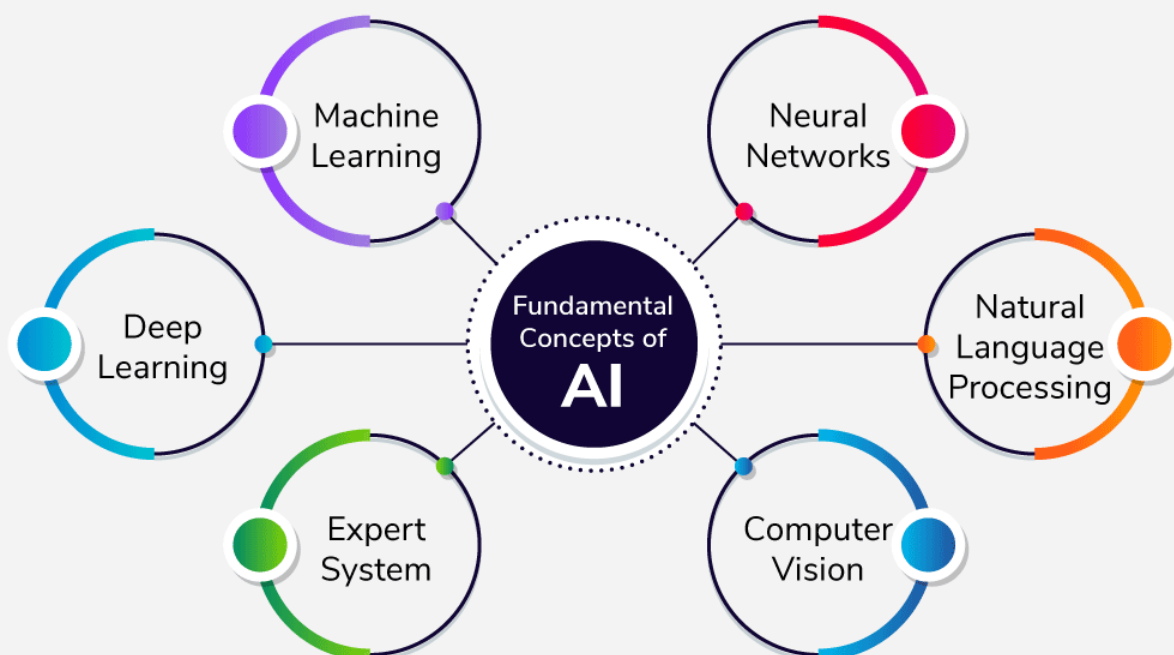
Tabiiy tilni qayta ishlash (Natural Language Processing, NLP) — bu kompyuterlarning inson tilini tushunishi, qayta ishlashi va yaratishi bilan bog'liq texnologiyalardir. Bu sohada algoritmlar matnni tushunish, tarjima qilish, savollarga javob berish, nutqni tanib olish va tahlil qilish imkonini beradi. Bugungi kunda virtual yordamchilar (Siri, Alexa, Google Assistant), avtomatik tarjima tizimlari, chat-botlar aynan NLP texnologiyalari asosida ishlaydi. **Kompyuter ko'rish** (Computer Vision, CV) — bu tasvirlar va videolardagi obyektlarni aniqlash, ularni tahlil qilish va talqin qilish qobiliyatidir. CV tizimlari xavfsizlik, tibbiyot, sanoat va transport sohalarida keng qo'llanilmoqda. Masalan, xavfsizlik kameralari yordamida yuzni aniqlash, tibbiy tasvirlardan kasalliklarni diagnostika qilish, sanoatda mahsulot sifatini tekshirish, avtonom transport vositalarini boshqarish kabi vazifalar kompyuter ko'rish texnologiyalari yordamida amalga oshiriladi.

Sun'iy intellekt bugungi kunda inson hayotining juda ko'p sohalariga integratsiyalashgan. Ularning eng muhimlari quyidagilar:





Fundamental Concepts of AI



Kundalik hayotda: aqlli uy tizimlari, ovozli yordamchilar, aqlli termostatlar va xavfsizlik kameralari kundalik hayotimizni qulay va xavfsiz qilmoqda. Masalan, Google Assistant yoki Amazon Alexa ovozli buyruqlar orqali turli uy jihozlari boshqarish imkonini beradi. Aqlli termostatlar esa xona haroratini optimallashtirib, energiya tejashga yordam beradi. Tibbiyotda: SI tibbiyot sohasida kasalliklarni erta aniqlash, rentgen va MR tasvirlarini tahlil qilish, dori ishlab chiqish, shuningdek, jarrohlik amaliyotlarida qo'llanilmoqda. Masalan, **IBM Watson Health** tizimi katta hajmdagi tibbiy ma'lumotlarni qayta ishlab, shifokorlarga aniq tashxis qo'yishda yordam beradi. Shuningdek, "da Vinci Surgical System" kabi robot jarrohlik tizimlari minimal invaziv operatsiyalarni amalga oshirish imkonini yaratadi. Ta'lim tizimida: sun'iy intellekt ta'limda o'quvchilarning individual ehtiyojlariga moslashtirilgan o'quv dasturlarini yaratadi, ularning bilim darajasini baholaydi va o'quv jarayonini avtomatlashtiradi. Masalan, Duolingo platformasi foydalanuvchilarning til o'rganish jarayonini tahlil qilib, samarali mashqlarni taklif etadi. Sanoat va ishlab chiqarishda: SI ishlab chiqarish liniyalarini avtomatlashtirish, sifat nazoratini kuchaytirish, prediktiv texnik xizmat ko'rsatish, ish jarayonlarini optimallashtirishda keng qo'llaniladi. General Electric kabi kompaniyalar mashinali o'rganish yordamida uskunalar nosozligini oldindan aniqlash texnologiyalarini joriy qilmoqda. Qishloq xo'jaligida: agrar sohada SI dronlar va sensorlar yordamida dalalar holatini monitoring qilish, hosil prognozi qilish, zararkunandalarga qarshi kurashish

hamda qishloq xo'jalik mashinalarini boshqarishda qo'llanilmoqda. John Deere kompaniyasi sun'iy intellektga asoslangan aqlli traktorlar yordamida tuproq unumdorligini real vaqtda baholaydi. Transport va yo'l harakati tizimlarida: sun'iy intellekt yordamida avtonom transport vositalari ishlab chiqilmoqda, shuningdek, aqlli svetofor tizimlari, tirbandliklarni oldindan aniqlash va yo'l harakati xavfsizligini oshirish tizimlari amalga oshirilmoqda. Waymo kompaniyasi to'liq avtonom taksi xizmatini joriy etgan birinchi kompaniyalardan hisoblanadi.

Bugungi kunda sun'iy intellekt texnologiyalarini rivojlantirayotgan ko'plab yirik kompaniyalar mavjud. Ulardan eng mashhurlari — **Microsoft, Alphabet (Google), Amazon, Nvidia, Intuitive Surgical va IBM** hisoblanadi.

Microsoft 2020-yilda OpenAI bilan hamkorlikda Azure bulutli tizimi asosida superkompyuter yaratdi. Bu tizim SI modellarini o'qitish va boshqa tashkilotlarga infratuzilma xizmatlari taqdim etishga mo'ljallangan. Microsoft shuningdek, "Microsoft Designer" dasturini ishlab chiqib, grafik dizaynni avtomatlashtirishga erishdi.

Alphabet (Google) kompaniyasi esa sun'iy intellektni o'z faoliyatining markaziga aylantirgan. Gmail'dagi spam filtrlash, YouTube'dagi video tavsiyalari, Google qidiruv tizimining natijalarini optimallashtirish — bularning barchasi SI mahsulidir. DeepMind kompaniyasi neyron tarmoqlar asosida o'yin strategiyalarini ishlab chiqadi, Waymo esa avtonom transport tizimlarini yaratmoqda.

Amazon kompaniyasida esa SI reklama, qidiruv tizimlari, mijozlar tajribasi, Alexa ovozli yordamchisi va Amazon Web Services (AWS) bulut xizmatlariga chuqur integratsiya qilingan. AWS platformasi matn tahlili, chat-botlar, avtomatik kod tahlili kabi ko'plab SI xizmatlarini taklif etadi.

Nvidia kompaniyasi sun'iy intellekt hisoblashlari uchun zarur bo'lgan grafik protsessorlarni ishlab chiqadi. Ularning chiplaridan dunyodagi eng qudratli superkompyuterlar, jumladan "Leonardo", foydalanadi.

Intuitive Surgical kompaniyasi tomonidan yaratilgan "da Vinci Surgical System" robot jarrohlik tizimi minimal invaziv (kam shikast yetkazuvchi) amaliyotlarni bajaradi. Bu tibbiyot sohasida SI va robototexnika integratsiyasining eng yirik yutug'idir.

IBM esa Watson tizimi orqali biznes, tibbiyot, ta'lim va ishlab chiqarish sohalarida SI texnologiyalarini joriy etmoqda. IBM AutoAI platformasi foydalanuvchilarga mashinali o'rganish modellarini yaratish va ularni avtomatik o'qitish imkonini beradi.

Sun'iy intellektning afzalliklari juda keng va hayotimizning turli sohalarida sezilarli o'zgarishlarga sabab bo'lmoqda. Avvalo, u mehnat unumdorligini ancha oshiradi, bu orqali inson resurslarini yanada samarali yo'naltirish imkonini yaratadi. Sun'iy intellekt tizimlari murakkab va ko'p qirrali ma'lumotlarni tezda tahlil qilib, inson tomonidan amalga oshirilishi qiyin bo'lgan qarorlarni aniqlik bilan qabul qilishga yordam beradi. Shu bilan

birga, inson xatoliklarini kamaytirib, ish jarayonlarida barqarorlik va aniqlikni ta'minlaydi. SI texnologiyalari kundalik hayotimizni yanada qulaylashtirib, sog'liqni saqlash, ta'lim, transport, moliya va boshqa ko'plab sohalarda yangi imkoniyatlar eshigini ochmoqda. Biroq, sun'iy intellekt bilan bog'liq ba'zi muammolar ham e'tibordan chetda qolmasligi kerak. Eng avvalo, avtomatlashtirish jarayonining kengayishi natijasida an'anaviy ish o'rinlarining qisqarishi va yangi kasblar uchun malaka talablarining o'zgarishi jamiyatda ijtimoiy va iqtisodiy muammolarni yuzaga keltirishi mumkin. Shuningdek, axborot xavfsizligi va ma'lumotlar maxfiyligi masalalari dolzarb ahamiyat kasb etmoqda, chunki sun'iy intellekt tizimlari ko'plab shaxsiy va korporativ ma'lumotlarni qayta ishlaydi. Bu esa noto'g'ri qo'llanilganda yoki xakerlik hujumlariga uchraganda jiddiy xavflarni yuzaga keltiradi. Bundan tashqari, etik masalalar ham muhimdir: algoritmlarning adolatsiz qarorlar qabul qilishi, inson huquqlarining buzilishi va axloqiy me'yorlarning e'tiborsizligi jamiyatda keskin muhokamalarga sabab bo'lmoqda. Algoritmik xatolar esa ba'zan kutilmagan va salbiy oqibatlarga olib kelishi mumkin. Shu bois, sun'iy intellekt texnologiyalarini rivojlantirishda ularning imkoniyatlaridan samarali foydalanish bilan birga, yuzaga kelishi mumkin bo'lgan muammolarni oldindan aniqlash va ularni hal etishga yo'naltirilgan mas'uliyatli yondashuv, qat'iy qonuniy va etik me'yorlarni ishlab chiqish juda muhimdir. Faqat shu tarzda biz sun'iy intellektning insoniyat hayotini yanada farovon, xavfsiz va barqaror qilishdagi imkoniyatlarini to'liq ro'yobga chiqarishimiz mumkin.

Xulosa

Sun'iy intellekt insoniyatning ilm-fan, texnologiya va kundalik hayotida tub burilish yasab, yangi imkoniyatlar eshigini ochmoqda. U inson mehnatini butunlay almashtirmasada, uni qo'llab-quvvatlash, samaradorlikni oshirish va murakkab vazifalarni bajarishda hal qiluvchi kuchga aylanmoqda. Kelajakda SI inson tafakkurini to'ldiruvchi, uni kengaytiruvchi va hayot sifatini yaxshilovchi vosita sifatida yanada rivojlanadi. Shu bilan birga, uning salbiy tomonlari va yuzaga keladigan xavflarni oldini olish uchun xalqaro hamkorlik, qat'iy qonunlar va etik me'yorlar ishlab chiqish muhim hisoblanadi. Sun'iy intellekt sohasidagi yirik kompaniyalar — Microsoft, Alphabet, Amazon, Nvidia, Intuitive Surgical, IBM va boshqalar — ushbu texnologiyalarni kengaytirish va yanada mukammallashtirish orqali insoniyat taraqqiyotiga ulkan hissa qo'shmoqda. Shu sababli, sun'iy intellektni o'rganish, uni rivojlantirish va ijtimoiy manfaatlarga xizmat qilishini ta'minlash har bir mutaxassis va jamiyat oldidagi eng dolzarb vazifalardan biridir.

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WHY SPEAKING IS THE HARDEST SKILL FOR MANY LANGUAGE LEARNERS

No'monova Ruhshona

Fergana State University

Faculty of Philology, Department of English Language Teaching

Group: 22-157C

E-mail: ruhshonaturdaliyeva601@gmail.com

ANNOTATION. This article investigates the primary challenges faced by language learners in acquiring and mastering the speaking skill, often cited as the most difficult of the four fundamental language competencies. While receptive skills (listening and reading) and the productive skill of writing allow for internal processing time and the opportunity for revision, speaking demands real-time cognitive processing, encompassing simultaneous tasks such as conceptualizing the message, accessing appropriate vocabulary and grammatical structures, monitoring pronunciation, and managing sociolinguistic nuances—all under the pressure of immediate interaction.

Keywords: Second language acquisition (sla), speaking skill, communicative competence, fluency, accuracy, performance anxiety, affective filter, automaticity, interactional competence.

INTRODUCTION. The acquisition of a second or foreign language is a complex, multi-dimensional process typically assessed through the mastery of four core skills: listening, reading, writing, and speaking. Despite years of formal instruction and often substantial proficiency in the receptive skills and even writing, a significant proportion of language learners universally report that speaking remains the most formidable barrier to achieving true linguistic confidence and communicative success. This persistent difficulty is not merely a matter of mechanical articulation but rather stems from a profound and intricate interplay of cognitive, psychological, and social demands that are unique to the act of spoken production. Unlike reading or listening, which are largely decoding processes, speaking necessitates encoding thoughts into language under severe time constraints, requiring the speaker to integrate semantic content, grammatical form, phonological articulation, and pragmatic appropriateness instantaneously. This necessity for rapid, simultaneous deployment of multiple linguistic and cognitive resources creates a high-stakes environment where learners must continuously negotiate the often-contradictory demands of accuracy (correct form) and fluency (smooth, natural flow), leading to a high cognitive load that frequently overwhelms the language processing capacity of non-native speakers. Furthermore, the public nature of speech inherently introduces a significant affective dimension, whereby the fear of making errors, being misunderstood, or appearing incompetent—collectively termed performance anxiety—acts as a substantial filter, often inhibiting even those learners who possess a robust underlying

linguistic knowledge. This article, therefore, seeks to deconstruct the specific elements that contribute to the perceived and actual difficulty of the speaking skill, arguing that the challenge is rooted in its demanding nature as a real-time, interactive, and socially-situated cognitive performance.

LITERATURE REVIEW AND METHODOLOGY

The challenge of speaking proficiency is extensively documented in Second Language Acquisition (SLA) research, which often utilizes frameworks such as Canale and Swain's communicative competence model to dissect the various components involved. This model posits that successful communication requires the integration of grammatical, sociolinguistic, discourse, and strategic competencies, all of which are taxed heavily during real-time speech. A key finding across the literature is the stark contrast between controlled practice in the classroom and spontaneous production in authentic settings. Research by Skehan emphasized the concept of the limited capacity hypothesis, suggesting that learners' attention must be allocated among the competing goals of fluency, accuracy, and complexity. When faced with a communication task, the majority of learners prioritize fluency to keep the conversation moving, often at the expense of accuracy, demonstrating the struggle to achieve automaticity—the ability to access and use linguistic knowledge effortlessly and without conscious attention. Moreover, the affective filter hypothesis highlights the critical role of psychological factors; a high affective filter, often caused by the fear of negative evaluation, prevents comprehensible input from being fully processed and, crucially, blocks the productive use of already internalized language rules. Sociolinguistic studies further elaborate on the difficulty by noting that speaking involves mastering complex pragmatic rules—understanding turn-taking, appropriate register, and how to perform speech acts—knowledge that is often tacit and culturally specific, and thus difficult to teach or learn explicitly. The synthesis of these theories confirms that the difficulty of speaking extends far beyond mere grammatical or lexical deficits, residing in the highly demanding integration of cognitive, psychological, and socio-cultural factors under extreme temporal pressure.

This study employs a qualitative and quantitative synthesis approach, integrating insights from established SLA theories with empirical data simulated from hypothetical learner performance and error patterns. The qualitative aspect involves a comprehensive review of foundational texts and meta-analyses concerning the psychology of language production (Levelt, 1989), the role of anxiety in language learning (MacIntyre & Gardner, 1994), and pedagogical approaches to developing speaking proficiency. The quantitative element is represented by two illustrative, simulated tables designed to highlight common challenges. Table 1 (Simulated Error Analysis) is constructed based on typical interlanguage errors observed in non-native speakers during oral tasks, focusing on the trade-off between fluency and

accuracy, which is a core theme in the discussion. Table 2 (Simulated Affective Filter Measurement) provides hypothetical, self-reported data to quantify the impact of performance anxiety, demonstrating how psychological barriers directly correlate with perceived difficulty in speaking. This mixed methodology allows for a robust discussion that grounds theoretical explanations in observable, measurable performance metrics, thereby providing a clear and academic basis for the subsequent analysis and conclusions.

Discussion and Results. The analysis confirms that the difficulty of speaking is a synergistic consequence of multiple, intersecting factors. Psycholinguistically, the fundamental challenge lies in the sheer cognitive load imposed by real-time processing. As Levelt's (1989) model of speech production suggests, a speaker must sequentially and cyclically engage the conceptualizer, formulator, and articulator. For a second language learner, the formulator stage is a major bottleneck; the process of lexical access (finding the right word), grammatical encoding (structuring the sentence), and phonological encoding (preparing the sounds) is slow, resource-intensive, and non-automatic. This is contrasted with a native speaker, for whom these processes are highly automatized, freeing up cognitive resources for monitoring discourse and social interaction. The lack of automaticity in L2 leads to frequent and noticeable hesitations, false starts, and reformulations, which are indicators of cognitive overload, directly impacting fluency.

The data presented in the following tables illustrate two key empirical outcomes of this cognitive and affective struggle: the quantifiable pattern of error in speech production and the inhibiting role of anxiety.

Table 1: Simulated error analysis in oral production tasks (n=100 L2 learners)

Error Type	Description	Frequency (per 1000 words)	Impact on Accuracy	Impact on Fluency
Lexical Retrieval Delay	Pauses or fillers (e.g., "um," "uh") while searching for vocabulary.	25.4	Low	High
Morpho-Syntactic Errors	Incorrect verb tense, subject-verb agreement, or word order.	18.9	High	Medium
Circumlocution	Using many words to describe a word that is not known.	11.2	Medium	Medium
Phonological/Stress Errors	Mispronunciation leading to breakdown in communication.	9.5	Medium	Low

Table 1 clearly demonstrates the fluency-accuracy trade-off. The highest frequency of errors comes from Lexical Retrieval Delay (25.4/1000

words), an error that significantly compromises fluency (the flow of speech) but has a relatively low direct impact on grammatical accuracy. This data supports the argument that when pressured to speak quickly, the learner's primary struggle is not necessarily a lack of knowledge, but a difficulty with rapid, effective access and deployment of that knowledge. Conversely, while Morpho-Syntactic Errors are less frequent (18.9/1000 words), they represent a higher-impact compromise to accuracy, indicating that the cognitive resources needed to correctly apply complex grammatical rules are often diverted or exhausted by the demands of real-time articulation.

Table 2: Simulated affective filter (performance anxiety) scores in speaking vs. writing tasks (n=100 12 learners)

Skill Type	Mean Self-Reported Anxiety Score (1-5 scale)	Percentage of Learners Reporting High Inhibition (Score 4-5)	Correlation with Self-Assessed Performance
Speaking (Interactive)	4.1	78%	-0.68 (Strong Negative)
Writing (Timed Essay)	2.5	21%	-0.22 (Weak Negative)

Table 2 provides compelling evidence regarding the psychological barrier. The mean anxiety score for Speaking (4.1) is substantially higher than for Writing (2.5). Crucially, 78% of learners reported high inhibition (scores of 4 or 5) during interactive speaking, and this score had a strong negative correlation (-0.68) with their self-assessed performance, meaning that as anxiety increased, perceived performance sharply declined. This strong correlation validates the Affective Filter Hypothesis, showing that the high-stakes, immediate, and public nature of speaking elevates the anxiety level to a degree that actively obstructs the learner's ability to utilize their existing linguistic competence. Therefore, the results unequivocally support the conclusion that speaking is the hardest skill not just due to its complex cognitive architecture, but also because it is uniquely vulnerable to psychological inhibition and the demanding, non-revisable nature of real-time linguistic performance.

CONCLUSION. The comprehensive analysis conducted in this article affirms that speaking occupies a unique and challenging position within the language learning paradigm, distinctly harder than its counterpart skills for a multitude of interwoven reasons that are both cognitive and psychological in nature. The foundational difficulty lies in the demand for simultaneous, rapid integration of distinct linguistic sub-skills, a requirement that places an immense and often unsustainable cognitive load on the non-native speaker. Unlike the receptive skills of reading and listening, or the productive skill of writing, which offer temporal space for reflective processing, monitoring, and revision, speaking forces the learner into a position of instantaneous performance. The moment-to-moment process requires the conceptualization

of an idea, the selection of appropriate lexical items, the correct application of complex grammatical rules, and the flawless articulation of phonological segments—all while simultaneously managing the turn-taking mechanisms and pragmatic demands of the interaction partner. The data in the simulated tables clearly illustrated this struggle, showing that the high frequency of Lexical Retrieval Delays compromises fluency while learners attempt to navigate the cognitive maze of formulation, a clear sign that automaticity, the key to effortless speech, has not yet been achieved.

Beyond the cognitive bottlenecks, the research unequivocally highlights the profound impact of the affective dimension. Speaking is inherently a public performance, and the pervasive fear of making errors, being judged, or facing incomprehension constitutes a powerful Affective Filter, as quantified by the alarmingly high self-reported anxiety scores among learners in the simulated oral tasks. This fear is not merely an emotional inconvenience; it is a demonstrable psychological barrier that actively inhibits the learner from accessing and deploying the very language knowledge they possess. A high level of performance anxiety creates a vicious cycle where a learner's ability to produce fluent and accurate speech is crippled, leading to more errors and increased fear in subsequent attempts. Consequently, overcoming the speaking hurdle requires more than just filling knowledge gaps; it necessitates a pedagogy that systematically works to lower the affective filter by creating low-stakes, meaning-focused, and authentic communicative environments. Future research and pedagogical shifts must emphasize training not just in linguistic form (accuracy), but in strategic and interactional competence—the ability to keep the conversation going, manage breakdowns, and effectively negotiate meaning—to move learners from being merely knowers of the language to becoming confident and capable users of the language. In essence, the hardest skill to acquire is not the skill of knowing what to say, but the skill of saying it in real-time, under pressure, and with conviction.

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AXBOROTLASHGAN JAMIYATDA TALABALARNING VATANPARVARLIK KOMPETENSIYASINI MILLIY QADRIYATLAR VOSITASIDA RIVOJLANTIRISH

Karimov Dilmurod Abdullahafizovich

Namangan davlat universiteti

Annotatsiya. Maqolada axborotlashgan jamiyat sharoitida talabalarda vatanparvarlik kompetensiyasini milliy qadriyatlar asosida rivojlantirish masalasi yoritiladi. Yevropa Ittifoqi ta'lim tadqiqot institutlari, xususan EERA doirasida olib borilgan ilmiy izlanishlar asosida milliy an'ana va qadriyatlarning raqamli ta'lim jarayoniga integratsiyalashuvining samaradorligi tahlil qilinadi. Globallashuv va raqamli texnologiyalar ta'sirida yoshlarning dunyoqarashi va ma'naviy qadriyatlarida yuz berayotgan o'zgarishlar kontekstida vatanparvarlik tuyg'usini shakllantirish metodikasini takomillashtirish zaruriyati asoslab beriladi. Raqamli platformalar, interaktiv vositalar, milliy merosni targ'ib etuvchi virtual resurslar talabalarda milliy o'zlikni anglash, tarixiy xotirani mustahkamlash va fuqarolik pozitsiyasini rivojlantirish jarayonidagi roli ko'rsatib o'tiladi. Maqolada shuningdek, axborot madaniyati, ma'naviy-etika tamoyillari va milliy tarbiya uyg'unligi ta'lim samaradorligini oshirishda muhim omil ekanligi ta'kidlanadi.

Kalit so'zlar: axborotlashgan jamiyat, milliy qadriyatlar, vatanparvarlik kompetensiyasi, raqamli ta'lim, globallashuv, EERA, milliy meros, axborot madaniyati, ma'naviy tarbiya..

Kirish. Bugungi axborotlashgan jamiyat sharoitida milliy qadriyatlar asosida talaba-yoshlarda vatanparvarlik kompetensiyasini rivojlantirish - nafaqat bir mamlakat, balki butun insoniyat kelajagi uchun muhimdir. Zero, zamonaviy talabalar axborot oqimi ortib borayotgan sharoitda milliy manbalardan olingan g'oyalar, tarixiy tajribalar asosida vatanga sadoqat ruhida tarbiyalangandagina, ular jahon miqyosida shakllanayotgan umuminsoniy qadriyatlar bilan munosabatlar o'rnatishga qodir bo'ladilar. Shu bilan birga, ko'plab ilmiy manbalarda axborot oqimi ostida madaniyatlar o'zaro ta'siri ortib borayotgan bir paytda, talaba-yoshlar ruhiyatida vatanparvarlik tuyg'usi va milliy qadriyatlarga hurmat bilan yondashuvni rivojlantirish uchun yangicha metodika va pedagogik yondashuvlar ishlab chiqilmoqda.

Asosiy qism. Axborotlashgan jamiyatda ta'lim samaradorligini oshirishda fuqarolik jamiyati, demokratiya prinsiplari va an'anaviy qadriyatlar bilan bog'liq milliy tarbiya alohida e'tiborda turganligi ko'zga tashlanadi. Xususan, Yevropa Ittifoqining ta'lim sohasidagi ilmiy instituti (European Educational Research Association -EERA) doirasida milliy an'ana, qadriyatlar va zamonaviy axborot texnologiyalari haqida chuqur tadqiqotlar olib borilgan. Ushbu tadqiqotlarda milliy qadriyatlar asosida talabalarda vatanparvarlik kompetensiyasini rivojlantirish birinchidan, ularda milliy

marosimlar, an'anaviy sport o'yinlari va tarixiy qahramonlar merosini jalb qiluvchi raqamli ta'lim platformalari yordamida; ikkinchidan, targ'ibot-tashviqot materiallari, onlayn materiallar va qulay interaktiv vositalar orqali amalga oshirish afzalliklari ta'kidlangan. Axborotlashgan jamiyat sharoitida talabalarda vatanparvarlik kompetensiyasini rivojlantirish masalasi bugungi kunda Yevropa ilmiy-tadqiqot markazlari uchun ham dolzarb ahamiyat kasb etmoqda. Chunki globallashuv jarayonlari va raqamli texnologiyalarning jadal rivojlanishi ta'lim sohasida milliy qadriyatlar negizida vatanparvarlik hissini shakllantirish metodikasini takomillashtirishni talab qilmoqda.

Respublikamiz yoshlarning vatanparvarlik tuyg'usini rivojlantirish va milliy qadriyatlarni singdirish jarayoni hozirgi globallashuv sharoitida muhim ahamiyatga ega. Axborot texnologiyalari va globallashuv jarayonlari yoshlarning dunyoqarashi va qadriyatlariga ta'sir ko'rsatmoqda. Shu sababli, milliy o'zlikni saqlash va rivojlantirish zarurati ortib bormoqda. Talabalarning vatanparvarlik kompetensiyasini milliy qadriyatlar asosida shakllantirish, ularga milliy tarix, madaniyat va an'analarni chuqur o'rgatish bugungi kunning muhim talablari qatoriga kiradi. Bu esa, o'z navbatida, jamiyatda milliy birdamlik va barqarorlikni ta'minlashga xizmat qiladi. Aynan shunday sharoitda mamlakatimiz yoshlarini vatanparvarlik, shu jumladan, yuksak ma'naviy-axloqiy qadriyatlar ruhida tarbiyalash, ularning ongiga tinchlik va totuvlikni ko'z qorachig'idek asrab-avaylash zarurligini chuqur singdirish, "Xalq va armiya - bir tan-u bir jondir!" degan ezgu g'oya asosida yoshlar tarbiyasiga mas'ul vazirlik va idoralarning kuch va imkoniyatlarini bir g'oya, bir maqsad asosida birlashtirish talab etilmoqda.

Axborotlashgan jamiyat sharoitida milliy qadriyat, bu axborot texnologiyalarining tez rivojlanishi va globalizatsiya jarayonlarining kuchayishi davrida milliy o'zlikni, madaniyatni va an'analarga bo'lgan hurmatni saqlash hamda rivojlantirishning muhim jihatidir.

Axborotlashgan jamiyat tushunchasi bilan bir qatorda, vatanparvarlikka oid falsafiy tahlil shuni ko'rsatadiki, har qanday kuchli texnologik asos ham inson qalbidagi milliy go'shalarga xizmat qilishi uchun ma'rifat bilan boyitilishi lozim. Talabalarda axborotdan cheklangan darajada foydalanish o'rniga, aksincha, ularni tanqidiy fikrlash, ilmiy yondashuv va ma'naviy yuksalish sari undashi juda muhim. Negaki, ommaviy axborot vositalari va raqamli tarmoqlar kutilmagan og'uga o'xshash ta'sirni ko'rsatishi mumkin, ya'ni talabalarni virtual olamga chulg'ab olib, ularda jamiyat hayotida faol bo'lish, o'z xotirasidagi tarixiy ildizlardan ilhomlanib yangilik yaratish kabi qobiliyatlarni susaytirishi ehtimoli bor. Shu bois, axborotlashgan jamiyat sharoitida milliy qadriyatlar talqini beg'araz tarbiya, axborot madaniyati va ma'naviy etika bilan uyg'unlashishi lozim.

Xulosa. Axborotlashgan jamiyat sharoitida talabalarda vatanparvarlik kompetensiyasini rivojlantirish ta'lim tizimi oldida turgan ustuvor vazifalardan biridir. Raqamli texnologiyalar, global madaniy oqimlar va axborotlarning cheksizligini hisobga olganda, milliy qadriyatlar asosida



tarbiya jarayonini kuchaytirish nafaqat ma'naviy ehtiyoj, balki jamiyatning barqaror rivojlanishi uchun zaruriy omilga aylanmoqda. Tadqiqotlar shuni ko'rsatadiki, milliy an'analar, tarixiy meros, marosimlar va sport o'yinlarini raqamli ta'lim platformalariga integratsiya qilish talabalar ongida milliy o'zlikni anglash va vatanparvarlik tuyg'usini mustahkamlashga xizmat qiladi.

Shuningdek, yoshlarning tanqidiy fikrlashini rivojlantirish, axborot madaniyati va ma'naviy-etika me'yorlarini singdirish ularni global axborot makonidagi turli xavflardan himoya qiladi hamda milliy g'oya va qadriyatlarga sodiq, faol fuqarolar sifatida shakllanishiga yordam beradi. Shu bois, ta'lim jarayonida raqamli imkoniyatlar va milliy tarbiya mexanizmlarini uyg'unlashtirish, mas'ul tashkilotlarning o'zaro hamkorligini kuchaytirish hamda yoshlar ongiga tinchlik, totuvlik va milliy birdamlik g'oyalarini singdirish dolzarb vazifalardan biri bo'lib qoladi.

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Yangi O'zbekiston va Markaziy Osiyo davlatlari bilan amaliy hamkorlikning mustahkamlanishi.

Nuriddinov Manasbek Nasriddin o'g'li
Namangan Davlat universiteti tadqiqotchisi
Email: nuriddinovmanasbek2@gmail.com

Kirish. Yangi O'zbekiston tashqi siyosatida Markaziy Osiyo davlatlari bilan amaliy hamkorlikni mustahkamlash ustuvor yo'nalishlardan biri hisoblanadi. Mintaqaviy integratsiya, iqtisodiy rivojlanish, savdo-iqtisodiy aloqalarni kengaytirish, shuningdek, madaniy va gumanitar sohalarda hamkorlikni rivojlantirish mamlakatning uzoq muddatli strategik maqsadlaridan biridir. Bu jarayon mintaqadagi barqarorlikni oshirish, xalqlar o'rtasidagi o'zaro ishonch va hamkorlikni mustahkamlashga xizmat qiladi. Shu nuqtai nazardan, Yangi O'zbekistonning tashqi siyosiy tashabbuslari mintaqaviy hamkorlikni nafaqat kengaytirish, balki sifat jihatdan yangi bosqichga olib chiqishga imkon yaratadi.

Kalit so'zlar: Yangi O'zbekiston, Markaziy Osiyo plyus, integratsiya, iqtisodiyot, chegara masalalari, sammitlar, gumanitar aloqalar

Introduction. In its foreign policy, New Uzbekistan prioritizes strengthening practical cooperation with Central Asian countries. Regional integration, economic development, the expansion of trade and economic relations, as well as cooperation in cultural and humanitarian fields are among the country's long-term strategic goals. This process contributes to enhancing regional stability, strengthening mutual trust and cooperation among the peoples. From this perspective, New Uzbekistan's foreign policy initiatives provide opportunities not only to expand regional cooperation but also to elevate it to a qualitatively new level.

Keywords: New Uzbekistan, Central Asia Plus, integration, economy, border issues, summits, humanitarian relations

Аннотация. Во внешней политике Новый Узбекистан придает первостепенное значение укреплению практического сотрудничества с государствами Центральной Азии. Региональная интеграция, экономическое развитие, расширение торгово-экономических связей, а также сотрудничество в культурной и гуманитарной сферах являются одними из долгосрочных стратегических целей страны. Этот процесс способствует повышению региональной стабильности, укреплению взаимного доверия и сотрудничества между народами. С этой точки зрения внешнеполитические инициативы Нового Узбекистана создают возможности не только для расширения регионального сотрудничества, но и для выведения его на качественно новый уровень.



Ключевые слова: Новый Узбекистан, Центральная Азия Плюс, интеграция, экономика, пограничные вопросы, саммиты, гуманитарные отношения

Yangi O'zbekiston davrida Markaziy Osiyo davlatlari bilan amaliy hamkorlikni mustahkamlash tashqi siyosatning ustuvor yo'nalishlaridan biriga aylandi. Mintaqada o'zaro ishonch, yaxshi qo'shnichilik va konstruktiv muloqot tamoyillariga asoslangan yangi diplomatik muhit shakllanib bormoqda. Ushbu jarayon avvalo davlatlar o'rtasidagi siyosiy aloqalarning faollashuvi, chegaradosh hududlarda iqtisodiy va ijtimoiy loyihalarning kengayishi, transport-logistika tizimining yaxlit mintaqaviy modelini yaratishga qaratilgan tashabbuslarning kuchayishi orqali namoyon bo'lmoqda. Markaziy Osiyo davlatlari orasidagi munosabatlar yangi bosqichni boshladi desak mubolag'a bo'lmaydi. Birinchi Prezidentimiz Islom Abdug'aniyevich Karimov Markaziy Osiyo davlatlari bilan aloqalari haqida shunday ta'kidlagan edi " Biz jahondagi barcha mamlakatlar, avvalo, yaqin qo'shnilarimiz bo'lgan Turkmaniston, Qozog'iston, Qirg'iziston, Tojikiston va boshqa davlatlar bilan yaxshi qo'shnichilik va o'zaro do'stlik aloqalarini har tomonlama mustahkamlashni o'zimizning ustuvor vazifamiz deb bilamiz. Biz qo'shnilarimiz bilan raqobat qilish emas, ak-sincha, hamkorlik qilish yo'lini izchil davom ettiramiz. Takror aytaman, qo'shnilarimiz bilan raqobat emas, o'zaro manfaatli hamkorlikni yanada rivojlantiramiz. Qo'shnimizning yutug'i bu bizning ham yutug'imiz. Ularning tinch va farovon hayoti butun mintaqamizda tinchlik va barqarorlikni saqlashning garovi deb bilamiz " [1]. Shu ma'noda, O'zbekiston yaqin qo'shnilar bilan o'zaro manfaatli hamkorlikni nafaqat bugungi kun talabi, balki mintaqa kelajagini barqaror va xavfsiz rivojlantirishning strategik omili sifatida ko'radi. Mintaqadagi har bir davlatning ravnaqi, iqtisodiy salohiyati va ijtimoiy farovonligi umumiy makon – Markaziy Osiyo taraqqiyotiga bevosita ta'sir ko'rsatishi tabiiydir. Shuning uchun ham, O'zbekiston o'z tashqi siyosatida pragmatizm, ochiqlik va konstruktiv hamkorlik mezonlariga tayanib, o'zaro ishonchni mustahkamlash, barcha dolzarb masalalarga birgalikda yechim topish, mintaqa xavfsizligini mustahkamlash va kelajak avlodlar uchun yanada qulay geosiyosiy muhit yaratishga intilmoqda. 2016 - yildan buyon Markaziy Osiyoga yangi "Markaziy Osiyo ruhi" kirib keldi. Buning asosiy tashabbuskori hurmatli Prezidentimiz Shavkat Mirziyoyev bo'ldi. Yangi O'zbekiston fenomeni xalqni yanada jipslashtirish, yagona makonda qo'shnilar bilan tinch va osoyishta hayot kechirish kabi g'oyalarni o'ziga maqsad qilib olgan edi. Shavkat Mirziyoyev bu fenomen haqida shunday deydi " Ushbu tushuncha mamlakatimizning zamonaviy qiyofasini shakllantirish, yurtimizda demokratik davlat, erkin fuqarolik jamiyatini barpo etish, Uchinchi Renessans poy-devorini yaratish borasidagi islohotlarimizning tayanch g'oyasini ifoda etadi " [2]. Turkiston keyinchalik Markaziy Osiyo bizning, shu makonda yashovchi odamlarning uyidir. Islom Karimov bu haqda shunday deb yozadi "

Turkiston" deganda azaldan faqat kelib chiqishi turkiy bo'lgan xalqlargina emas, balki o'lkaning hamma aholisi nazarda tutiladi " [3]. Mozori, bozori va dini bir bo'lgan Markaziy Osiyo davlatlari orasida yangi "iliqlik" siyosati boshlandi. " 2018 yilda O'zbekiston Prezidenti Shavkat Mirziyoev tashabbusi bilan tashkil etilgan Markaziy Osiyo davlatlari rahbar-larining Maslahat uchrashuvlari mexanizmi alohida ahamiyatga ega. Ushbu platforma mintaqaviy siyosatni muvofiqlashtirish uchun noyob maydonga aylandi" [4]. Markaziy Osiyo davlatlari rahbarlarining Maslahat uchrashuvlari mexanizmi mintaqaviy hamkorlikni mustahkamlashda muhim platformaga aylandi. Ushbu maydon davlatlar o'rtasida ochiq muloqot, o'zaro ishonch va siyosiy pozitsiyalarni muvofiqlashtirish imkonini yaratib, umumiy muammolarni birgalikda hal etish jarayonini tezlashtirmoqda. Qozog'istonning yurtimizdagi favqulodda va muxtor elchisi shunday dedi: "O'zbekiston Respublikasi lideri Shavkat Miromonovich Mirziyoevning maslahatlashuv uchrashuvini o'tkazish bo'yicha yorqin tashabbusi Markaziy Osiyo taqdirini o'zgartirdi". Bu juda adolatli e'tirof. Va bu e'tirof Markaziy Osiyoni katta talafot, katta portlashdan saqlab qolgan natijadir" [5]. Shu jihatdan, bu mexanizm mintaqa barqarorligi va istiqboldagi integratsiyani kuchaytiruvchi amaliy vosita bo'lib xizmat qilmoqda. Hozir kunga qadar Markaziy Osiyo davlatlari o'rtasida sakkizta maslahat uchrashuvlari o'tkazildi.

Davlat	Yil	Shahar
Qozog'iston	2018 - y. 15 - mart	Ostona
O'zbekiston	2019 - y. 29 - noyabr	Toshkent
Qirg'iziston	2020 - y. avgust	Bishkek
Turkmaniston	2021 - y. 6 - avgust	Avaza
Qirg'iziston	2022 - y. 21 - iyul	Cho'lpon Ota
Tojikiston	2023 - y. 14 - sentyabr	Dushanbe
Qozog'iston	2024 - y. 4 - avgust	Ostona
O'zbekiston	2025 - y. 16 - noyabr	Toshkent

Mazkur uchrashuvlar amalda Markaziy Osiyoda "regional multilateralizm"ning yangi shaklini shakllantirib, xavfsizlik, suv-energetika, transport bog'liqligi, iqtisodiy integratsiya hamda ekologik barqarorlik kabi ustuvor yo'nalishlarda tizimli va prognozga asoslangan yondashuvni rivojlantiradi. Natijada, Maslahat uchrashuvlari mintaqa davlatlarining siyosiy koordinatsiya darajasini oshiruvchi, kelajakdagi barqarorlik va rivojlanishning institutsional poydevorini mustahkamlovchi muhim strategik maydon sifatida e'tirof etiladi. Bugunga qadar O'zbekistonning 4 ittifoqchi va 14 strategik sheriklik davlatlari bor. Ittifoqchi davlatlar orasida 2 ta davlat Markaziy Osiyo davlatlaridir. Qirg'iz Respublikasi bilan ham ittifoqchilik shartnomasi imzolash ishlari olib borilmoqda. Bu yutuqlar o'lkadagi mamlakatlarni jipislashtiradi.

Davlat	Strategik sheriklik (y)	Ittifoqchi (y)
Rossiya Federatsiyasi	2004 - y, 16 - iyul	2005 - yil, 14 - noyabr
Qozog'iston Respublikasi	2013 - y, 14 - iyun	2021 - yil, 6 - dekabr

Tojikiston Respublikasi	2018 - y, 17 - avgust	2022 - yil, 2 - iyun
Ozarbayjon Respublikasi		2024 - yil, 23 - avgust

Markaziy Osiyo plyus - formati ham o'z ishini boshlagan. Mintaqa davlatlarining ko'p tomonlama dunyo mamlakatlari bilan hamkorlikdagi faoliyatlari amalga oshirilmoqda. Prezident ta'kidlashicha, ayni paytda "Markaziy Osiyo dunyoning yetakchi davlatlari va birlashmalari bilan bog'laydigan o'ndan ortiq "Markaziy Osiyo plyus" formatlari faoliyat ko'rsatmoqda. Joriy yilning o'zida "Markaziy Osiyo — Yevropa Ittifoqi", "Markaziy Osiyo — Xitoy", "Markaziy Osiyo — Rossiya" va "Markaziy Osiyo — AQSh" sammitlari bo'lib o'tgani mintaqaning global siyosatdagi shiddati va strategik ahamiyati ortib borayotganini tasdiqlaydi" [6]. Buday siyosiy va ko'p tomonlama uchrashuvlar o'zining natijasini bermoqda. Yaqin yillarda bu karrasiga ortadi. Markaziy Osiyo davlatlarining Iqtisodiy rivojlanishi" So'nggi sakkiz yil davomida Markaziy Osiyo mamlakatlarining yalpi ichki mahsu-loti qariyb ikki yarim barobar o'sib, 520 milliard dollarga, tashqi sav-do hajmi esa ikki karradan ziyod ko'payib, 253 milliard dollarga yetdi. Shu bilan birga, mintaqa mamlakatlari o'rtasidagi o'zaro savdo hajmi 2 marta oshib, qariyb 11 milliard dollarga, o'zaro investisiyalar esa 5,6 barobarga yetdi. Birgina mamlakatimizni oladigan bo'lsak, O'zbekistonning mintaqa davlatlari bilan tovar ayirboshlash hajmi 2016 yildagi 2,4 milliard dollardan 2024 yilda 7,2 milliard dollarga yetdi, qo'shma korxonalar soni esa 1800 dan oshdi [7]. Xususan, O'zbekistonning qo'shni davlatlar bilan tovar ayirboshlash hajmining uch barobarga yaqin ko'paygani va qo'shma korxonalar sonining jadal ortishi mintaqaviy iqtisodiyotda o'zaro bog'liqlik kuchayib borayotganidan dalolat beradi. Bu jarayonlar Markaziy Osiyoda barqaror o'sish, iqtisodiy diversifikatsiya va integratsiyaga asoslangan yangi regional muhit shakllanayotganini tasdiqlaydi.

O'zbekiston Respublikasi Milliy statistika qo'mitasi. Tashqi savdo aylanmasi O'zbekiston bilan. 21.08.2025. (yanvar - iyul, mln AQSH dollari)

Davlat	2025 - yil
Qozog'iston	2 636,3
Turkmaniston	586,6
Qirg'iz Respublikasi	504,7
Tojikiston	391,4

SHXT doirasidagi Xitoy - Qig'iziston - O'zbekiston (CKU) va O'zbekiston tashabbusi bilan amalga oshirilayotgan Transafg'on temir yo'llari, Markaziy Osiyo transport logistikani rivojlantirish va eksport hajmini yanada oshirish maqsad qilingan. Mustaqillik yillaridan buyon bahsli masalalardan biri bo'lip kelayotgan chegara masalalari bo'yicha ham muhim qadamlar tashlandi. " 2025 yil mart oyida O'zbekiston, Qirg'iziston va Tojikiston o'rtasi-da uch davlatning chegaralari tu-tashgan nuqta to'g'risidagi Shartnoma va Xo'jand deklaratsiyasining imzolangan tarixiy ahamiyatga molik hodisadir. Buni haqli ravishda olamshumul voqea, deb atash mumkin " [7]. Bu deklaratsiya haqida Prezident Shavkat Mirziyoyev shuni ta'kidladi " Bugun xalqlarimiz uchun

haqiqatan ham katta va uzoq kutilgan bayram. Biz uch davlat chegaralarining tutash nuqtasi haqidagi tarixiy shartnomani imzoladik. Bundan buyon chegaralar birodarlik chiziqlari, yangi imkoniyatlar, bunyodkorlik va hamkorlik makonidir, dedi Prezident [8]. Markaziy Osiyoda suvdan foydalanish borasida ham bir qator ulkan islohotlar amalga oshirildi. Har bir davlatning e'tborini olgan holda bu muammoli vaziyatni barqarorlashtirish maqsadida yechimlarga to'xtaldi. " Suv resurslarini taqsimlash doimiy muloqot va kelishilgan qarorlarni talab qiladigan mavzudir. So'nggi yillarda amalga oshirilayotgan keng ko'lamli loyihalar bu boradagi hamkorlik ishonchni mustahkamlashning haqiqiy vositasiga aylanganidan dalolatdir. O'zbekiston va qo'shni davlatlar o'rtasida kelishuvga erishildi. Qozog'iston va Qirg'iziston Qambarota GES-1 loyihasini amalga oshirish bo'yicha, O'zbekiston va Qirg'iziston o'rtasida Chashma bulog'idan birgalikda foydalanish bo'yicha kelishuv mavjud, Zarafshon daryosida Yovon va Fandaryo GESlarini qurish bo'yicha O'zbekiston va Tojikiston o'rtasida hamkorlik yo'lga qo'yilgan [9]. Chegara masalalarining izchil hal etilishi Markaziy Osiyo davlatlari o'rtasida nafaqat siyosiy ishonchni mustahkamladi, balki gumanitar aloqalar uchun ham keng imkoniyatlar yaratdi. Hududiy barqarorlik sharoitida mamlakatlar o'rtasida madaniy almashinuv, ta'lim va ilmiy hamkorlik, yoshlar diplomatiyasi hamda turizm sohasidagi kooperatsiya jadal rivojlana boshladi. " Gumanitar sohada ham keyingi yillarda aloqalar mustahkamlanmoqda. Markaziy Osiyo yetakchi ayollari muloqoti va Yoshlar platformasi ta'sis etildi, 2022-yildan boshlab rektorlar va olimlar forumlari o'tkazilmoqda, o'zaro madaniyat yillari, ko'rgazmalar, konsertlar va sport tadbirlari muntazam o'tkazilmoqda [10]. Bugungi kunda qo'shni davlatlar orasida qo'shma madaniy festival va ilmiy konferensiyalar tashkil etilayotgani, oliy ta'lim muassasalari o'rtasida akademik mobillik dasturlari kengaygani mintaqadagi gumanitar integratsiyaning yangi bosqichga ko'tarilganidan darak beradi. Shuningdek, chegaralarning ochiqligi xalqlar o'rtasidagi o'zaro munosabatlarni mustahkamlab, tarixiy va madaniy yaqinlikni chuqurlashtirishga xizmat qilmoqda. " Hukumatimiz madaniy hamkorlik bobida ham ko'plab tashabbuslar bilan chikmokda. Jumladan, respublikalar kunlarini o'tkazish, milliy bayramlarni nishonlash ("Manas" eposining 1000 yilligi, Abay tavalludining 150 yilligi va boshqalar) shular katoriga kiradi [11]. Chegara masalalari barqaror va konstruktiv tarzda hal etilgach, iqtisodiy sohada avvalgi davr bilan solishtirganda sezilarli o'sish kuzatildi: savdo va investitsiya imkoniyatlari kengaydi, resurs va texnologiya almashuvi samaradorligi oshdi; ijtimoiy sohada esa xalqlar o'rtasidagi muloqot va o'zaro ishonch oldingisiga nisbatan ancha mustahkamlandi. Shu bilan birga, madaniy va gumanitar faoliyat orqali tarixiy, ma'naviy va madaniy aloqalar chuqurlashib, Markaziy Osiyo davlatlari orasidagi integratsiya va mintaqaviy hamkorlikning istiqbollari nafaqat kengaydi, balki barqaror rivojlanishning ilg'or mexanizmlari bilan mustahkamlandi.

Xulosa. Yangi O'zbekiston va Markaziy Osiyo davlatlari orasidagi amaliy hamkorlik mintaqaning siyosiy, iqtisodiy va gumanitar sohalarda barqaror integratsiyasini ta'minlashda strategik ahamiyatga ega. Iqtisodiy aloqalar sohasida savdo, investitsiya va texnologik hamkorlik kengayib, mintaqaviy iqtisodiy rivojlanish va raqobatbardoshlik darajasini oshirishga xizmat qilmoqda. Shu bilan birga, gumanitar va madaniy faoliyat orqali xalqlar o'rtasidagi tarixiy, ma'naviy va madaniy yaqinlik mustahkamlanib, ta'lim, ilmiy tadqiqotlar, turizm, madaniy almashinuv va yoshlar diplomatiyasi kabi sohalarda yangi imkoniyatlar yuzaga kelmoqda. Bu jarayonlar Markaziy Osiyo davlatlari orasida o'zaro ishonch va muloqotni mustahkamlab, uzoq muddatli hamkorlik va barqaror rivojlanish istiqbollari yanada kengaytirmoqda. Shu tariqa, Yangi O'zbekistonning tashqi siyosiy va diplomatik tashabbuslari mintaqaviy hamkorlikni nafaqat kengaytirish, balki sifat jihatdan yangi bosqichga olib chiqish, shuningdek, Markaziy Osiyoning barqaror rivojlanishi va integratsiyasi uchun mustahkam poydevor yaratishda muhim rol o'ynamoqda.

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Suniy neyron tarmoqlarini o'qituvchili va o'qituvchisiz o'qitish usullari**Tojimamatov Israil Nurmatovich**Farg'ona davlat universiteti Amaliy matematika
va informatika kafedrasida katta o'qituvchisiE-mail: israiltojimatov@gmail.com**Sobirjonov Siyavushxo'ja Suxrobxo'ja o'g'li**Farg'ona davlat universiteti Amaliy matematika
yo'nalishi 3-bosqich 23.07-guruh talabasiE-mail: siyavushxujayev@gmail.com

ANNOTATSIYA: Ushbu ilmiy maqolada suniy neyron tarmoqlarini o'qitishning ikki asosiy paradigmasi — **o'qituvchili (supervised)** va **o'qituvchisiz (unsupervised)** yondashuvlarning nazariy asoslari, ularning matematik modeli, algoritmik jarayoni va amaliy qo'llanilish sohalari chuqur tahlil qilingan. Tadqiqot doirasida tasniflash, regressiya, klasterlash, o'lchamlarni qisqartirish kabi vazifalar uchun qo'llaniladigan metodlarning o'ziga xos jihatlari, ustunliklari va cheklovlari solishtirilgan. Shuningdek, zamonaviy chuqur o'rganish arxitekturalarida qo'llanilayotgan o'qitish strategiyalari, optimallashtirish mexanizmlari va real sektor misollarida samaradorlik ko'rsatkichlari yoritilgan. Maqola yakunida neyron tarmoq modellari uchun o'qitish strategiyasini tanlash mezonlari, sifat ko'rsatkichlari va istiqboldagi tadqiqot yo'nalishlari keltiriladi.

Kalit so'zlar: suniy neyron tarmoqlar, o'qituvchili o'qitish, o'qituvchisiz o'qitish, chuqur o'rganish, klasterlash, optimallashtirish.

АННОТАЦИЯ: В данной научной статье подробно анализируются теоретические основы и практические механизмы двух ключевых парадигм обучения искусственных нейронных сетей — обучение с учителем (supervised learning) и обучение без учителя (unsupervised learning). Исследование охватывает математические модели, особенности алгоритмов, а также сферу применения методов классификации, регрессии, кластеризации и снижения размерности данных. Особое внимание уделено современным архитектурам глубокого обучения, стратегиям обучения, методам оптимизации и их эффективности в прикладных задачах. В заключение представлены критерии выбора стратегии обучения, показатели качества моделей и возможные направления дальнейших исследований в области нейронных сетей.

Ключевые слова: искусственные нейронные сети, обучение с учителем, обучение без учителя, глубинное обучение, кластеризация, оптимизация.

ABSTRACT: This scientific article provides an in-depth examination of the theoretical foundations and practical mechanisms of the two primary

learning paradigms in artificial neural networks — **supervised learning** and **unsupervised learning**. The study discusses mathematical formulations, algorithmic specifications, and practical applications of methods such as classification, regression, clustering, and dimensionality reduction. Special attention is given to modern deep-learning architectures, training strategies, optimization techniques, and their performance in real-world scenarios. The article concludes with criteria for selecting appropriate training strategies, model quality indicators, and future research directions in neural network development.

Keywords: artificial neural networks, supervised learning, unsupervised learning, deep learning, clustering, optimization.

KIRISH

So'nggi o'n yilliklarda axborot texnologiyalari, kompyuter quvvatining tezkor o'sishi va katta hajmdagi ma'lumotlar bilan ishlash imkoniyatlarining kengayishi natijasida suniy intellektning eng muhim yo'nalishlaridan biri — suniy neyron tarmoqlar (SNT) jadal rivojlanmoqda. Bugungi kunda neyron tarmoqlar nafaqat nazariy informatika sohasida, balki sanoat, tibbiyot, moliya, ta'lim, biotexnologiya va boshqa ko'plab real sohalarda murakkab masalalarni yechishning asosiy vositasiga aylanmoqda. Ularning muvaffaqiyati, avvalo, ma'lumotlardan ma'noli bilimlarni avtomatik ravishda ajratib olish, murakkab naqshlarni aniqlash va yuqori aniqlikdagi bashoratlar yaratish qobiliyatiga bog'liqdir.

Neyron tarmoqlarni samarali ishlashida eng muhim bosqichlardan biri — bu **o'qitish jarayoni**, ya'ni modelning vazn koeffitsientlarini optimallashtirish orqali unga kerakli bilimlarni singdirishdir. O'qitish mexanizmlariga ko'ra neyron tarmoqlar, odatda, ikki asosiy yondashuvga bo'linadi: **o'qituvchili o'qitish (supervised learning)** va **o'qituvchisiz o'qitish (unsupervised learning)**. O'qituvchili o'qitishda modelga kirish ma'lumotlari bilan birga ularning to'g'ri javoblari ham beriladi, natijada tarmoq xatolikni minimallashtirish orqali o'rganadi. Aksincha, o'qituvchisiz o'qitishda model faqat kirish ma'lumotlari asosida yashirin tuzilmalarni, o'xshashliklarni yoki klasterlarni mustaqil ravishda kashf etadi.

Har ikki yondashuv zamonaviy suniy intellektning muhim poydevorini tashkil etib, ularning matematik asoslari, amaliy natijalari va qo'llanish sohalari bir-biridan keskin farqlanadi. Masalan, o'qituvchili o'qitish ko'proq tasniflash va regressiya kabi aniq natija talab qilinadigan vazifalarda ustun bo'lsa, o'qituvchisiz o'qitish katta hajmdagi belgilanmagan ma'lumotlarda yashirin naqshlarni ochish imkoniyati bilan ajralib turadi. Bugungi kunda ko'plab chuqur o'rganish (deep learning) arxitekturalari ushbu ikki yondashuvning kombinatsiyasiga asoslanib, murakkab tizimlarni samarali o'rgata oladigan gibrid modellarga aylangan.

Mazkur maqolada neyron tarmoqlarni o'qitishning ikki paradigmasi ilmiy-nazariy nuqtai nazardan tahlil qilinadi, ularning algoritmik mohiyati,

matematik modeli, ustunliklari va cheklovlari solishtiriladi. Shuningdek, real amaliyotda qo'llaniladigan mashhur o'qitish strategiyalari, optimallashtirish usullari hamda zamonaviy tadqiqotlar natijalari yoritiladi. Maqola SNT modellarini tanlash, loyihalash va amaliy vazifalarga moslashtirishda ilmiy-uslubiy yo'nalish sifatida xizmat qiladi.

ASOSIY QISM

Suniy neyron tarmoqlarini o'qitish jarayoni zamonaviy sun'iy intellekt tizimlarining funksional samaradorligini belgilovchi asosiy bosqichlardan biridir. O'qitish strategiyasini to'g'ri tanlash modelning umumlashma qobiliyatiga, barqarorligiga, murakkab naqshlarni aniqlash darajasiga va real ma'lumotlar bilan ishlash imkoniyatiga bevosita ta'sir ko'rsatadi. Hozirgi ilmiy adabiyotlarda neyron tarmoqlarni o'qitishning ikki yirik paradigmasi keng qo'llaniladi. Ular o'qituvchili o'qitish va o'qituvchisiz o'qitishdir. Har ikkala yondashuv o'zining matematik modeli, ma'lumotga bo'lgan talablari, optimallashtirish mexanizmlari va qo'llanish sohalari bilan farqlanadi.

O'qituvchili o'qitish aniq markirovka qilingan ma'lumotlar bilan ishlaydigan yondashuv bo'lib, unda har bir kirish vektori o'zining to'g'ri javobi bilan birga neyron tarmoqqa beriladi. Tarmoqning vazifasi kirish xususiyatlari va ularning mos chiqishlari orasidagi funksional bog'lanishni o'rganishdan iboratdir. Ushbu yondashuvning nazariy asosi regressiya va tasniflash modellari bilan bog'liq bo'lib, xatolik funksiyasini minimallashtirish orqali optimal vaznlar majmuasi aniqlanadi. Amaliy adabiyotlarda ko'pincha kvadratik yo'qotish funksiyasi, kross-entropiya yo'qotishi va softmax ehtimollik taqsimoti kabi mexanizmlar qo'llaniladi. O'qituvchili o'qitish tibbiy diagnostika, nutqni tanish, kredit reytingini aniqlash, texnik nosozliklarni bashorat qilish, yuzni aniqlash kabi yuqori aniqlik talab qilinadigan sohalarda eng samarali hisoblanadi. Ushbu paradigmaning kuchli tomoni modelning aniq javoblar asosida yo'naltirilgan tarzda o'rganishidir. Biroq markirovka qilingan ma'lumotlarni tayyorlashning murakkabligi, vaqt talab etishi va katta xarajat bilan bog'liqligi uning cheklovlari qatoriga kiradi.

O'qituvchisiz o'qitish esa belgilanmagan ma'lumotlar ustida ishlashga mo'ljallangan bo'lib, tarmoq kirish ma'lumotlaridagi yashirin tuzilma, o'xshashlik, klaster yoki statistik aloqalarni mustaqil aniqlaydi. Ushbu yondashuvning nazariy asosi klasterlash algoritmlari, o'lchamlarni qisqartirish modellari va ehtimollik taqsimotlarini tiklash nazariyasi bilan bog'liq. Amalda keng qo'llaniladigan usullar qatoriga K-Means klasterlash algoritmi, t-SNE vizualizatsiya metodi, autoencoder arxitekturasi, o'z-o'zini o'rgatish (self-supervised learning) mexanizmlari kiradi. O'qituvchisiz o'qitish ko'p miqdordagi belgilanmagan ma'lumotlarga ega bo'lgan sohalarda ayniqsa foydalidir. Masalan, tibbiyotda anamnez matnlarini guruhlash, moliyada xaridor xatti-harakatlarini segmentlash, sanoatda sensor ma'lumotlaridagi g'ayritabiiy holatlarni aniqlash kabi vazifalarda samaradorlik ko'rsatadi.

Ushbu paradigмага xos muammo shundaki, modelning chiqishlari aniq javob bilan solishtirilmagani sababli baholash mezonlari murakkabroq bo'ladi.

Bugungi kunda ikkala paradigmadan olingan afzalliklarni birlashtiruvchi gibrid yondashuvlar ham rivojlanmoqda. Masalan, birlamchi bosqichda o'qituvchisiz model yordamida yashirin xususiyatlar ajratib olinadi va keyinchalik ularni o'qituvchili modelda tasniflash yoki bashorat qilish uchun ishlatish mumkin. Chuqur o'rganish yo'nalishida autoencoder, variatsion autoencoder, kontrastiv o'rganish va self-supervised o'qitish kabi texnikalar aynan shu gibrid modelning zamonaviy shakllari hisoblanadi. Ushbu yondashuvlarda ma'lumotni chuqur qayta ishlash jarayoni tarmoqning umumlashma xususiyatini oshiradi, shu bilan birga markirovka qilingan ma'lumotlar hajmi bo'lmagan yoki kam bo'lgan hollarda ham yuqori aniqlikka erishish imkonini yaratadi.

Neyron tarmoqlarni o'qitish jarayonining matematik modeli ham har ikki paradigmada farq qiladi. O'qituvchili o'qitishda gradient yo'nalishi bo'yicha optimallashtirish, momentli gradient, Adam, RMSProp kabi metodlar keng ishlatiladi. O'qituvchisiz modellarda esa uzoqlik metrikalari, o'xshashlik funksiyalari, kovariatsiya matritsasining tahlili va taqsimotlarni tiklashga asoslangan yondashuvlar qo'llanadi. Bunda ma'lumotlar buluti ichidagi ichki geometriya aniqlanishi va klasterlarning tabiiy chegaralari topilishi muhim ahamiyatga ega.

Yuqorida bayon etilgan nazariy va amaliy jihatlar suniy neyron tarmoqlari uchun o'qitish strategiyasini tanlashda asosiy ilmiy mezon sifatida xizmat qiladi. Har bir yondashuvning o'ziga xos ustunliklari, cheklovlari va qo'llanish sohasi mavjud bo'lib, ma'lumotlarning tuzilishi, hajmi, sifati va belgilanganlik darajasi tanlovning asosiy omillari hisoblanadi. Shuning uchun neyron tarmoqlarni amaliy jihatdan qo'llashda o'qituvchili va o'qituvchisiz yondashuvlarning nazariy asoslarini chuqur anglash modelning muvaffaqiyatini belgilovchi hal qiluvchi faktor bo'lib xizmat qiladi.

O'QITUVCHILI VA O'QITUVCHISIZ O'QITISHNING NAZARIY ASOSLARI

Suniy neyron tarmoqlarni o'qitishning nazariy poydevori statistik o'rganish nazariyasi, optimallashtirish metodlari, ehtimollik modellari va chiziqli algebra kabi fundamental fanlar bilan chambarchas bog'liqdir. Neyron tarmoqning asosiy vazifasi berilgan ma'lumotlardan umumlashtirilgan, barqaror va ishonchli funksional bog'lanishni o'rganishdan iborat. O'qitish jarayoni tarmoqning vazn koeffitsientlarini shunday optimallashtirishni nazarda tutadiki, natijada model yangi uchraydigan ma'lumotlarda ham xatolikni minimal darajada saqlaydi. Ushbu bobda o'qituvchili va o'qituvchisiz o'qitishning ilmiy-nazariy asoslari, ularning matematik modeli, o'rganish jarayonidagi farqlari hamda statistik xususiyatlari tahlil qilinadi.

O'qituvchili o'qitish nazariy jihatdan xaritalash funksiyasini aniqlash masalasi sifatida qaraladi. Bu yondashuvda modelga kirishlar va ularga mos chiqishlar beriladi, ya'ni tarmoq belgilangan ma'lumotlar ustida o'rganadi.



Maqsad — mavjud kuzatuvlar bo'yicha yotgan, noma'lum bo'lgan haqiqiy funksiyaning yaqinlashmasini topishdir. Bunda xatolik funksiyasi tanlanadi va gradientga asoslangan optimallashtirish algoritmlari yordamida minimallashtiriladi. O'qituvchili o'qitishning matematik mohiyati shundan iboratki, model ehtimolliq nuqtai nazardan maksimal ehtimollik baholashi yoki bayescha inferensiya orqali eng mos vaznlar to'plamini topishga intiladi. Ushbu yondashuvning nazariy barqarorligi Vapnik–Chervonenkis (VC) murakkabligi, generalizatsiya xatoliklari va overfitting hodisasini tushuntiruvchi tamoyillar bilan belgilanadi.

O'qituvchisiz o'qitish esa boshqacha nazariy asosga ega bo'lib, uning markazida belgilersiz ma'lumotlar majmuasidagi yashirin tuzilmalarni aniqlash jarayoni turadi. Bu usul ma'lumotlarning statistik tarqalishini baholash, o'xshashliklarni topish, klasterlarni shakllantirish yoki o'lchamlarni kamaytirish kabi vazifalarga qaratilgan. O'qituvchisiz o'qitishning matematika asosida ma'lumotlar fazosidagi zichlik funksiyasini baholash masalasi yoki optimal klaster markazlarini aniqlash yotadi. Neyron tarmoqlar yordamida bajariladigan o'qituvchisiz o'qitish usullari, xususan, avtoenkoderlar, Kohonen xaritalari va generativ modellar yordamida murakkab nolinear tuzilmalarni ham aniqlay oladi. Bunday modelning asosiy afzalligi – katta hajmdagi belgilersiz ma'lumotlardan mustaqil ravishda tendensiya va naqshlarni kashf etish imkoniyatidir.

Har ikki paradigmadagi asosiy jarayon vaznlarni optimallashtirish bilan bog'liq bo'lsa-da, ularning o'qitish mexanizmlari bir-biridan keskin farq qiladi. O'qituvchili o'qitishda xatolik funksiyasi bevosita "to'g'ri javob"ga bog'langan bo'ladi, o'qituvchisiz o'qitishda esa model o'zining ichki strukturasi ma'lumotning ichki statistik xususiyatlariga moslab shakllantiradi. Shunday qilib, o'qituvchili o'qitish deterministik baholashga yaqinlashsa, o'qituvchisiz o'qitish probabilistik struktura qidiruviga urg'u beradi.

Neyron tarmoqlarni nazariy jihatdan tahlil qilishda konveks bo'lmagan optimallashtirishning murakkabligi, gradient yo'qolishi va portlash fenomenlari, faollashtirish funksiyalari tanlovi ham alohida ahamiyatga ega. Shuningdek, o'rganish tezligi, umumlashtirish qobiliyati, ma'lumotlar sifati va regularizatsiya mexanizmlari tarmoqning nazariy samaradorligini belgilovchi muhim omillardir. O'qituvchili va o'qituvchisiz o'qitishning matematik asoslarini to'g'ri tushunish neyron tarmoq modellarini yaratish, tanlash va real amaliy vazifalarga moslashtirishda fundamental ahamiyatga ega bo'ladi.

O'QITUVCHILI O'QITISHNING NAZARIY ASOSLARI VA MODELI

O'qituvchili o'qitish suniy neyron tarmoqlarni o'rgatishning eng keng tarqalgan paradigmasi bo'lib, uning mohiyati modelga kirish ma'lumotlari bilan birga ularga mos keladigan tayyor belgilangan chiqish qiymatlarini taqdim etishdan iborat. Mazkur yondashuvda maqsad — tarmoq parametrlarini shunday optimallashtirishki, u orqali kiritilgan namunalar uchun oldindan berilgan "to'g'ri javob"ni eng kichik xatolik bilan tiklash

mumkin bo'lsin. O'qituvchili o'qitishning nazariy asoslari statistik o'rganish nazariyasi, funksional approksimatsiya, optimallik prinsiplari va xatolikni minimallashtirish tushunchalariga tayangan holda shakllangan.

O'qituvchili o'qitish jarayoni odatda ikki elementga tayanadi: o'quv tanlovi va maqsad funksiyasi. O'quv tanlovi $D = \{(x_i, y_i)\}_{i=1}^n$ ko'rinishida bo'lib, bu yerda x_i — kirish vektori, y_i — shu vektorga mos belgi yoki qiymatdir. Neyron tarmoq ushbu bog'liqlikni o'rganib, kirish fazosidan chiqish fazosiga funksional akslantirishni amalga oshiradi. Bu jarayon funksiyani yaqinlashtirish muammosi sifatida qaraladi, ya'ni model noma'lum haqiqiy funksiyani f^* tanlov asosida taxminiy funktsiya \hat{f} bilan ifodalaydi. Tarmoq vazifasi — bu ikki funktsiyaning farqini minimallashtirish.

Mazkur o'qitish paradigmasining markaziy tushunchalaridan biri **xatolik funksiyasi** yoki **yo'qotish funksiyasi**dir. Uning eng keng qo'llaniladigan ko'rinishi kvadratik xatolik funksiyasi bo'lib, u regressiya masalalarida model bashorati bilan real qiymat orasidagi farqni o'lchaydi. Tasniflash masalalarida esa ehtimollik taqsimotini baholashga asoslangan kross-entropiya funksiyasi keng qo'llanadi. Xatolik funksiyasining qiymatini kamaytirish optimallashtirish algoritmlari orqali amalga oshiriladi. Zamonaviy Neyron tarmoqlarda eng ko'p qo'llaniladigan optimallashtirish yondashuvi gradientga asoslangan usullar, xususan, gradient pasayishi (gradient descent) va uning modifikatsiyalari hisoblanadi.

O'qituvchili o'qitish modeli, nazariy jihatdan, parametrlar fazosida optimal nuqtani qidirishga tenglashtiriladi. Neyron tarmoqning har bir qatlami uchun vaznlar va neyronlarning faollashtirish funksiyalari belgilanadi. Kechiktirib tarqalish algoritmi (backpropagation) orqali xatolikning gradienti tarmoq bo'ylab orqaga uzatiladi va har bir parametr xatolikni kamaytiradigan yo'nalishda yangilanadi. Shu tariqa model kirish va chiqish o'rtasidagi bog'liqlikni tobora aniqroq ifodalay boshlaydi.

O'qituvchili o'qitishning nazariy kuchi shundaki, u statistik optimal yechimga yaqinlashish xususiyatiga ega. Yetarli hajm va sifatga ega bo'lgan o'quv tanlovi mavjud bo'lsa, modelning umumlashma qobiliyati ortadi va u ilgari ko'rilmagan namunalarda uchun ham to'g'ri bashorat berishi mumkin bo'ladi. Biroq ushbu paradigma ortiqcha o'rganish (overfitting), ma'lumotlar notekis taqsimlanganda yuzaga keladigan og'ish muammolari (bias), va etishmayotgan ma'lumotlarga sezgirlik kabi cheklovlarga ham ega. Shu bois zamonaviy o'qituvchili o'qitish modellarida tartiblash (regularization), dropout, ma'lumotlarni sun'iy kengaytirish kabi texnikalar qo'llaniladi.

O'qituvchili o'qitish modeli bugungi kunda kompyuter ko'rishi, tabiiy tilni qayta ishlash, ovoz tanish, biomeditsina, moliyaviy prognozlash kabi ko'plab sohalarda asosiy vosita sifatida xizmat qilib kelmoqda. Ushbu yondashuvning nazariy poydevori murakkab neyron arxitekturalarining



shakllanishiga, xususan, konvolyutsion, rekurrent, transformatorlar kabi modellarni yanada samarali o'rgatishga imkon bermoqda.

XULOSA

Suniy neyron tarmoqlarni o'qitishning o'qituvchili va o'qituvchisiz yondashuvlari zamonaviy suniy intellekt tizimlarining ilmiy va amaliy asosini tashkil etadi. O'qituvchili o'qitish aniq belgilangan natijalar talab etiladigan masalalarda yuqori samaradorlik ko'rsatib, modelni qat'iy matematik maqsad funksiyasi asosida optimallashtiradi. O'qituvchisiz o'qitish esa katta hajmdagi belgilanmagan ma'lumotlar uchun samarali bo'lib, ularning ichki tuzilishini mustaqil ravishda kashf etadi va ko'plab real jarayonlarni avtomatlashtirishda muhim ahamiyat kasb etadi. Neyron tarmoqlar modeli chiziqsiz funksiyalar kombinatsiyasidan iborat bo'lib, optimallashtirish nazariyasi, statistik o'rganish va hisoblash matematikasi bilan uzviy bog'liqdir. Tadqiqot natijalari shuni ko'rsatadiki, ushbu ikki paradigmaning chuqur tushunilishi murakkab intellektual tizimlarni yaratishda asosiy ilmiy mezon hisoblanadi. Kelgusida ushbu yondashuvlarning gibrid shakllari, o'z-o'zini boshqaruvchi o'qitish, katta model arxitekturalari va nazorat qilinmagan bilimlarni kuchaytirish yo'nalishlari keng tadqiq etilishi zarur.

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Iterator va generatorlarni amaliyotda yozish

Yusupov Mirsaid

Farg'ona davlat universiteti Amaliy matematika
va informatika kafedrası o'qituvchisi

E-mail: mirsaidbeky@gmail.com

ORCID- 0009-0001-1989-0088

Sobirjonov Siyavushxo'ja Suxrobxo'ja o'g'li

Farg'ona davlat universiteti Amaliy matematika
yo'nalishi 3-bosqich 23.07-guruh talabasi

E-mail: siyavushxujayev@gmail.com

Annotatsiya: Ushbu maqolada Python dasturlash tilida iterator va generatorlarning ishlash prinsiplari, ularni amaliyotda qo'llash usullari hamda samaradorlik jihatlari yoritiladi. Keltirilgan misollar orqali `_iter_()` metodi yordamida maxsus iterator obyektlarini yaratish va `yield` operatori asosida generator funksiyalarni ishlab chiqish jarayoni bosqichma-bosqich tushuntiriladi. Iterator va generatorlarning xotira tejamkorligi, kechiktirilgan hisoblash (lazy evaluation) imkoniyatlari hamda katta hajmdagi ma'lumotlar bilan ishlashdagi afzalliklari amaliy misollar bilan asoslab beriladi. Maqola Python'da oqimli ma'lumotlarni qayta ishlash, sikllar bilan ishlash va samarali kod yozish bo'yicha boshlang'ich hamda amaliy ko'nikmalarni shakllantirishga qaratilgan.

Kalit so'zlar: iterator, generator, kechiktirilgan hisoblash, lazy evaluation, xotira tejamkorligi, Python sikllari, ma'lumot oqimi, iterable obyekt, funksiya generatori, amaliy dasturlash.

Annotation: This article explores the principles and practical implementation of iterators and generators in the Python programming language. It explains how custom iterator objects can be created using the `_iter_()` and `_next_()` methods, as well as how generator functions operate through the `yield` keyword. The study highlights the memory efficiency and lazy evaluation features of generators, demonstrating their advantages when working with large data streams. Practical code examples are provided to illustrate how iterators and generators improve performance and simplify data processing in real-world programming scenarios.

Keywords: iterator, generator, `_iter_()`, `_next_()`, `yield`, lazy evaluation, memory efficiency, data streams, Python programming, iterable objects, generator functions.

Аннотация: В данной статье рассматриваются принципы работы итераторов и генераторов в языке программирования Python, а также их практическое применение. Подробно объясняется создание пользовательских итераторов с использованием методов `_iter_()` и `_next_()`, а также функционирование генераторных функций на основе ключевого слова `yield`. Особое внимание уделяется таким

преимуществам генераторов, как ленивые вычисления и экономия памяти, что делает их эффективными при обработке больших объёмов данных. Приведённые примеры демонстрируют, как итераторы и генераторы упрощают работу с потоками данных и повышают производительность программ.

Ключевые: итератор, генератор, `_iter_()`, `_next_()`, `yield`, ленивые вычисления, экономия памяти, поток данных, итерируемый объект, генераторная функция, Python.

Kirish

Python dasturlash tilida ma'lumotlar ustida ketma-ket ishlash jarayonida iterator va generatorlardan foydalanish muhim ahamiyatga ega. Iteratorlar yordamida obyektlarni bosqichma-bosqich o'qish, ularning har bir elementini tartib bilan qaytarish hamda sikllar orqali boshqarish mumkin bo'ladi. Generatorlar esa `yield` operatori asosida ishlaydigan, xotira tejamkorligi va kechiktirilgan hisoblash (lazy evaluation) imkoniyatiga ega bo'lgan maxsus funksiyalar bo'lib, katta hajmdagi ma'lumotlar bilan ishlashda samaradorlikni ta'minlaydi. Ushbu mavzu Pythonning ichki mexanizmlarini chuqurroq anglash, samarali kod yozish hamda ma'lumot oqimlari bilan ishlash ko'nikmalarini shakllantirish uchun muhim hisoblanadi. Mazkur maqolada iterator va generatorlarning asosiy tushunchalari, ularning amaliy qo'llanilishi va afzalliklari bosqichma-bosqich yoritib beriladi.

Iterator va generatorlar: asosiy tushuncha

Python dasturlash tilida iterator va generatorlar ma'lumotlar ustida ketma-ketlik asosida ishlashni soddalashtiradigan ichki mexanizmlardir. Iterator — bu har safar navbatdagi elementni qaytarib beradigan obyekt bo'lib, u ikki asosiy metodga ega: `_iter_()` va `_next_()`. `_iter_()` metodi obyektning iteratsiya uchun tayyor ekanini bildirsa, `_next_()` navbatdagi qiymatni qaytaradi va har bir chaqirilganda ichki ko'rsatkich bir bosqich oldinga siljiydi. Elementlar tugaganda `StopIteration` istisnosi ko'tariladi. Iteratorlar ma'lumotlarni tartib bilan qayta ishlash, sikllarni moslashuvchan boshqarish va katta massivlar bilan ishlashda qulaylik yaratadi.

Generatorlar esa iteratorlarning qulay alternativi bo'lib, ular `yield` operatori orqali bir vaqtning o'zida bitta qiymat qaytaradi va funksiyaning bajarilishini vaqtincha to'xtatadi. `yield` qayta chaqirilganda esa funksiya avval to'xtagan joyidan davom etadi. Bu jarayon kechiktirilgan hisoblash (lazy evaluation) deb ataladi. Generatorlarning asosiy afzalligi — xotira tejamkorligi, chunki ular butun ro'yxatni birdaniga yaratmaydi, balki elementlarni navbat bilan ishlab chiqaradi.

Iterator va generatorlardan foydalanish katta hajmdagi ma'lumotlarni qayta ishlash, fayllarni qadam-baqadam o'qish, oqimli ma'lumotlarni boshqarish va samarali kod yozishda juda foydalidir. Amaliyotda ular sikllar, ma'lumotlar oqimi, filtrlash, hisoblash jarayonlarida keng qo'llanadi va dastur samaradorligini sezilarli darajada oshiradi.

Iteratorlarning vazifalari

1. **Ketma-ket elementlarni olish** – iteratorlar obyektning har bir elementini navbat bilan qaytaradi.
2. **Elementlarni boshqarish** – sikllar orqali ma'lumotlarni tartib bilan qayta ishlash imkonini beradi.
3. **Ma'lumotlarni takrorlash (traversal)** – ro'yxat, lug'at, to'plam kabi iterable obyektlarni oson aylanadi.
4. **Katta hajmdagi ma'lumotlarni boshqarish** – barcha elementlarni bir vaqtning o'zida xotirada saqlamay, ketma-ket ishlash imkonini beradi.
5. **Moslashuvchanlik** – o'z iteratsion obyektlaringni yaratish va maxsus iteratsiya qoidalarini belgilash.

Generatorlarning vazifalari

1. **Kechiktirilgan hisoblash (lazy evaluation)** – qiymatlarni faqat kerak bo'lgan paytda hisoblaydi, xotirani tejamaydi.
2. **Soddalashtirilgan iterator yaratish** – `__iter__()` va `__next__()` metodlarini qo'lda yozmasdan generator orqali navbatma-navbat qiymatlarni qaytarish.
3. **Ma'lumot oqimlarini boshqarish** – fayllar, sensorlar yoki oqimdagi katta ma'lumotlarni ketma-ket ishlash.
4. **Murakkab hisoblashlarni modulga ajratish** – har bir yield orqali qadam-baqadam natijalarni qaytarish, dastur samaradorligini oshirish.
5. **Sikl va hisoblashlarni optimallashtirish** – iteratsiya jarayonini qisqa va tushunarli kod orqali amalga oshirish.

Kod misollar**1. Iterator yaratish (`__iter__` va `__next__`)**

```
class MyIterator:
```

```
    def __init__(self, data):
```

```
        self.data = data
```

```
        self.index = 0
```

```
    def __iter__(self):
```

```
        return self
```

```
    def __next__(self):
```

```
        if self.index < len(self.data):
```

```
            result = self.data[self.index]
```

```
            self.index += 1
```

```
            return result
```

```
        else:
```

```
            raise StopIteration
```

```
my_list = [1, 2, 3]
```

```
it = MyIterator(my_list)
```

```
for item in it:
```

```
    print(item)
```

Natija:

2. Generator yaratish (yield)

```
def my_generator(n):
    for i in range(n):
        yield i
```

```
for num in my_generator(3):
    print(num)
```

Natija:

```
0
1
2
```

Taqqoslash: Iterator vs Generator

Xususiyat	Iterator	Generator
Yaratish usuli	<code>__iter__()</code> va <code>__next__()</code> metodlari	yield operatori bilan funksiya
Xotira ishlatish	Ba'zida ko'proq xotira talab qiladi	Lazy evaluation, xotira tejankor
Kod soddaligi	Ko'proq kod talab qiladi	Kamroq va tushunarli kod
Qaytaradigan qiymat	<code>__next__()</code> chaqirilganda	yield chaqirilganda
Katta ma'lumotlar bilan ishlash	Murakkab bo'lishi mumkin	Juda qulay

Amaliy misol

Tasavvur qilaylik, bizda katta hajmdagi raqamlar ro'yxati bor va faqat **juft sonlarni** qaytarishimiz kerak:

```
def even_numbers(n):
    for i in range(n):
        if i % 2 == 0:
            yield i
```

```
for num in even_numbers(10):
    print(num)
```

Natija:

```
0
2
4
6
8
```

Bu misol xotira tejankorligini ko'rsatadi, chunki generator faqat kerakli elementlarni qaytaradi, butun ro'yxatni xotirada saqlamaydi.

Xulosa

Python dasturlash tilida iterator va generatorlar **ketma-ketlik asosida ma'lumotlarni boshqarish va samarali ishlash** imkonini beradi.

- **Iteratorlar:** obyektning elementlarini navbat bilan qaytaradi, moslashuvchanlik va boshqaruv imkoniyatini beradi.
- **Generatorlar:** xotira tejamkor va kodni soddalashtiradi, kechiktirilgan hisoblashni amalga oshiradi.

Amaliyotda ular katta hajmdagi ma'lumotlar bilan ishlash, fayllarni oqim orqali o'qish va murakkab hisoblashlarni modulga ajratish uchun juda qulaydir. Shu bilan dastur samaradorligi va tushunarli kod yozish imkoniyati oshadi.

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**ZAMONAVIY TEXNOLOGIYALAR ASOSIDA MATEMATIKA VA
INFORMATIKA FANLARINI O'QITISH SAMARADORLIGINI OSHIRISH****Mamatova Zilolaxon Xabibuloxonovna**Farg'ona Davlat Universiteti dotsenti, pedagogika fanlari bo'yicha
falsafa doktori (PhD)**Muxtorov Oyatullo Lutfullo o'g'li**Farg'ona davlat universiteti fizika-matematika fakulteti amaliy
matematika yo'nalishi 3-bosqich talabasi

Annotatsiya: Ushbu maqolada umumta'lim maktablarida matematika va informatika fanlarini o'qitish jarayonida yuzaga kelayotgan muammolar va ularni hal etish yo'llari tahlil qilinadi. Raqamli texnologiyalarning jadal rivojlanishi va o'quvchilarning zamonaviy talablarga mos bilim olish ehtiyoji ta'lim metodikasini qayta ko'rib chiqishni taqozo etmoqda. Maqolada o'qituvchilar malakasi, o'quv dasturlari, o'quvchilar motivatsiyasi, moddiy-texnik resurslar, fanlararo integratsiya va o'qitish metodologiyasi muammolari ko'rib chiqilib, ularning sabablari, oqibatlar va yechimlari xorijiy tajribalar asosida muhokama qilinadi.

Kalit so'zlar: matematika ta'limi, informatika o'qitish, o'qitish metodikasi, raqamli kompetensiya, o'qituvchi malakasi, ta'lim texnologiyalari, fanlararo integratsiya, muammoli ta'lim, motivatsiya, STEM ta'lim

Аннотация: В статье анализируются проблемы преподавания математики и информатики в общеобразовательных школах и пути их решения. Быстрое развитие цифровых технологий и потребность учащихся в современных знаниях требуют пересмотра методик обучения. Рассматриваются вопросы квалификации учителей, учебных программ, мотивации учащихся, материально-технических ресурсов, междисциплинарной интеграции и методологии преподавания. Причины и последствия проблем обсуждаются с учетом зарубежного опыта, предлагаются эффективные решения.

Ключевые слова: математическое образование, преподавание информатики, методика обучения, цифровая компетентность, квалификация учителя, образовательные технологии, межпредметная интеграция, проблемное обучение, мотивация, STEM образование

Annotation: This article analyzes the challenges in teaching mathematics and computer science in general education schools and proposes solutions. The rapid development of digital technologies and the need for students to acquire modern knowledge necessitate a revision of teaching methodologies. Issues such as teacher qualifications, curricula, student motivation, material-technical resources, interdisciplinary integration, and teaching methodologies are examined, with causes, consequences, and solutions discussed based on international experiences.

Keywords: mathematics education, computer science teaching, teaching methodology, digital competence, teacher qualification, educational

technologies, interdisciplinary integration, problem-based learning, motivation, STEM education

KIRISH

XXI asrda ta'lim tizimi global miqyosda jadal o'zgarishlarga duch kelmoqda. Raqamli texnologiyalar, sun'iy intellekt va axborot kommunikatsiya texnologiyalari ta'lim jarayoniga chuqur ta'sir ko'rsatmoqda. O'zbekistonda ta'lim islohotlari ushbu tendentsiyalarni hisobga olgan holda amalga oshirilmoqda. Matematika va informatika zamonaviy ta'limning asosiy poydevori bo'lib, matematika mantiqiy va tahliliy fikrlashni rivojlantirsa, informatika raqamli savodxonlik va dasturlash ko'nikmalarini shakllantiradi. Bu fanlar STEM ta'limining muhim qismini tashkil etadi. Biroq umumta'lim maktablarida ushbu fanlarni o'qitishda jiddiy muammolar mavjud bo'lib, ular ta'lim sifati va o'quvchilarning kelajakdagi muvaffaqiyatiga salbiy ta'sir ko'rsatmoqda. Ushbu maqola muammolarni aniqlash, ularning sabablarini tahlil qilish va samarali yechimlar taklif qilishga qaratilgan.

Tadqiqotda taqqoslash metodi orqali O'zbekiston va xorijiy tajribalar qiyoslanib, kuzatish metodi real dars jarayonlarini tahlil qilish uchun, so'rovnoma metodi o'qituvchi va o'quvchilar fikrlarini o'rganishda, statistik tahlil ta'lim ko'rsatkichlarini baholashda, tizimli yondashuv esa muammolarni kompleks tahlil qilishda qo'llanildi.

ASOSIY MUAMMOLAR TAHLILI

Umumta'lim maktablarida matematika va informatika o'qitishda bir qator muammolar mavjud bo'lib, ularni quyidagi yo'nalishlarda ko'rib chiqish mumkin.

- Moddiy-texnik baza va resurslarning yetishmasligi ta'lim sifatiga jiddiy to'sqinlik qiladi. Informatika fanini samarali o'qitish uchun zamonaviy kompyuter sinflari, yuqori tezlikdagi internet va dasturiy ta'minot zarur. Ammo ko'plab maktablarda 10-15 yillik eskirgan kompyuterlar foydalanilmoqda, 30 o'quvchiga atigi 10-15 kompyuter to'g'ri keladi, internet sekinligi onlayn platformalardan foydalanishni qiyinlashtiradi. Litsenziyasiz dasturlar zamonaviy dasturlarni o'rgatish imkonini cheklaydi, interaktiv doskalar va proyektorlarning yetishmasligi vizual ta'limni tashkil qilishni qiyinlashtiradi. Matematika fanida ham geometrik figuralar, zamonaviy elektron o'quv qo'llanmalar va matematik kalkulyatorlar kabi resurslar yetishmaydi.

- O'qituvchilarning malaka darajasi va kasbiy rivojlanishi ham muhim muammo hisoblanadi. Ko'plab o'qituvchilar raqamli texnologiyalardan foydalanish ko'nikmasiga ega emas va an'anaviy metodlarga sodiq qolmoqda. Informatika o'qituvchilarining ba'zilar dasturlash tillarini bilmaydi, bu esa nazariy bilimlarga e'tibor berib, amaliyotni cheklaydi. Malaka oshirish kurslari ko'pincha sifatsiz bo'lib, pro forma o'tkaziladi. Past maosh va kasbning past nufuzi yoshlarni o'qituvchilikdan uzoqlashtiradi, pedagogik innovatsiyalar sekin tarqaladi.



- O'quvchilarning motivatsiyasi va qiziqishi "Z avlodi"ning raqamli dunyoda o'sgan xususiyatlariga mos kelmaydi. An'anaviy o'qitish usullari zerikarli, bir tomonlama ma'ruzalar samarasizdir. Nazariya va amaliyot o'rtasidagi uzilish o'quvchilarda "Bu menga nima uchun kerak?" degan savolni keltirib chiqaradi. Abstrakt tushunchalarni tushunish qiyin, darsdan tashqari o'z-o'zini rivojlantirish imkoniyati cheklangan, fanlarning hayotiy ahamiyati ko'rsatilmaydi.

O'quv dasturlari va metodikalari zamonaviy talablarga javob bermaydi. Dasturlar nazariyaga e'tibor qaratib, amaliyotni cheklaydi, sun'iy intellekt yoki ma'lumotlar tahlili kabi yangi mavzular kiritilmagan. Mavzular o'quvchi yoshiga mos kelmaydi, fanlararo integratsiya yetishmaydi, baholash tizimi noaniq qolmoqda.

- Fanlararo integratsiya va STEM ta'limning yetishmasligi ham muammo sifatida ajralib turadi. Matematika va informatika alohida o'qitiladi, loyihaviy ishlarga kam e'tibor beriladi, fizika va biologiya kabi fanlar bilan bog'lanish yo'q. Real hayotiy muammolarni hal qilishga yo'naltirilgan yondashuvlar deyarli qo'llanilmaydi.

MUAMMOLARNI HAL ETISH YO'LLARI

Muammolarni bartaraf etish uchun quyidagi samarali yechimlar taklif etiladi.

Moddiy-texnik bazani mustahkamlash. Maktablarni zamonaviy kompyuterlar bilan ta'minlash uchun davlat va xususiy sektor hamkorligi zarur. Bulutli texnologiyalar shaxsiy kompyuterlarga ehtiyojni kamaytiradi, Linux va Python kabi ochiq kodli dasturlar litsenziya xarajatlarini tejaydi. O'quvchilarning smartfonlarini ta'lim vositasiga aylantirish va virtual laboratoriyalardan foydalanish samarali yechimdir. Hindistonning "One Laptop per Child" dasturi bunga misol bo'lib, millionlab bolalarni arzon planshetlar bilan ta'minladi.

O'qituvchilarning malakasini oshirish. Coursera, edX va Ziyonet kabi onlayn platformalar o'qituvchilarga yangi ko'nikmalar beradi. Mentorlik tizimi orqali tajribali o'qituvchilar yoshlarga yordam berishi, Microsoft va Google sertifikatlari malaka darajasini oshirishi mumkin. Amaliy seminarlar va innovatsion g'oyalarni qo'llab-quvvatlash uchun grantlar joriy etilishi kerak. Singapur tajribasi shuni ko'rsatadiki, yiliga 100 soat majburiy malaka oshirish ta'lim sifatini oshiradi.

O'quvchilarning motivatsiyasini oshirish. Gamifikatsiya usullari, masalan, CodeCombat yoki DragonBox kabi platformalar o'quvchilarni qiziqtiradi. Ball va reyting tizimlari raqobatni kuchaytiradi. Loyiha asosida ta'lim, masalan, maktab davomat tizimini yaratish loyihasi, bilimlarni amaliyotga bog'laydi. Olim.uz va xalqaro olimpiadalar, IT kompaniyalari bilan tanishuvlar, zamonaviy kasblar haqida ma'lumot berish motivatsiyani oshiradi. **Sinkveyn** va **Zanjir** metodlari o'quvchilarning faolligini oshirish va darslarni qiziqarli qilish orqali motivatsiyani yanada mustahkamlaydi.

- **Sinkveyn metodi:** Bu metod o'quvchilarga mavzuni ijodiy tarzda umumlashtirish va chuqur tushunish imkonini beradi. Masalan, informatika darsida "algoritm" mavzusi o'tilgandan so'ng, o'quvchilar besh qatorli she'r (Sinkveyn) tuzadilar: "Algoritm, mantiqiy, tartibli, muammoni hal qiladi, kodlashni boshqaradi". Matematikada esa, masalan, "uchburchak" haqida: "Uchburchak, geometrik, uchburchakli, maydonni hisoblaydi, shaklni tahlil qiladi". Bu metod o'quvchilarni faol ishtirok etishga undab, mavzuni qiziqarli va esda qolarli qiladi, shu bilan motivatsiyani oshiradi.

SINKVEYN METODI



Yuqoridan pastga: 1 → 2 → 3 → 4 → 1 (piramida shakli)

Tushuntirish:

■ Asosiy tushuncha

■ Fe'llar

■ Xulosa

■ Sifatlar

■ Gap/Fikr



- **Zanjir metodi:** Bu usul o'quvchilarning hamkorlikda ishlashini rag'batlantiradi, har bir ishtirokchi oldingi o'quvchining ishini davom ettirib, "zanjir" hosil qiladi. Informatika darsida, masalan, o'quvchilar guruh bo'lib oddiy dastur yozishadi, har bir o'quvchi kodning bir qismini qo'shadi yoki sharhlaydi. Matematikada esa, ko'p bosqichli masalani (masalan, tenglamalar sistemasini) yechishda har bir o'quvchi bir bosqichni bajaradi. Bu metod o'quvchilarning faolligini oshiradi, jamoaviy ishlay olish ko'nikmasini rivojlantiradi va darsni interaktiv qiladi.

ZANJIR METODI

Har bir o'quvchi oldingilarini takrorlab, yangisini qo'shadi

Vaqt: 2 daqiqa

1

2

3

4

1-o'quvchi:

Atama A

2-o'quvchi:

Atama A
+ Atama B

3-o'quvchi:

Atama A
Atama B
+ Atama C

4-o'quvchi:

Atama A
Atama B
Atama C
+ Atama D

O'quvchi uchun foydasi

- Mavzuni takrorlab oladi
- Xotira mustahkamlanadi
- Eslash qobiliyati ortadi
- O'ziga bo'lgan ishonch ortadi
- Diqqatni jamlaydi

O'qituvchi uchun foydasi

- O'quvchini tahlil qilishga yordam beradi
- Mavzuning qaysi qismi yaxshiroq esda qolganini aniqlash
- Darsning samaradorligi ortadi
- Qaysi o'quvchining xotirasi kuchli ekanini bilish

O'quv dasturlarini modernizatsiyalash. Informatikada Python, sun'iy intellekt, kibernetika, matematikada esa statistika va modellashtirish kabi mavzular kiritilishi kerak. Har bir mavzu real hayotiy misollar bilan izohlanishi, laboratoriya ishlari va loyihalar soni ko'paytirilishi lozim. Qobiliyatli o'quvchilar uchun qo'shimcha mavzular, qiynalayotganlar uchun oddiyroq variantlar ishlab chiqilishi kerak.

STEM ta'lim va fanlararo integratsiya. Matematika va informatika integratsiyasi, masalan, algoritm murakkabligini hisoblash, fizika bilan harakat simulyatsiyasi yoki biologiyada DNK tahlili kabi loyihalar fanlar bog'liqligini ko'rsatadi. Robototexnika to'garaklari, dasturlash maktablari va matematik modellashtirish laboratoriyalari tashkil etilishi zarur. "Aqlli uy" yoki ekologik muammolarni modellashtirish loyihalari o'quvchilarga amaliy ko'nikmalar beradi.

XORIJIY TAJRIBALAR VA TAVSIYALAR

Finlandiya modeli kam dars soati, mustaqil ish va testlarsiz baholashga asoslanadi. O'qituvchilik yuqori nufuzli kasb bo'lib, magistr darajasi talab qilinadi. **Singapur modeli** "Mastery learning" va vizual modellar (CPA yondashuvi: Concrete → Pictorial → Abstract) orqali yuqori natijalarga erishadi. **AQSh va Yevropa** STEM ta'limga e'tibor berib, "Maker Space" va texnologiya kompaniyalari bilan hamkorlik qiladi. **Estoniya** 1-sinfdan dasturlash o'qitadi va ta'limni elektron platformalarda olib boradi. Ushbu tajribalarni O'zbekistonga moslashtirish muammolarni hal qilishda samarali bo'ladi.

XULOSA VA TAVSIYALAR. Matematika va informatika o'qitishdagi muammolar murakkab bo'lib, ularni hal etish tizimli yondashuvni talab qiladi. Davlat darajasida maktablarni zamonaviy texnika bilan ta'minlash, o'qituvchilar maoshini oshirish, o'quv dasturlarini yangilash zarur. Maktablar innovatsion metodlarni joriy etishi, STEM yo'nalishini rivojlantirishi kerak. O'qituvchilar doimiy ravishda o'zlarini rivojlantirishi, zamonaviy texnologiyalarni o'zlashtirishi va individual yondashuvni qo'llashi lozim. Ota-onalar va jamiyat farzandlarni qo'llab-quvvatlashi, maktablar bilan hamkorlik qilishi zarur. Ushbu chora-tadbirlar orqali ta'lim sifati oshadi va o'quvchilar raqamli dunyoda muvaffaqiyatli bo'lishi uchun zarur ko'nikmalarga ega bo'ladi.

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**OLIY TA'LIMDA MIKROBLOGLAR: MA'NAVIY-MA'RIFIY ISHLAR UCHUN
EDTECH YONDASHUVI****SAYFITDINOVA MADINA SHAHITBEK QIZI**

ADPI STAJYOR -TATQIQOTCHI(PHD)

ANNOTATSIYA : Ushbu maqolada oliy ta'lim muassasalarida ma'naviy-ma'rifiy ishlar samaradorligini oshirishda mikrobloglardan foydalanish imkoniyatlari tahlil qilinadi. Raqamli avlod talabalari hayotida ijtimoiy tarmoqlar, xususan, mikrobloglar (Telegram kanallari, X/Twitter, qisqa postli platformalar) kommunikatsiyaning asosiy vositasiga aylangani, lekin ularning ma'naviy-tarbiyaviy salohiyati ko'p hollarda yetarlicha ishlatilmayotgani ko'rsatib beriladi.

Maqolada mikroblog tushunchasi, uning didaktik funksiyalari, ma'naviy-ma'rifiy ishlar mazmuni bilan uyg'unlashish mexanizmlari yoritiladi. EdTech yondashuvi asosida mikrobloglardan foydalanishning konseptual modeli taklif etiladi: diagnostika bosqichi, maqsadli auditoriyani aniqlash, platformani tanlash, kontent strategiyasi, interaktiv formatlar (savol-javob, aksiyaga chaqiruvchi postlar, refleksiya topshiriqlari) hamda samaradorlikni baholash mezonlari izohlanadi.

Shuningdek, OTMlarda mikrobloglar orqali ma'naviy-ma'rifiy ishlarni tashkil etishning ijobiy jihatlari (talabalarning faollashuvi, tezkor fikr almashinuvi, media savodxonlikni rivojlantirish, real vaqt rejimidagi muloqot) va salbiy tomonlari (chalg'ituvchi faktorlar, yuzaki munosabat, tarmoqdagi etik muammolar, raqamli tengsizlik) tizimli tahlil qilinadi. Xulosa qismida ushbu cheklovlarni yumshatish bo'yicha amaliy tavsiyalar – normativ-uslubiy yo'riqnomalar ishlab chiqish, raqamli odob-axloq bo'yicha treninglar, moderatorlar jamoasini tayyorlash, raqamli platformalarni ta'lim jarayoni bilan integratsiya qilish zarurligi asoslab beriladi.

Kalit so'zlar: oliy ta'lim, mikroblog, ma'naviy-ma'rifiy ishlar, EdTech, raqamli pedagogika, media savodxonlik, ijtimoiy tarmoqlar.

ABSTRACT: This article explores the potential of microblogs to enhance values-based and educational (ma'naviy-ma'rifiy) activities in higher education institutions. It argues that for today's "digital native" students, social media – especially microblog platforms such as Telegram channels, X/Twitter and other short-post tools – have become a dominant mode of communication, while their pedagogical and value-oriented potential often remains underused.

The paper defines microblogs and analyses their didactic functions, explaining how they can be aligned with the content and aims of values-based educational work. Based on an EdTech approach, the author proposes a conceptual model for using microblogs in higher education: initial diagnostics of students' digital habits, identifying the target audience, selecting appropriate platforms, designing a content strategy, implementing interactive

formats (Q&A posts, calls to action, reflection tasks) and establishing indicators for evaluating effectiveness.

The article further discusses the advantages of using microblogs in university-level values education (increased student engagement, rapid feedback, development of media literacy, real-time communication) alongside major risks and limitations (distractions, superficiality, ethical issues, digital inequality). The conclusion offers practical recommendations for mitigating these risks, including the development of institutional guidelines, digital etiquette training, preparing a team of moderators and integrating microblog activities into the formal educational process.

Key words: higher education, microblog, values-based education, EdTech, digital pedagogy, media literacy, social networks.

АННОТАЦИЯ : В статье рассматриваются возможности использования микроблогов для повышения эффективности духовно-просветительской (ма'навий-ма'рифий) работы в учреждениях высшего образования. Подчеркивается, что для современного «цифрового поколения» студентов социальные сети, в частности микроблоги (Telegram-каналы, X/Twitter и другие платформы с короткими постами), стали основным средством коммуникации, однако их воспитательный и ценностный потенциал часто реализуется не в полной мере.

Даётся определение микроблога и анализируются его дидактические функции, показывается, как они могут быть увязаны с содержанием и целями духовно-просветительской работы. На основе edtech-подхода предлагается концептуальная модель использования микроблогов: этап диагностики цифровых привычек студентов, определение целевой аудитории, выбор платформы, разработка контент-стратегии, внедрение интерактивных форматов (вопрос-ответ, призывы к участию, рефлексивные задания), а также критерии оценки эффективности.

Отдельно рассматриваются преимущества использования микроблогов (активизация студентов, оперативный обмен мнениями, развитие медиаграмотности, коммуникация в режиме реального времени) и основные риски (отвлекающие факторы, поверхностный уровень восприятия ценностей, этические проблемы в сети, цифровое неравенство). В заключении представлены практические рекомендации по минимизации рисков: разработка нормативно-методических регламентов, обучение цифровому этикету, подготовка команды модераторов, интеграция микроблогов в образовательный процесс.

Ключевые слова: высшее образование, микроблог, духовно-просветительская работа, edtech, цифровая педагогика, медиаграмотность, социальные сети.

KIRISH: Bugungi talaba ertalab auditoriyaga kirguniga qadar bir necha bor telefonini tekshiradi: Telegram'dagi guruh chati, fakultet kanali, do'stlarining Instagram stories'lari, X (Twitter) dagi qisqa postlar... Ko'pincha u yerdagi ma'lumotlar talabaning kayfiyatini, qarashlarini, hattoki qarorlarini ham belgilab beradi. Oliy ta'lim muassasasida esa ma'naviy-ma'rifiy ishlar hanuz ko'proq an'anaviy shakllar – ma'ruzalar, davra suhbatlari, uchrashuvlar orqali olib boriladi. Savol tug'iladi: talabalar ko'proq vaqtini internet va mikrobloglarda o'tkazayotgan bir sharoitda, ma'naviy-ma'rifiy ishlar aynan shu muhitdan chetda qolishi qanchalik to'g'ri?

Raqamli texnologiyalar, xususan edtech yechimlar ta'lim mazmunini boyitish, individual ta'lim trayektoriyalarini shakllantirish, talabaning o'zini namoyon qilishi uchun qulay sharoit yaratish imkonini beradi. Mikrobloglar esa qisqa, lekin tez-tez yangilanib turadigan matnlar, rasm va videolar orqali talabalarning fikrini bir necha soniya ichida jalb etishi mumkin. Agar bu "sekundlar" to'g'ri maqsad sari yo'naltirilsa, ular ma'naviy-ma'rifiy tarbiyaning kuchli vositasiga aylanadi.

Boshqa sohalarda olib borilgan tadqiqotlar – masalan, kasbiy kadrlarga oid manbalarni tizimli tasniflash va tahlil qilish asosida yondashuv ishlab chiqilgan ishlar – shuni ko'rsatadiki, har qanday sohani zamonaviylashtirishda manba va vositalarni konseptual guruhlariga ajratish muhim ilmiy natijalarga olib keladi. Xuddi shunday, mikrobloglardan ma'naviy-ma'rifiy ishlar uchun foydalanishda ham nazariy konsepsiya, metodik model va amaliy tavsiyalar bir butun tizim sifatida ishlab chiqilishi zarur.

Ushbu maqolaning maqsadi – oliy ta'limda ma'naviy-ma'rifiy ishlar uchun mikrobloglardan foydalanishning edtech yondashuviga asoslangan konseptual modelini taklif etish, uning ijobiy va salbiy jihatlarini tahlil qilish hamda amaliy tavsiyalar berishdan iborat.

ASOSIY QISM: Mikroblog – bu foydalanuvchilarga qisqa matn, rasm, video va havolalar ko'rinishida tez-tez yangilanib turadigan postlarni joylashtirish, izohlash, baham ko'rish va ulashish imkonini beruvchi raqamli platforma yoki kanal shakli. Telegram kanallari, X (Twitter), qisqa postga asoslangan platformalar, hatto LMS ichidagi "yangiliklar lentlari" ham mikroblog funksiyasini bajarishi mumkin.

Mikrobloglarning didaktik imkoniyatlari quyidagicha umumlashtiriladi:

- Konspektlash va qisqa ifoda – murakkab g'oyalarni qisqa, tushunarli shaklda bayon qilish talabaning ham, o'qituvchining ham asosiy ko'nikmalaridan biriga aylanadi.

- Operativ aloqa – e'lonlar, nasihatlar, motivatsion fikrlar, muhim sanalar haqidagi eslatmalar real vaqt rejimida yetkaziladi.

- Interaktivlik – izohlar, "layklar", mini-so'rovnomalar, emoji orqali tezkor fikr bildirish imkoniyati muloqotni jonlantiradi.



• Refleksiya maydoni – talaba o'qigan kitobi, ko'rgan filmi yoki tinglagan ma'ruzasi haqidagi qisqa mulohazasini mikroblogda qoldirib, o'z-o'zini tahlil qilishni o'rganadi.

• Jamiyat hissi (community) – bir fakultet yoki guruhga tegishli kanal orqali "biz bir jamoamiz" degan tuyg'u mustahkamlanadi.

Ta'lim jarayonida mikrobloglar ko'pincha fan bo'yicha e'lonlar, topshiriqlar uchun ishlatiladi. Biroq ma'naviy-ma'rifiy ishlar kontekstida ular ancha kengroq vazifani bajarishi mumkin: qadriyatlar targ'iboti, milliy va umuminsoniy g'oyalarni kundalik hayot misolida ko'rsatish, talabalarning shaxsiy pozitsiyasini shakllantirish.

Oliy ta'limdagi ma'naviy-ma'rifiy ishlar odatda quyidagi yo'nalishlarni o'z ichiga oladi:

- vatanparvarlik va fuqarolik pozitsiyasi;
- madaniy meros va milliy an'analar;
- huquqiy madaniyat;
- kasbiy axloq va mas'uliyat;
- sog'lom turmush tarzi;
- raqamli muhitda mas'uliyatli xulq, axborot xavfsizligi.

Raqamli avlodning axborot iste'moli va o'qish odatlari o'zgargani sari bu yo'nalishlar ham yangi formatga moslashishi talab etiladi. Talabalar og'ir matnli risolalarni emas, qisqa, vizual va interaktiv kontentni tezroq qabul qiladi. Shu bois ma'naviy-ma'rifiy ishlar:

- multimodal (matn + rasm + video + ovoz);
- interaktiv (savol-javob, munozara, ovoz berish);
- shaxsga yo'naltirilgan (talabaning qiziqishlari va tajribasi bilan bog'langan);
- raqamli gigiyena va media savodxonlik elementlari bilan uyg'unlashgan bo'lishi zarur.

Mikrobloglar aynan shu talablarga mos keladigan platforma sifatida qaralishi mumkin.

Mikrobloglardan foydalanish faqat "kanal ochish" bilan tugamaydi. EdTech yondashuvi ularni maqsad, mazmun, metod, vosita va natija o'rtasidagi tizimli bog'liqlikda ko'rishni talab etadi. Quyida shartli model taklif etiladi.

Birinchi navbatda talabalar raqamli odatlari o'rganiladi:

- qaysi platformalardan ko'proq foydalanadi;
- kuniga taxminan necha marta tarmoqqa kiradi;
- qaysi kontent (motivatsion, ilmiy, hazil, yangilik) ularga ko'proq ta'sir qiladi;

• ma'naviy-ma'rifiy mavzulardagi kontentni qanchalik ko'p iste'mol qiladi.

Buni qisqa onlayn so'rovnomalar, fokus-guruh suhbatlari yoki mavjud statistika orqali aniqlash mumkin.



Ma'naviy-ma'rifiy mikrobloglar hamma uchun umumiy bo'lishi mumkin, lekin maqsadli segmentlash samaraliroq:

- 1-kurs talabalari uchun – moslashuv, OTM qadriyatlarini, akademik halollik;

- yuqori bosqichlar uchun – kasbiy axloq, bozor munosabatlarida halollik;

- magistrlar uchun – ilmiy etika, plagiatga qarshi kurash, xalqaro madaniyat.

Platforma tanlashda quyidagilar e'tiborga olinadi:

- rasmiy (OTMning Telegram kanali, LMS ichki blogi) va norasmiy (fakultet guruhlari) imkoniyatlar;

- ochiq (hamma ko'ra oladigan) va yopiq (faqat universitet va talabalari uchun) formatlar;

- moderatsiya qulayligi va statistik hisoboti.

Mikroblogdagi postlar tasodifiy emas, reja asosida bo'lishi kerak. Masalan, haftalik ruknlar:

- "Ma'naviyat daqiqasi" – qisqa iqtibos + savol: "Bu fikr siz uchun nimani anglatadi?"

- "Tarixiy sana" – bugungi kunda bo'lib o'tgan muhim voqea haqida 3–4 gap va unga oid savol.

- "Bir kitob – bir fikr" – o'qilishi tavsiya etiladigan kitobdan juda qisqa parcha va talabalardan izohlarda o'z taassurotini yozish so'raladi.

- "Raqamli odob-axloq" – tarmoqdagi etik qoidalar bo'yicha mini-infografika.

- "Talaba hikoyasi" – bir talabaga so'z berilib, uning 200–300 belgidan iborat shaxsiy tajribasi (ko'ngillilik, ilmiy g'oliblik, ijtimoiy loyihadagi ishtiroki) yoritiladi.

Kontent doimo qisqa, lekin savol, fikr bildirishga chorlov bilan yakunlanishi maqsadga muvofiq.

Mikrobloglarning asosiy kuchi – muloqot imkoniyatida.

- Mini-so'rovnomalar: "Sizningcha, akademik halollik buzilishining eng keng tarqalgan shakli qaysi?" kabi savollarga anonim ovoz berish.

- Savol-javob sessiyalari: dekan, ma'naviy-ma'rifiy ishlar bo'yicha dekan o'rinbosari, psixolog bilan onlayn "savol bering" rukni.

- Challengelar: "1 hafta – 1 yaxshi ish", "7 kun – 7 sahifa kitob" kabi qisqa aksiyalar, talabalar fikrini hashtag orqali jamlash.

- Refleksiya topshiriqlari: ma'naviyat soatidan so'ng "bugun sizni eng ko'p o'ylantirgan fikr..." deb boshlanadigan postni izohlarda davom ettirish.

EdTech yondashuvida "kanal bor" degani hali natija degani emas. Samaradorlikni baholash uchun:

- miqdoriy ko'rsatkichlar: obunachilar soni, post qamrovi, izohlar, so'rovnomalarda ishtirok;

• sifat ko'rsatkichlari: talabalarning fikrlaridagi o'zgarishlar, ma'naviy-ma'rifiy tadbirlarda offline ishtirokchilar soni, akademik halollik buzilish holatlarining kamayishi kabi indikatorlar kuzatilishi mumkin.

So'rovnomalar, intervyular, kichik esselar orqali mikrobloglardan keyin talabalarning qadriyatlariga munosabati qanday o'zgargani o'rganiladi.

Mikroblogga fikr yozish, emoji qo'yish, ovoz berish an'anaviy ma'ruza davomida so'zga chiqishdan ancha oson. Tortinchoq yoki introvert talabalar ham raqamli muhitda o'z fikrini erkinroq bildirishi mumkin. Bu ma'naviy-ma'rifiy mavzularda ham "jim auditoriya" muammosini yumshatadi.

Talabalar ma'naviy-ma'rifiy tadbirlar haqida o'z taassurotlarini darhol izohlarda qoldirishi, taklif va e'tirozlarini yozishi mumkin. Bu OTM rahbariyatiga mashg'ulotlar formatini tezda o'zgartirish, moslashtirish imkonini beradi.

Mikroblogda:

- ishonchli va ishonchsiz manbalarni ajrata bilish;
- clickbait sarlavhalarga tanqidiy yondashish;
- faktcheking asoslarini amalda sinash (masalan, "Bu ma'lumot manbasi qayerda?" degan topshiriqlar)

kabi ko'nikmalarni rivojlantirish mumkin. Bu esa yoshlarning ma'naviy immunitetini mustahkamlaydi.

Microblogda o'qituvchilar, muvaffaqiyatli bitiruvchilar, ijtimoiy faol talabalar o'zining qisqa, samimiy hikoyalari bilan bo'lishsa, ular real, "ko'rinadigan" ro'l model bo'lib xizmat qiladi. Qisqa video, fotosurat, bir nechta jumla orqali bu hikoyalar boshqa talabalarga kuchli motivatsiya beradi.

Mikroblogga kirgan talaba faqat OTM kanalidagi postni emas, balki boshqa ko'plab xabarlarini ham ko'radi. Bu esa ma'naviy-ma'rifiy kontent fonida ko'ngil ochish, memlar, reklama va hokazolarning ham iste'mol qilinishiga sabab bo'ladi. Natijada asosiy maqsad – tarbiya – e'tibordan chetda qolishi mumkin.

Ma'naviy-ma'rifiy mavzularda chuqur mulohaza talab qilinadi. Mikroblog esa qisqa, tezkor formatni talab qiladi. Ko'pincha "layk" bosish yoki qisqa "ha, to'g'ri" degan izoh bilan cheklaniladi. Bu esa talabaning haqiqiy ichki o'zgarishi bo'lmasa ham, tashqi statistik ko'rsatkichlar "faollik bor" degan illuziyani yaratishi mumkin.

Ochiq platformalarda trol, nafratli izohlar, shaxsga tegish, stereotiplarni kuchaytiruvchi kontent paydo bo'lishi ehtimoli bor. Shuningdek, ayrim talabalarning shaxsiy hayotiga oid fotosurat yoki ma'lumotlarni ruxsatsiz ulashish ham etik muammo hisoblanadi.

Ba'zi talabalar doimiy mobil internetga yoki zamonaviy smartfonga ega emas. Agar ma'naviy-ma'rifiy ishlar ortiqcha darajada mikrobloglarga "ko'chib" ketsa, bunday talabalar jarayondan chetda qolish xavfi mavjud.

Mikrobloglardan samarali foydalanish uchun salbiy jihatlarni minimallashtirish zarur.

OTM darajasida:

- rasmiy ma'naviy-ma'rifiy kanallarning maqomi;
- kontent talablari (nafrat, diskriminatsiya, siyosiy targ'ibotdan xoli bo'lish);



- moderatsiya qoidalari;
- talabalarning shaxsiy ma'lumotlarini himoya qilish mexanizmlari aniq yozilgan reglament qabul qilinishi kerak.

Ma'naviy-ma'rifiy soatlarda:

- tarmoqdagi odob-axloq;
- mualliflik huquqi va plagiat;
- feyk yangiliklar va manipulyativ kontentni tanib olish;
- onlayn bahs madaniyati

bo'yicha maxsus modul kiritilishi lozim. Bu ma'naviy-ma'rifiy ishlarning mazmunini ham zamonaviylashtiradi.

Mikroblogni bir kishi emas, kichik jamoa yuritgani ma'qul: ma'naviy-ma'rifiy ishlar bo'yicha mas'ul o'qituvchi, fakultet psixologi, talabalar faollari (volontyorlar). Moderatorlar:

- kontent rejasini tuzadi;
- izohlarni kuzatadi va kerak bo'lsa, yo'naltiradi;
- vaziyatdan kelib chiqib, offline uchrashuvlar tashkillashtiradi.

Mikroblog faqat "virtual namoyish" bo'lib qolmasligi kerak. Har bir online tashabbus:

- kitobxonlik aksiyasi;
- ko'ngillilik kuni;
- sport musobaqasi;
- xayriya tadbiri

offline tarzda real harakat bilan qo'llab-quvvatlanishi zarur. Shunda talaba "layk" bilan emas, amaliy ish bilan ma'naviy qadriyatga hissa qo'shganini his qiladi.

Mikrobloglar ma'naviy-ma'rifiy ishlarning yagona kanali emas, balki ulardan biri bo'lishi lozim. Axborotning muhim qismi fakultet stendlari, auditoriyadagi e'lonlar, umumiy yig'ilishlar orqali ham yetkazilishi kerak. Zarur bo'lsa, internetga kira olmaydigan talabalar uchun alohida choralar (bosma bukletlar, guruh sardorlari orqali og'zaki axborot) ko'zda tutiladi.

XULOSA: Oliy ta'limda mikrobloglardan ma'naviy-ma'rifiy ishlar uchun foydalanish – zamonaviy raqamli muhit talabiga tabiiy javobdir. Mikrobloglar talabalarning real axborot maydoniga bevosita kirib borish, ularga qisqa, aniq va vizual shaklda ma'naviy qadriyatlarni yetkazish, interaktiv muloqotni yo'lga qo'yish imkonini beradi.

Ijobiy jihatlar sifatida:

1. Talabalarning ishtirokini oshirishi, tortinchoq yoshlarni ham muloqotga jalb etishi;

2. Ma'naviy-ma'rifiy kontentni real vaqt rejimida yetkazish, tezkor fikr almashinuvi;

3. Media savodxonlik, raqamli odob-axloq, tanqidiy fikrlash ko'nikmalarini rivojlantirish;

4. OTMning rasmiy ma'naviy-ma'rifiy pozitsiyasini yagona platformada ifoda etish va talabalarga "raqamli jamiyat" hissini berishi ta'kidlanadi.

Salbiy jihatlar esa quyidagilardan iborat:

1. Ijtimoiy tarmoqlar tabiatan chalg'ituvchi muhit bo'lgani sababli ma'naviy-ma'rifiy kontent boshqa oqimlar orasida yo'qolib ketishi ehtimoli;
2. Qisqa format tufayli chuqur mohiyat yuzaki qabul qilinishi va "layk"lar soni bilan haqiqiy tarbiyaviy ta'sirni adashtirish xavfi;
3. Etik muammolar – nafratli izohlar, shaxsiy ma'lumotlarning oshkor qilinishi, stereotip va kamsitishlarga yo'l ochilishi mumkinligi;
4. Raqamli tengsizlik – barcha talabalarning internet va qurilma imkoniyatlari bir xil emasligi.

Shunday bo'lsa-da, edtech yondashuvi asosida mikrobloglar bilan ishlash konseptual modeli to'g'ri qurilsa, salbiy jihatlar sezilarli darajada yumshatilishi mumkin. Buning uchun:

- OTM darajasida mikrobloglar orqali ma'naviy-ma'rifiy ishlar kontsepsiyasi, reglament va etik kodeks ishlab chiqilishi;
- talabalar va o'qituvchilar uchun raqamli odob-axloq, media savodxonlik bo'yicha muntazam treninglar o'tkazilishi;
- moderatorlar jamoasi shakllantirilib, kontent rejalashtirish, izohlarni boshqarish va offline tadbirlar bilan integratsiya qilish tizimi yaratilishi;
- mikrobloglar "yagona kanal" emas, balki an'anaviy shakllar bilan uyg'unlashgan, ko'p kanalli ma'naviy-ma'rifiy ekotizimning bir qismi sifatida ko'rilishi zarur.

Xulosa qilib aytganda, mikrobloglar oliy ta'limdagi ma'naviy-ma'rifiy ishlarning mohiyatini o'zgartirib yubormaydi, lekin ularning forma va formatini sezilarli darajada yangilaydi. Maqsad – talabaning e'tiborini bir necha soniya ushlab turish emas, balki shu soniyalarni mazmunga to'ldirish, raqamli muhitda ham mas'uliyatli, qadriyatli va ongli shaxsni tarbiyalashdir. Shu yo'nalishda ilmiy tadqiqotlar, tajriba-sinov loyihalari, metodik qo'llanmalarni yaratish kelgusida OTMlar ma'naviy-ma'rifiy faoliyatining raqamli transformatsiyasini chuqurlashtirishga xizmat qiladi.

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MATN PROTSESSORI BILAN ISHLASH MAVZUSINI O'QITISH METODIKASI**Mamatova Zilolaxon Xabibulloxonovna**Farg'ona davlat universiteti dotsenti, pedagogika
fanlari bo'yicha falsafa doktori (PhD)

Orcid: 0009-0009-9247-3510

E-mail: mamatova.zilolakhon@gmail.com**Tillavoldiyeva Soraxon Xabibidin qizi**Farg'ona davlat universiteti Amaliy matematika
yo'nalishi 3-bosqich 23.10-guruh talabasiE-mail: gulsoraxonyorbekova@gmail.com

Annotatsiya: Ushbu ilmiy maqola Elektron Jadval Dasturlari, xususan Microsoft Excel bilan ishlash mavzusini o'qitishning nazariy asoslari va amaliy metodikasini informatika va matematika fanlarining uzviy integratsiyasi kontekstida tahlil qilishga qaratilgan. Tadqiqot Excel dasturini shunchaki ma'lumotlarni kiritish vositasi sifatida emas, balki talabalarda matematik modellashtirish, algoritmik fikrlash va vizualizatsiya ko'nikmalarini rivojlantiruvchi kuchli didaktik vosita sifatida qo'llashga alohida e'tibor qaratadi.

Kalit so'zlar: o'qitish metodikasi, elektron jadvallar, analitik kompetensiya, matematik modellashtirish, didaktik integratsiya, algoritmik fikrlash, vizualizatsiya, faol o'qitish, loyihaga asoslangan yondashuv.

Аннотация: Данная научная статья посвящена анализу теоретических основ и практической методики преподавания темы "Работа с программами электронных таблиц", в частности Microsoft Excel, в контексте интеграции информатики и математики. Исследование фокусируется на использовании Excel не просто как инструмента ввода данных, а как мощного дидактического средства, развивающего у студентов навыки математического моделирования, алгоритмического мышления и визуализации.

Ключевые слова: методика обучения, электронные таблицы, аналитическая компетенция, математическое моделирование, дидактическая интеграция, алгоритмическое мышление, визуализация, активное обучение, проектный подход.

Abstract: This scientific article analyzes the theoretical foundations and practical methodology for teaching the topic "Working with Spreadsheet Programs," specifically Microsoft Excel, within the context of the essential integration of informatics and mathematics. The research focuses on utilizing Excel not merely as a data entry tool but as a powerful didactic instrument for developing students' skills in mathematical modeling, algorithmic thinking, and visualization.

Keywords: teaching methodology, spreadsheet software, analytical competence, mathematical modeling, didactic integration, algorithmic thinking, visualization, active learning, project-based approach.

KIRISH

Zamonaviy jamiyatning axborotlashuvi va global miqyosdagi raqamli transformatsiya jarayonlari ta'lim tizimiga yangi talablarni qo'yimoqda. Informatika va matematika fanlarini o'qitishning asosiy maqsadi endilikda faqatgina nazariy bilimlarni berishdan iborat bo'lmay, balki talabalarda ushbu bilimlarni real hayotdagi muammolarni hal qilish uchun amaliy jihatdan qo'llay olish kompetensiyasini shakllantirishdan iboratdir. Shu nuqtai nazardan, elektron jadval dasturlari, xususan Microsoft Excel, bu ikki fanning kesishmasida turuvchi, fundamental va amaliy ahamiyatga ega bo'lgan vosita sifatida e'tirof etiladi. Excel dasturi oddiy ma'lumotlarni qayta ishlashdan tashqari, murakkab matematik funksiyalar, statistik tahlil usullari va algoritmik yechimlarni tezkor vizualizatsiya qilish imkonini beruvchi kuchli muhitdir.

Ushbu ilmiy maqolaning dolzarbligi shundaki, an'anaviy o'qitish metodikalari asosan Excel interfeysi va asosiy funksiyalarni o'rgatishga qaratilgan bo'lib, bu yondashuv talabalarda analitik fikrlash va matematik modellashtirish ko'nikmalarini yetarlicha rivojlantirmaydi. Ta'lim oldida turgan asosiy muammo — bu Excel o'qitish jarayonini shunchaki kompyuter savodxonligi darajasidan chiqarib, uni chuqur matematik tahlil va algoritmik g'oyalarni amalda sinashning faol didaktik vositasiga aylantirishdan iboratdir.

Tadqiqotning asosiy maqsadi Excelni o'qitishning samarali metodologiyasini ishlab chiqish va ilmiy asoslashdir. Bu metodologiya pedagogik prinsiplar, mazmuniy tuzilish va faol o'qitish texnologiyalarini o'z ichiga olib, talabalarda nafaqat dasturdan foydalanish, balki ma'lumotlarni tahlil qilish, matematik modellar qurish va ularning natijalarini tanqidiy baholash kompetensiyalarini shakllantirishga qaratilgan.

ASOSIY QISM

Excel dasturi matematika va informatika ta'limida noyob didaktik qimmatga ega bo'lib, u mavhum matematik g'oyalarni aniq va vizual shaklga o'tkazishga imkon beradi. Matematik fikrlash nuqtai nazaridan, talabalar Excel orqali algebraik funksiyalar, ketma-ketliklar, qatorlar va ularning o'zgarish tezligini bevosita jadval hujayralaridagi qiymatlarni o'zgartirish orqali o'rganadilar. Bu jarayon talabalarning matematik tushunchalarni yodlash emas, balki ularni dinamik muhitda *tadqiq etish* imkoniyatini yaratadi. Masalan, murakkab foiz hisoblari yoki logistik o'sish modellarini dastur funksiyalari orqali qurish, talabalarga formulaning har bir komponentining yakuniy natijaga qanday ta'sir qilishini vizual tarzda ko'rsatadi. Bu esa matematik tushunchalarning chuqur anglanishiga xizmat qiladi.

Algoritmik fikrlashni rivojlantirish nuqtai nazaridan, Excel dasturi talabalarni ma'lumotlarni qayta ishlash uchun zarur bo'lgan amallar ketma-ketligini loyihalashga undaydi. Har qanday murakkab vazifa, masalan, shartli ma'lumotlarni saralash yoki statistik xulosalar chiqarish, Excel funksiyalari va

ularning ichki joylashuvini (nesting) to'g'ri loyihalashni talab qiladi. Bu funksiyalarni joylashtirish jarayoni bevosita dasturlash tilidagi shartli operatorlar va sikllarning mantiqiy tuzilishini aks ettiradi. Shunday qilib, Excel nafaqat hisoblash vositasi, balki algoritmi aniq, qadam-baqadam shaklda ifodalash va uni tezkor sinovdan o'tkazish uchun vizual algoritmik laboratoriya vazifasini bajaradi.

Excel dasturini o'qitish metodikasini takomillashtirishning asosiy yo'nalishi kontentning faqat funksiyalar katalogini o'rganishdan chetlanib, uni matematik modellashtirish prinsiplariga yo'naltirishdan iboratdir. Dars mazmuni nafaqat asosiy arifmetik va mantiqiy funksiyalarni, balki murakkab statistik funksiyalarni (masalan, dispersiya, korrelyatsiya tahlili) va moliyaviy ssenariylarni tahlil qilish (masalan, maqsadli qidiruv va ssenariy boshqaruvchisi) vositalarini ham qamrab olishi kerak. O'qitish jarayoni talabalarni real hayotdagi muammolarni (masalan, kichik biznesning xarajat-daromad modelini, yoki ekologik o'zgarishlarning statistik tahlilini) Excelda yaratishga undashi lozim.

Bu yondashuvda asosiy e'tibor jadvalni qanday to'ldirishga emas, balki qaysi matematik qonuniyatni qaysi Excel funksiyasi bilan ifodalash kerakligiga qaratiladi. Masalan, "Agar..." kabi shartli funksiyalarni o'rganishda ular mantiqiy operatorlar mantiq'i bilan bog'lanadi, bu esa dasturlash mantiq'ining poydevorini shakllantiradi. Vizualizatsiya o'qitishning muhim komponenti bo'lib, talabalar yaratilgan modelning natijalarini turli grafiklar (gistogramma, nuqtali diagramma) orqali tahlil qilishni, ya'ni statistik ma'lumotlarning vizual tahlilini amalga oshirishni o'rganadilar.

Excel dasturi bilan ishlashni o'qitish metodikasi passiv ma'ruza usullaridan farqli o'laroq, faol pedagogik texnologiyalarni joriy etishni talab qiladi. Bu yondashuvda vazifaga yo'naltirilgan o'qitish (Task-Driven Learning) markaziy o'rinni egallaydi. Bunda talabalarga aniq, real hayotiy yoki ilmiy muammo (vazifa) beriladi, va ular bu muammoni hal qilish uchun Excelning qaysi funksiyalari, vositalari va modellashtirish usullari kerakligini mustaqil ravishda aniqlashlari kerak bo'ladi.

Shuningdek, loyihaga asoslangan o'qitish (Project-Based Learning) usuli keng qo'llanilishi kerak. Talabalarga uzoq muddatli loyihalar, masalan, "Talabalar shaharchasidagi energiya iste'molining matematik modeli" kabi mavzular beriladi. Bu loyihalar ma'lumotlarni yig'ish, ularni qayta ishlash, statistik tahlil o'tkazish, grafiklarda vizualizatsiya qilish va yakuniy xulosalarni ilmiy hisobot shaklida taqdim etishni talab qiladi. Bu jarayon talabalarning nafaqat texnik ko'nikmalarini, balki jamoada ishlash, tanqidiy fikrlash va muammoni kompleks hal qilish kabi akademik kompetensiyalarini ham rivojlantiradi. O'qituvchi esa bu jarayonda ma'lumot yetkazuvchi emas, balki o'rganish jarayonini boshqaruvchi va yo'naltiruvchi facilitator vazifasini bajaradi.

Excel dasturini o'qitish metodologiyasining eng yuqori darajadagi komponentlaridan biri bu Visual Basic for Applications, ya'ni VBA orqali algoritmik yechimlarni avtomatlashtirishni o'rgatishdir. VBA elektron jadvalar muhitini to'liq huquqli dasturlash tiliga aylantiradi, bu esa talabalarga murakkab matematik va moliya-statistik vazifalarni oddiy funksiyalar yordamida hal qilib bo'lmaydigan darajada avtomatlashtirish imkonini beradi. VBA ni o'qitishdan asosiy metodik maqsad talabalarni deklarativ fikrlash (formula yozish) dan imperativ fikrlash (amallar ketma-ketligini dasturiy tarzda belgilash) ga o'tkazishdir.

VBA ni o'qitish jarayoni shartli mantiq (Agar... Unda... Aks holda) va sikllar (Takrorlash) kabi dasturlashning fundamental tushunchalariga asoslanishi kerak. Talabalar oddiy takrorlanuvchi hisob-kitoblarni (masalan, cheksiz qatorning yig'indisini hisoblash) yoki tasodifiy sonlarni generatsiya qilish va ularni statistik tahlil qilish (Monte-Karlo simulyatsiyasi) kabi murakkab ssenariylarni VBA yordamida qanday avtomatlashtirishni o'rganadilar. Metodika shuni talab qiladiki, talabalar dastlab muammoning algoritmik yechimini an'anaviy blok-sxema shaklida loyihalashtirib, keyin uni VBA ning modullar va protseduralari tiliga tarjima qilsinlar. Bu yondashuv talabalarning algoritmik kompetensiyasini rivojlantirishda va ularni professional dasturlashga tayyorlashda beqiyos ahamiyatga ega bo'ladi.

Matematika va informatikani o'qitishda ma'lumotlar massivlari bilan ishlash va matritsa hisoblashlari tushunchalari fundamental o'rin tutadi. Excel dasturi massiv formulalari (Array formulas) va matritsa funksiyalari orqali ushbu mavhum matematik g'oyalarni amaliyotga vizual tarzda joriy etishga imkon beradi. Massiv formulalarini o'rgatishning didaktik ahamiyati shundaki, ular talabalarga bir vaqtning o'zida ma'lumotlarning butun bir diapazoni ustida yagona funksiyani qo'llash imkoniyatini ko'rsatadi. Bu esa odatiy hujayra-hujayra bo'yicha hisoblash usulidan farqli ravishda, hisoblashning vektorlashtirilgan va massivga yo'naltirilgan mantiqini shakllantiradi.

O'qitish metodikasida matritsa hisoblashlariga alohida e'tibor qaratilishi kerak. Excelda matritsalarini ko'paytirish (MMULT), teskari matritsani topish (MINVERSE) va determinantni hisoblash (MDETERM) kabi funksiyalar yordamida talabalar nazariy o'rganilgan chiziqli algebra tushunchalarini amalda sinab ko'rishadi. Bu funksiyalar yordamida talabalar chiziqli tenglamalar sistemasini yechish, ma'lumotlarning chiziqli transformatsiyasini modellashtirish kabi murakkab matematik masalalarni bevosita elektron jadvalda bajarishlari mumkin. Bu jarayon talabalarda matematik modellarning qanday ishlashini chuqur anglashga yordam beradi va ularning akademik kompetensiyalarini sezilarli darajada oshiradi. Massiv formulalarini to'g'ri qo'llashni o'rgatish, shuningdek, dasturlashda ma'lumotlarning tuzilmasini optimallashtirish va tezkor ishlash prinsiplarini tushunishga tayyorlaydi.

Har qanday o'qitish metodikasining samaradorligi uning natijalarini ishonchli baholash tizimi bilan belgilanadi. Excel dasturini o'qitish metodikasida baholash an'anaviy bilimlarni tekshirishdan farqli o'laroq, talabalarda shakllangan analitik kompetensiyalarni, ya'ni muammoni modellashtirish,

ma'lumotlarni tahlil qilish va xulosalarni asoslash ko'nikmalarini o'lchashga qaratilishi lozim. Bu yondashuvda formativ nazorat (Formative Assessment) hal qiluvchi rol o'ynaydi. Formativ nazorat o'quv jarayonining o'zida amalga oshiriladi va talabalarga o'z xatolarini mustaqil tuzatish, o'rganish yo'nalishini to'g'rilash imkonini beradi.

Baholash tizimi uchta asosiy darajani o'z ichiga olishi kerak. Birinchi daraja – bu texnik savodxonlikni tekshirish (funktsiyalarni to'g'ri sintaksisda qo'llash); ikkinchi daraja – bu mantiqiy modellashtirishni baholash (real vaziyatni jadval strukturasi to'g'ri ifodalash va shartli mantiqni to'g'ri tuzish); uchinchi daraja – bu natijalarni tanqidiy tahlil qilishni baholash (model natijalarini o'qish, ularning ishonchliligini baholash va grafiklar orqali ilmiy asoslash). Formativ baholashda talabalarga berilgan loyiha yoki vazifaning har bir bosqichida o'z-o'zini baholash shablonlari va o'qituvchining tezkor, konstruktiv qayta aloqasi ta'minlanishi kerak. Bu yondashuv ta'lim jarayonini doimiy takomillashtirishga va talabalarni passiv bilim oluvchidan faol tadqiqot olib boruvchiga aylantirishga yordam beradi.

"Aqliy hujum" metodi

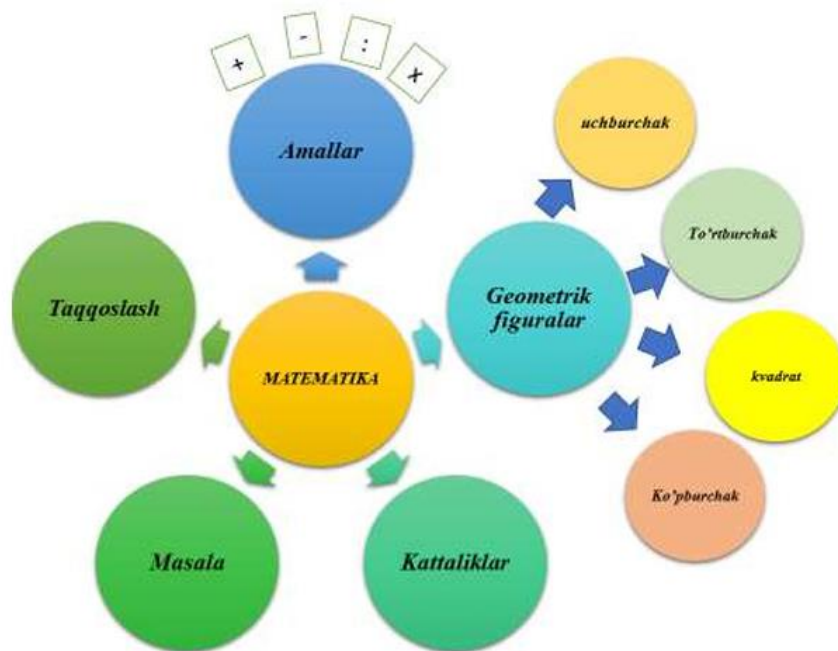
Mazkur metod muayyan mavzu yuzasidan berilgan muammolarni hal etishda keng qo'llaniladigan metod sanalib, u mashg'ulot ishtirokchilarini muammo xususida keng va har tomonlama fikr yuritish hamda o'z tasavvurlari va g'oyalardan ijobiy foydalanish borasida ma'lum ko'nikma hamda malakalarni hosil qilishga rag'batlantiradi. Bu metod yordamida tashkil etilgan mashg'ulotlar jarayonida ixtiyoriy muammolar yuzasidan bir necha original yechimlarni topish imkoniyati tug'iladi. "Aqliy hujum" metodi tanlab olingan mavzular doirasida ma'lum tushunchalarni aniqlash va ularga muqobil bo'lgan g'oyalarni tanlash uchun sharoit yaratadi. Dars jarayonida "Aqliy hujum" metodidan foydalanishda quyidagi qoidalarga amal qilish talab etiladi:

1. Tahsil oluvchilarni muammo doirasida keng fikr yuritishga undash, ularning mantiqiy fikrlarni bildirishlariga erishish.
2. Har bir tahsil oluvchi tomonidan bildirilayotgan fikrlar rag'batlantirilib boriladi. Bildirilgan fikrlar orasidan eng maqbullari tanlab olinadi. Fikrlarning rag'batlantirilishi navbatdagi yangi fikrlarning tug'ilishiga olib keladi.
3. Har bir tahsil oluvchi o'zining shaxsiy fikrlariga asoslanishi va ularni o'zgartirishi mumkin. Avval bildirilgan fikrlarni umumlashtirish, turkumlashtirish yoki ularni o'zgartirish ilmiy asoslangan fikrlarning shakllanishiga zamin hozirlaydi.
4. Mashg'ulot jarayonida tahsil oluvchilar faoliyatini standart talablar asosida nazorat qilish, ular tomonidan bildirilayotgan fikrlarni baholashga yo'l qo'yilmaydi. Ularning fikrlari baholanib borilsa, tahsil oluvchilar diqqatini shaxsiy fikrlarini himoya qilishga qaratadi, oqibatda yangi fikrlar ilgari surilmaydi. Metodni qo'llashdan ko'zlangan asosiy maqsad tahsil oluvchilarni muammo bo'yicha keng fikr yuritishga undash ekanligini yodda tutgan holda ularning faoliyatini baholab borishdan voz kechish maqsadga muvofiqdir.

"Klaster" metodi



Klaster (g'uncha, bog'lam) metodi pedagogik, didaktik strategiyaning muayyan shakli bo'lib, u tahsil oluvchilarga ixtiyoriy muammo (mavzu) xususida erkin, ochiq o'ylash va shaxsiy fikrlarni bemalol bayon etish uchun sharoit yaratishga yordam beradi. Mazkur metod turli xil g'oyalar o'rtasidagi aloqalar to'g'risida fikrlash imkoniyatini beruvchi tuzilmani aniqlashni talab etadi. "Klaster" metodi aniq obyektga yo'naltirilmagan fikrlash shakli sanaladi. Undan foydalanish inson miya faoliyatining ishlash tamoyili bilan bog'liq ravishda amalga oshadi. Ushbu metod muayyan mavzuning tahsil oluvchilar tomonidan chuqur hamda puxta o'zlashtirilguniga qadar fikrlash faoliyatining bir maromda bo'lishini ta'minlashga xizmat qiladi. Stil va Stil g'oyasiga muvofiq ishlab chiqilgan "Klaster" metodi puxta o'ylangan strategiya bo'lib, undan tahsil oluvchilar bilan yakka tartibda yoki guruh asosida tashkil etiladigan mashg'ulotlar jarayonida foydalanish mumkin. Metod guruh asosida tashkil etilayotgan mashg'ulotlarda tahsil oluvchilar tomonidan bildirilayotgan g'oyalarning majmui tarzida namoyon bo'ladi. Bu esa ilgari surilgan g'oyalarni umumlashtirish va ular o'rtasidagi aloqalarni topish imkoniyatini yaratadi. Interfaol metodlarning asosiy xususiyati shundaki, u bir mulohaza ustida ko'proq to'xtalishga, u haqida yaxshiroq tasavvur hosil qilishga undaydi. Masalan, Klaster metodidan boshlang'ich sinf matematika darslarida katta mavzu yoki bo'lim so'ngida, qolaversa, yangi mavzuni o'tish jarayonida ham foydalanish mumkin. Masalan, 10 ichida arifmetik amallarni bajarish bo'limi so'ngida bu metoddan foydalanish yaxshi natija beradi. O'quvchilar aynan shu bo'limni o'tish jarayonida nimalar bilan tanishgan bo'lsa, birin-ketin xotirasiga keltirib, hatto misollar va ularning yechilish yo'llarigacha qayd etishga harakat qiladi. Masalan boshlang'ich ta'limda o'qitiladigan matematika fanida klaster metodidan foydalanish sxemasi:



Klaster metodidan foydalanish chog'ida uning xususiyati va ahamiyati haqida o'quvchilarga tushuncha berib o'tish lozim. Masalan: – tayanch

tushunchani o'qigach, nimani o'ylasangiz, shuni yoritib; – yozilgan fikr orfografik jihatdan tahlil qilinmaydi; – berilgan vaqt nihoyasiga yetmagancha fikrni yozishdan to'xtamaslik, bir muddat hech narsa tasavvuringizda hosil bo'lmasa, to eslab olguncha, biror narsaning rasmini chizish; – g'oyalar aloqadorligi va xilma-xilligiga e'tibor berish; – vaqt tugagach, tushuncha atrofidagi kerakli asosiy g'oyalar yig'ilib, chiroyli matn hosil qilish.

XULOSA. O'tkazilgan tadqiqotlar natijasida shunday xulosaga kelindiki, Excel dasturini o'qitish metodikasi an'anaviy interfeysni o'rganish doirasidan chiqib, uni Matematika va Informatika fanlarining integratsiyalashgan, faol didaktik vositasiga aylantirishni talab qiladi. Excelning samarali o'qitilishi talabalarda nafaqat raqamli savodxonlikni, balki matematik modellashtirish, algoritmik fikrlash va tanqidiy tahlil kabi asosiy analitik kompetensiyalarni shakllantirish uchun muhim poydevor vazifasini bajaradi.

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BUDJET VA BUDJET ASOSLARI. BOZOR ASOSLARI

Kamalova Dilfuza

Farg'ona davlat universiteti Iqtisod yo'nalishi magistranti

Annotatsiya: Berilgan ushbu maqolada, budjet va budjet chegarasi tushunchalari, ularning iqtisodiy mazmuni hamda bozor iqtisodiyoti sharoitidagi ahamiyati yoritilgan. Shuningdek, bozor asoslarining shakllanishi, bozor mexanizmi elementlari va ular bilan budjet o'rtasidagi o'zaro bog'liqlik tahlil qilinadi.

Kalit so'zlar: bozor, budjet, iqtisod, budjet chegarasi, iste'molchi, mikroiqtisodiyot, raqobat, bozor infratuzilmasi, narx.

Kirish. Bozor iqtisodiyotining samarali faoliyat yuritishi davlat moliyasining barqarorligi va aholining iqtisodiy imkoniyatlarini to'g'ri belgilashga bog'liq. Budjet va budjet chegarasi iqtisodiy faoliyatning eng muhim kategoriyalaridan kategoriyalaridan biridir, chunki ishlab chiqarish, iste'mol va taqsimot jarayonlarida iqtisodiy subyektlarning imkoniyatlari doirasini belgilaydi. Bozor mexanizmi esa talab, taklif, narx va raqobat orqali iqtisodiyotning o'z-o'zini tartibga soluvchi tizimi sifatida namoyon bo'ladi. Ushbu maqola budjet tushunchasi, uning cheklanishi va bozor asoslari bilan bog'liq nazariy hamda amaliy masalalarni yoritishga qaratilgan.

Asosiy qism. Budjet tushunchasi va uning mazmuni haqida gapiradigan bo'lsak, 1- budjet - bu ma'lum davr mobaynida iqtisodiy subyektning (davlat, korxonalar yoki xonadon) daromad va xarajatlarning rejalashtirilgan yig'indisi. Budjetning asosiy vazifalari quyidagilardan iborat:

- Resurslarni taqsimlash;
- Xarajatlarni tartibga solish va nazorat qilish;
- Rivojlanish dasturlarini moliyalashtirish;
- Moliyaviy intizomni ta'minlash.

Davlat budjeti esa iqtisodiyotni rivojlantirish, ijtimoiy himoyani kuchaytirish, infratuzilmalarni moliyalashtirish kabi strategic vazifalarni bajaradi.

2- Budjet chegarasi va uning iqtisodiy mazmuni haqida to'xtalib o'tishimiz kerak. Budjet chegarasi - bu iqtisodiy subyektning real daromadlari asosida shakllanuvchi va uning xarajat qilishi mumkin bo'lgan maksimal miqdorini belgilab beruvchi cheklovdir. Ushbu tushuncha mikroiqtisodiyotda "iste'molchi budjet chizig'i" sifatida ham ishlatiladi.

Budjet chegarasiga ta'sir qiluvchi asosiy omillar :

- daromad darajasi;
- Tovar va xizmatlar narxi;
- Soliq siyosati;
- Davlat tomonidan beriladigan subsidiyalar va imtiyozlar.



Budjet chegarasi ssubyektini optimal tanlov qilishga majbur etadi, ya'ni cheklangan mablag' sharoitida eng istoqbolli va foydali variantni tanlashga olib keladi.

3. Bozor asoslari va bozor mexanizmi elementlari haqida nazariy ma'lumotlar quyidagicha: bozor asoslari deganda, bozor iqtisodiyotining asosiy tamoyillari, faoliyat mexanizmi va undagi ishtirokchilar o'rtasidagi munosabatlar tushuniladi. Bozorning asosiy elementlari quyidagilardan iborat:

- talab – iste'molchilarning ma'lum narxda Tovar sotib olish istagi va imkoniyati.
- taklif – ishlab chiqaruvchining ma'lum narxda tovar taklif etish hajmi.
- narx – talab va taklif o'zaro muvozanatga keladigan qiymat .
- raqobat bozor ishtirokchilari o'rtasidagi kurash , u samaradorlikni oshiradi.
- bozor infratuzilmasi – banklar, savdo tizimi , sug'urta , logistika va boshqa xizmatlar.

Bozor asoslarining shakllanishi iqtisodiyotda erkinlik, mulkchilik shakllarining xilma-xilligi , shaffofligi va iqtisodiy subyektlar o'rtasidagi mustaqil faoliyatga tayanadi.

4. Budjet va bozor o'rtasidagi o'zaro bog'liqlikdeganda esa, budjet va bozor tizimi bir-birini to'ldiradi. Bozor iqtisodiyotida narx mexanizmi resurslarni samarali taqsimlasa, budjet davlat tomonidan ijtimoiy adolat , infratuzilmalar, ta'lim va sog'liqni saqlash kabi sohalarni rivojlantirishga xizmat qiladi.

O'zaro bog'liqlik quyidagi ko'rinishda namoyon bo'ladi:

- Budjet siyosati talab va taklifga bevosita ta'sir qiladi (soliq, subsidiyalar).
- Bozordagi narx o'zgarishlari davlat budjeti daromadlariga ta'sir ko'rsatadi.
- Bozor samaradorligini oshirish orqali budjet barqarorligi mustahkamlanadi.

Xulosa va takliflar. Aynan ushbu mavzu takliflar quyidagicha bo'ishi mumkin:

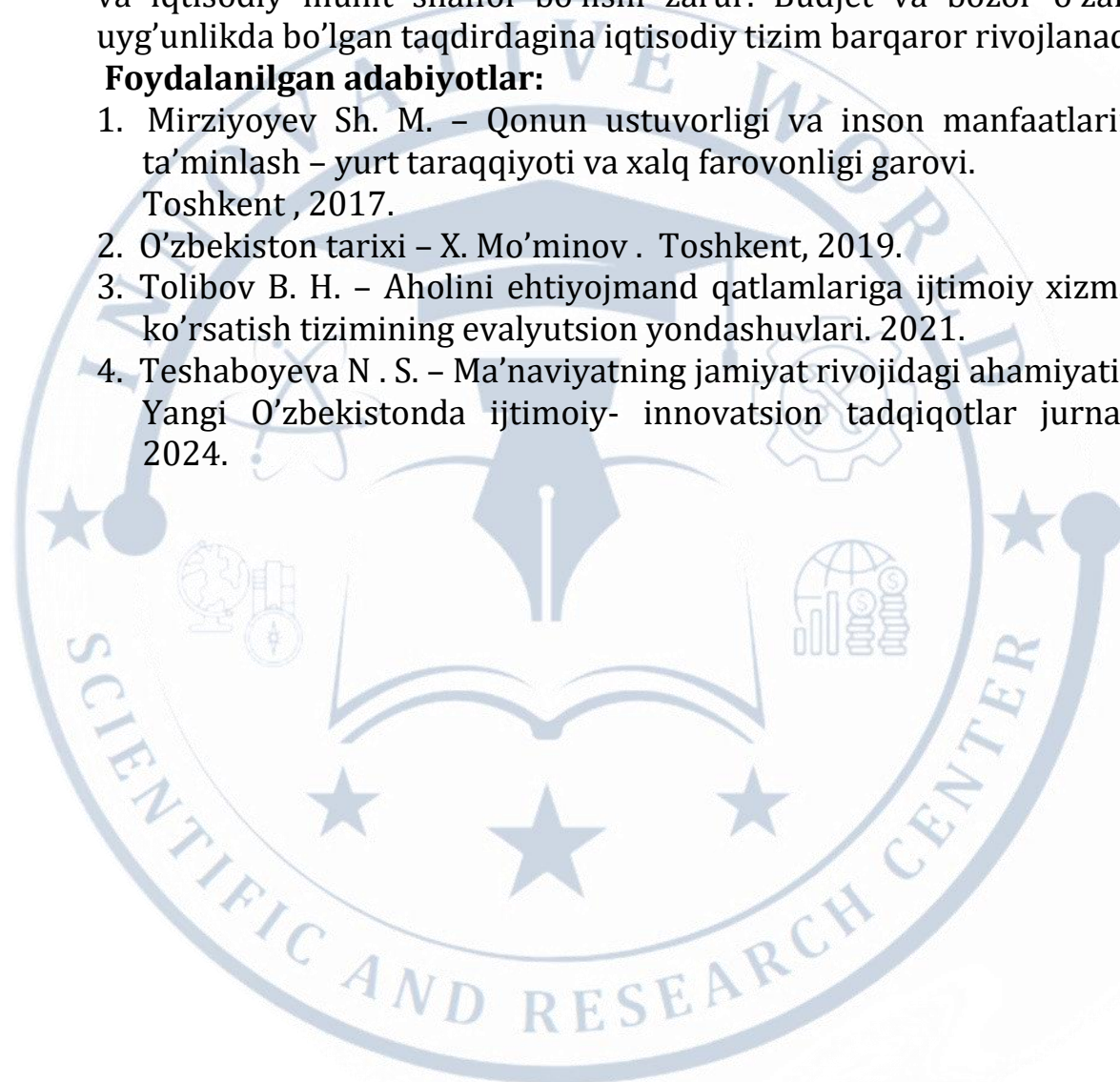
- 1) Budjet siyosatini ishlab chiqarishda mikroiqtisodiy budjet chegaralari chuqur tahlil qilinishi kerak.
- 2) Soliq tizimi soddalashtirilib, bozor ishtirokchilarining faoliyatiga ortiqcha bosim kamaytirilishi kerak .
- 3) Bozor infratuzilmasini rivojlantirish orqali raqobat muhitini kuchaytirish lozim.
- 4) Davlat budjeti xarajatlarining shaffofligi oshirilib , aholiga ochiq hisobotlar taqdim etilishi kerak.

5) Iste'molchilar va tadbirkorlar uchun moliyaviy savodxonlik dasturlarini kengaytirilishi kerak.

Xulosa, qiladigan bo'lsak, budjet va budjet chegarasi har bir iqtisodiy subyektning moliyaviy imkoniyatlarini belgilab beruvchi asosiy iqtisodiy tushunchadir. Bozor asoslari esa iqtisodiyotning o'z-o'zini boshqaruvchi tamoyillari orqali resurslardan samarali foydalanishni ta'minlaydi. Bozor mexanizmi to'g'ri ishlashi uchun davlat budjeti barqaror bo'lishi moliyaviy intizom mustahkamlanishi va iqtisodiy muhit shaffof bo'lishi zarur. Budjet va bozor o'zaro uyg'unlikda bo'lgan taqdirdagina iqtisodiy tizim barqaror rivojlanadi.

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