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Regional Features of Organizing Economic Clusters

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Abstract. This article discusses the need for the formation of economic clusters, their specific priorities and their regional characteristics. It also provides a conclusion on the study of the regional characteristics of the formation of economic clusters.

Key words. Cluster, economic cluster, direction, resource, efficiency, policy, innovation.

IQTISODIY KLASTERLARNI TASHKIL ETISHNING MINTAQAVIY XUSUSIYATLARI

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Annotatsiya. Ushbu maqolada iqtisodiy klasterlarni tashkil etish zaruriyati, o'ziga xos ustuvorliklari va ularning mintaqaviy xususiyatlari yoritilgan. Shuningdek, iqtisodiy klasterlarni tashkil etishning mintaqaviy xususiyatlari tadqiqi yuzasidan xulosa yoritilgan.

Аннотация. В данной статье рассматривается необходимость формирования экономических кластеров, их конкретные приоритеты и региональные особенности. Также приводятся выводы по результатам исследования региональных особенностей формирования экономических кластеров.

Kalit so'zlar. Klaster, iqtisodiy klaster, yo'nalish, resurs, samaradorlik, siyosat, innovatsiya.

Ключевые слова. Кластер, экономический кластер, направление, ресурс, эффективность, политика, инновации.

Klaster yondashuvi ilk bor Maykl Porter tomonidan ilmiy asoslangan bo'lib, u hududiy iqtisodiy rivojlanishda klasterlarning rolini ta'kidlagan. Bu bo'yicha

klasterlarning muhim shakli iqtisodiy klasterlar bugungi kunda iqtisodiy tarmoqlarni amalga oshirishda muhim o‘rin tutadi. Iqtisodiy tarmoqlarda shakllanadigan ushbu klaster ishlab chiqarishni xususiyashtirish va globallashtirish sharoitiga mos kelmaydigan tamoyil o‘rniga jahon va milliy iqtisodiyotlarni tabaqalashtirishning yangi tamoyili sifatida namoyon bo‘ladi. Ushbu yo‘nalish sanoat tarmoqlari kesishgan joyda yangi ixtisoslashgan tarmoqlarni shakllantirish bilan cheklanmaydi. Unga asosan, klasterlarga birlashishga qaror qilgan institutlarning rejalashtirilgan natijalari, darajasi, mezonlari va samaradorlikni belgilaydigan rivojlanish dasturi bo‘lishi lozim [1].

Iqtisodiy klaster ma‘lum bir hududda joylashgan, o‘zaro bog‘liq korxonalar, ta‘lim muassasalari, ilmiy markazlar va infratuzilma ob‘ektlarining integratsiyalashgan tizimidir. Iqtisodiy klasterlar iqtisodiyotda raqobatbardoshlikni oshirish, innovatsiyalarni joriy qilish va mahalliy resurslardan samarali foydalanishda muhim o‘rin tutadi. Mintaqalar iqtisodiyotida iqtisodiy klasterlarning rivojlanishi qator afzalliklarga ega bo‘ladi. Buning uchun hududlarda ishlab chiqarish samaradorligini oshirish, aholi farovonligini oshirish va rivojlanishning innovatsion yo‘lini joriy etish lozim [2]. Ushbu iqtisodiy klaster mamlakat iqtisodiyoti uchun zarur yo‘nalish sifatida ham namoyon bo‘ladi. Bu borada bugungi kunda ushbu klasterlar mamlakat iqtisodiyotining raqobatbardoshligini ta‘minlovchi mexanizm hamda iqtisodiy o‘sish drayverlari bo‘lib hisoblanmoqda [4].

Iqtisodiy jihatdan klasterlar ishlab chiqarish samaradorligini oshirishga xizmat qiladi. Korxonalar o‘rtasidagi kooperatsiya xarajatlarni kamaytiradi, resurslardan oqilona foydalanish imkonini beradi va mahsulot raqobatbardoshligini kuchaytiradi. Shu bilan birga, hududiy jihat klasterlarning muhim xususiyati bo‘lib, ularning ma‘lum bir geografik hududda joylashishi logistika qulayligini ta‘minlaydi va o‘zaro aloqalarni tezlashtiradi. Iqtisodiy klasterlar orqali korxonalar o‘rtasida kooperatsiya kuchayadi, ishlab chiqarish xarajatlari kamayadi va mahsulot sifati oshadi. Shunga asosan, iqtisodiy

klasterlarni tashkil etishda har bir hududning quyidagi o'ziga xos jihatlari hisobga olinadi:

- tabiiy-iqtisodiy omillar.
- geografik joylashuv.
- demografik omillar.
- infratuzilma.

Ammo, hududiy xususiyatlarga qarab iqtisodiy klasterlar tarkibi agrosanoat klasterlari (qishloq xo'jaligi va qayta ishlash), sanoat klasterlari (ishlab chiqarish korxonolari), turizm klasterlari (madaniy va tabiiy resurslardan foydalanish) va innovatsion klasterlar (ilm-fan va texnologiyalarga yo'naltirilganlik) kabi ko'rinishlarda mavjud bo'ladi. Mamlakatimizda iqtisodiy klaster siyosati so'nggi yillarda faol rivojlanmoqda. Bu borada paxta-to'qimachilik, meva-sabzavotchilik va turizm klasterlari shular jumlasiga kiradi. Mazkur klasterlar orqali qishloq xo'jaligi mahsulotlarini chuqur qayta ishlash va eksport salohiyatini oshirishga erishilmoqda.

Fikrimizcha, iqtisodiy klasterlarni tashkil etish orqali ishlab chiqarish samaradorligi oshadi, yangi ish o'rinlari yaratiladi, innovatsiyalar tez joriy etiladi va eksport hajmi ko'payadi. Ushbu sohadagi mavjud muammolarni hal qilish uchun davlat qo'llab-quvvatlashini kuchaytirish, investitsiyalarni jalb qilish va ta'lim va kadrlar tayyorlashni rivojlantirish maqsadga muvofiq.

Xulosa shuki, mintaqaviy xususiyatlarni hisobga olgan holda iqtisodiy klasterlarni tashkil etish hududlarning barqaror rivojlanishini ta'minlaydi. Ushbu yondashuv resurslardan samarali foydalanish, raqobatbardoshlikni oshirish va milliy iqtisodiyotni modernizatsiya qilishda muhim ahamiyat kasb etadi. Iqtisodiy klasterlar hududiy rivojlanishning samarali mexanizmi bo'lib, ular raqobatbardoshlikni oshirish, innovatsiyalarni joriy qilish va iqtisodiy o'sishni ta'minlashda muhim ahamiyatga ega. Ushbu klasterlar ko'p qirrali tizim bo'lib, ularning iqtisodiy, ijtimoiy, innovatsion va



tashkiliy jihatlari o‘zaro uyg‘un holda rivojlanganda hududiy iqtisodiyotning barqaror o‘shiga erishish mumkin.

Foydalanilgan adabiyotlar ro‘yxati:

1. Mardonov F.Sh. Oliy ta’limni rivojlantirishda klasterning o‘rni. // Academic research in educational sciences, Volume2, Issue4, 2021. - 714 b.
2. Elza I. Mantaeva, Viktoriya S. Goldenova. On the role of industrial cluster in regional economy development. // [Science Journal of VolSU. Global Economic System, 2017, Vol. 19, №1 \(38\)](#). – p. 45.
3. <https://imrs.uz/publications/articles-and-abstracts/cluster>



**Directions for Harmonizing Foreign Trade Regulation Legislation with WTO
Requirements**

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Abstract

This article analyzes the issues of harmonizing the foreign trade regulation legislation of the Republic of Uzbekistan with the requirements of the World Trade Organization. In particular, it examines directions for improving customs tariff policy, non-tariff restrictions, technical regulation, and sanitary and phytosanitary measures.

The study also highlights the challenges arising in the process of accession to the WTO and provides scientifically grounded mechanisms for overcoming them.

Keywords: World Trade Organization, foreign trade, customs policy, non-tariff restrictions, SPS, TBT, trade liberalization, economic integration.

**TASHQI SAVDONI TARTIBGA SOLISH QONUNCHILIGINI JST
TALABLARIGA MUVOFIQLASHTIRISH YO'NALISHLARI**

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Bojxona instituti, Bojxona tartibga solinishi va bojxona to'lovlari kafedrasi boshlig'i

Annotatsiya: Mazkur maqolada O'zbekiston Respublikasida tashqi savdoni tartibga solish qonunchiligini Jahon savdo tashkiloti (JST) talablariga muvofiqlashtirish masalalari tahlil qilingan. Xususan, bojxona-tarif siyosati, notarif

*cheklovlar, texnik tartibga solish, sanitariya va fitosanitariya choralari*ni takomillashtirish yo‘nalishlari o‘rganilgan. Shuningdek, JSTga a‘zo bo‘lish jarayonida yuzaga kelayotgan muammolar va ularni bartaraf etish mexanizmlari ilmiy asosda yoritilgan.

Kalit so‘zlar: *Jahon savdo tashkiloti, tashqi savdo, bojxona siyosati, notarif cheklovlar, SPS, TBT, savdo liberallasuvi, iqtisodiy integratsiya.*

Kirish: O‘zbekiston Respublikasining Jahon savdo tashkiloti (JST)ga a‘zo bo‘lish jarayoni mamlakat iqtisodiy taraqqiyotining muhim strategik yo‘nalishlaridan biri hisoblanadi. JSTga a‘zolik nafaqat xalqaro bozorlarga kengroq kirish imkoniyatini yaratadi, balki tashqi savdo siyosatini zamonaviy xalqaro standartlar asosida shakllantirish, investitsion jozibadorlikni oshirish, eksport salohiyatini kengaytirish hamda milliy iqtisodiyotning raqobatbardoshligini mustahkamlashga xizmat qiladi. Shu sababli tashqi savdoni tartibga solish qonunchiligini JST talablariga muvofiqlashtirish bugungi kunda davlat siyosatining ustuvor vazifalaridan biri sifatida namoyon bo‘lmoqda.

JSTning asosiy talablari savdo siyosatining shaffofligi, diskriminatsiyasizlik tamoyili, eng qulay sharoit yaratish rejimi (Most Favoured Nation – MFN), milliy rejim tamoyili, tarif va notarif cheklovlarning asosliligi hamda xalqaro savdo qoidalarining barqaror va prognoz qilinadigan bo‘lishiga asoslanadi. A‘zo davlatlar ushbu tamoyillarga muvofiq ravishda o‘z milliy qonunchiligini moslashtirishi shart.

O‘zbekistonda tashqi savdo faoliyatini tartibga soluvchi asosiy normativ-huquqiy hujjatlar qatoriga “Tashqi iqtisodiy faoliyat to‘g‘risida”gi Qonun, Bojxona kodeksi, Soliq kodeksi, “Valyutani tartibga solish to‘g‘risida”gi Qonun, “Texnik jihatdan tartibga solish to‘g‘risida”gi Qonun, “Raqobat to‘g‘risida”gi Qonun, investitsiyalar, sanitariya va fitosanitariya nazorati sohasidagi hujjatlar kiradi. So‘nggi yillarda ushbu

qonunchilikni takomillashtirish bo'yicha muhim islohotlar amalga oshirilgan bo'lsa-da, ayrim yo'nalishlarda JST talablariga to'liq moslashish zarurati saqlanib qolmoqda.

Birinchi navbatda, bojxona-tarif siyosatini JST talablariga moslashtirish zarur. JSTga ko'ra bojxona tariflari aniq, shaffof va oldindan prognoz qilinadigan bo'lishi lozim. O'zbekistonda ayrim import bojlarining yuqoriligi, vaqtinchalik tarif cheklovlarining tez-tez qo'llanilishi va ayrim preferensiyalarning bozor tamoyillariga mos emasligi tashqi savdo erkinligiga salbiy ta'sir ko'rsatishi mumkin. Shu bois bojxona tariflarini bosqichma-bosqich optimallashtirish, preferensiyalar tizimini qayta ko'rib chiqish va tarif siyosatini xalqaro amaliyotga yaqinlashtirish muhim yo'nalish hisoblanadi.

Ikkinchi muhim yo'nalish — notarif tartibga solish vositalarini qayta ko'rib chiqishdir. JST qoidalariga ko'ra litsenziyalash, kvotalash, sertifikatlashtirish va boshqa cheklovlar faqat asosli, vaqtinchalik va diskriminatsiyasiz tarzda qo'llanishi kerak. O'zbekistonda ayrim ruxsat berish tartiblarining murakkabligi, ortiqcha hujjat talab qilinishi va ma'muriy jarayonlarning uzoq davom etishi tadbirkorlik subyektlari uchun qo'shimcha xarajatlarni yuzaga keltirmoqda. Shu sababli ortiqcha notarif to'siqlarni qisqartirish, ruxsat berish tizimini soddalashtirish va elektron boshqaruv mexanizmlarini keng joriy etish zarur.

Uchinchi yo'nalish texnik jihatdan tartibga solish tizimini xalqaro standartlarga moslashtirishdan iborat. JSTning TBT (Technical Barriers to Trade) bitimiga muvofiq texnik reglamentlar, standartlashtirish va sertifikatlashtirish tizimi xalqaro me'yorlarga asoslangan bo'lishi lozim. O'zbekistonda ayrim milliy standartlar xalqaro ISO, IEC va Codex Alimentarius talablariga to'liq mos kelmaydi. Bu esa eksport qiluvchi korxonalar uchun qo'shimcha xarajat va tashqi bozorlarga chiqishda qiyinchiliklar tug'diradi. Shu bois texnik reglamentlarni xalqaro standartlar bilan uyg'unlashtirish va o'zaro tan olish mexanizmlarini rivojlantirish muhim ahamiyatga ega.

To‘rtinchi yo‘nalish sanitariya va fitosanitariya choralarini JSTning SPS bitimi talablariga moslashtirishdir. Oziq-ovqat xavfsizligi, veterinariya nazorati, o‘simliklar karantini va fitosanitariya tizimi ilmiy asoslangan, shaffof va xalqaro standartlarga mos bo‘lishi lozim. Amaliyotda ayrim hollarda sertifikatlashtirish va nazorat mexanizmlarining murakkabligi eksport-import operatsiyalarini sekinlashtirmoqda. Shu sababli xalqaro sertifikatlarni tan olish, laboratoriya tizimini modernizatsiya qilish va nazorat organlari faoliyatini raqamlashtirish ustuvor vazifa hisoblanadi.

Beshinchi muhim yo‘nalish — subsidiyalar va davlat qo‘llab-quvvatlash mexanizmlarini JST talablariga moslashtirishdir. JSTning Subsidiyalar va kompensatsiya choralari to‘g‘risidagi bitimiga ko‘ra davlat subsidiyalari raqobatga sun‘iy ta‘sir ko‘rsatmasligi kerak. O‘zbekistonda ayrim strategik tarmoqlarni qo‘llab-quvvatlash maqsadida berilayotgan imtiyozlar va preferensiyalar xalqaro savdo qoidalari nuqtayi nazaridan qayta baholanishi zarur. Ayniqsa, eksport subsidiyalarini bosqichma-bosqich optimallashtirish va bozor tamoyillariga mos qo‘llab-quvvatlash tizimini shakllantirish talab etiladi.

Oltinchi yo‘nalish savdo siyosatining shaffofligini oshirishdir. JST talablariga ko‘ra normativ-huquqiy hujjatlar ochiq e‘lon qilinishi, davlat qarorlari oldindan ma‘lum qilinishi va tadbirkorlik subyektlari uchun teng sharoit yaratilishi lozim. O‘zbekistonda elektron hukumat tizimi, ochiq ma‘lumotlar platformalari va normativ hujjatlarni ommaviy muhokama qilish mexanizmlarining joriy etilishi ijobiy natija bermoqda. Biroq bu jarayonni yanada takomillashtirish, davlat organlari faoliyatining hisobdorligini oshirish va qaror qabul qilish jarayonida biznes hamjamiyat ishtirokini kuchaytirish zarur.

Yettinchi yo‘nalish davlat xaridlari va raqobat muhitini takomillashtirish bilan bog‘liqdir. JSTning asosiy maqsadlaridan biri teng raqobat muhitini yaratishdir. Davlat xaridlarida adolatli tanlov tizimini joriy etish, monopoliyaga qarshi siyosatni

kuchaytirish, davlat korxonalari faoliyatining shaffofligini oshirish va bozorga kirish imkoniyatlarini kengaytirish muhim ahamiyatga ega.

Sakkizinchi yo‘nalish bojxona ma‘muriyatchiligini takomillashtirishdir. Bojxona tartib-taomillarini soddalashtirish, elektron deklaratsiya tizimini kengaytirish, “Yagona darcha” tamoyilini to‘liq joriy etish, xavfni boshqarish tizimini takomillashtirish va inson omilini kamaytirish savdo jarayonlarining samaradorligini oshiradi. Bu esa JSTning savdoni yengillashtirish tamoyillariga to‘liq mos keladi.

To‘qqizinchi yo‘nalish investitsion muhitni yaxshilash va xorijiy investorlar huquqiy kafolatlarini kuchaytirishdan iborat. JSTga a‘zolik investitsion muhit bilan bevosita bog‘liq bo‘lib, investorlar uchun huquqiy barqarorlik, adolatli sud himoyasi va mulk daxlsizligini ta‘minlash zarur.

Shuningdek, JSTga qo‘shilish jarayonida normativ-huquqiy bazani moslashtirish bilan bir qatorda institutsional islohotlarni chuqurlashtirish ham muhimdir. Davlat organlari o‘rtasidagi vakolatlarning aniq taqsimlanishi, savdo siyosatini yurituvchi organlar faoliyatining samaradorligi, professional kadrlar tayyorlash va xalqaro muzokaralar salohiyatini oshirish accession jarayonining muvaffaqiyatiga bevosita ta‘sir qiladi.

Xalqaro tajriba shuni ko‘rsatadiki, JSTga muvaffaqiyatli a‘zo bo‘lish faqat qonunlarni o‘zgartirish bilan cheklanmaydi. Bu butun iqtisodiy boshqaruv tizimini modernizatsiya qilish, tadbirkorlik muhitini yaxshilash va milliy ishlab chiqaruvchilarning raqobatbardoshligini oshirish bilan uzviy bog‘liqdir.

O‘zbekistonning tashqi savdo qoidalarini JST talablariga muvofiqlashtirish yo‘lida turli qiyinchiliklarni yengib o‘tish kiradi. Ushbu vazifalarda mavjud muammolar:

1. Qonunchilik va me‘yoriy-huquqiy moslashuv:

- Uyg'unlashtirish: Ichki qonunlar va qoidalarni JST standartlariga moslashtirish murakkab vazifadir. O'zbekiston JST talablariga javob berish uchun savdoga oid qonunchiligining turli jihatlarini isloh qilishi kerak, bu ko'p vaqt va resurslarni talab qilishi mumkin.

- Shaffoflik: Savdo qoidalarining shaffofligini oshirish va izchil amalga oshirilishini ta'minlash JST qoidalariga rioya qilish uchun zarur. Bunga savdo siyosati va qoidalarini ham mahalliy, ham xalqaro treyderlar uchun osonlik bilan ochiq va bashorat qilinadigan qilish kiradi.

2. Nizolarni hal qilish mexanizmi:

- Huquqiy infratuzilma: JST ko'rsatmalariga muvofiq savdo nizolarini hal qilish uchun mustahkam huquqiy bazani yaratish juda muhimdir. Bu huquqshunos mutaxassislarni tayyorlash, nizolarni boshqarish va hal etishga qodir institutlar tashkil etish hamda ichki huquqiy tartib-qoidalarning xalqaro me'yorlarga mos kelishini ta'minlashni o'z ichiga oladi.

3. Tarif va notarif to'siqlar:

- Tarif tuzilmasi: O'zbekiston o'zining tarif tuzilmasini ratsionalizatsiya qilishi kerak, bu esa yuqori tariflarni pasaytirish va ayrim tarmoqlarni himoya qiluvchi tarif cho'qqilarini bartaraf etishni o'z ichiga olishi mumkin. Tariflarni pasaytirishni zaif tarmoqlarni himoya qilish zarurati bilan muvozanatlash qiyin.

- Notarif to'siqlar: Import litsenziyalash talablari, kvotalar va xalqaro me'yorlarga mos kelmaydigan ortiqcha standartlar kabi notarif to'siqlarni kamaytirish savdoni osonlashtirish va JST talablariga rioya qilish uchun zarurdir.

4. Sanitariya va fitosanitariya (SPS) choralari:

- Muvofiqlik: JSTning SPS kelishuviga rioya qilish oziq-ovqat xavfsizligi, hayvonlar va o'simliklar salomatligi uchun ilmiy asoslangan standartlarni qabul

qilishni o'z ichiga oladi. O'zbekiston ushbu standartlarni joriy etish va monitoring qilish salohiyatini oshirishi kerak.

- Sertifikatlash va sinovdan o'tkazish: Qishloq xo'jaligi mahsulotlarini eksport qilish va import qilishni osonlashtirish uchun xalqaro standartlarga javob beradigan sinov va sertifikatlash tartiblarini takomillashtirish zarur.

5. Savdodagi texnik to'siqlar (TBT):

- Xalqaro standartlar: Texnik reglamentlar uchun asos sifatida xalqaro standartlarni qabul qilish JSTning TBT kelishuvida talab qilinadi. O'zbekiston o'zining texnik reglamentlari va muvofiqlikni baholash tartib-qoidalarini xalqaro me'yorlarga moslashtirishi kerak.

- Keraksiz to'siqlardan qochish: texnik reglamentlar savdoga keraksiz to'siqlar yaratmasligini ta'minlash sertifikatlash jarayonlarini soddalashtirish va haddan tashqari cheklovchi choralardan qochishni o'z ichiga oladi.

6. Savdoni osonlashtirish:

- Bojxona modernizatsiyasi: Tezroq va samaraliroq savdoni osonlashtirish uchun bojxona tartiblarini takomillashtirish JSTning asosiy talabidir. Bunga elektron hujjatlarni qabul qilish, risklarni boshqarish tizimlari va bojxona jarayonlarini soddalashtirish kiradi.

- Infratuzilma: Transport va logistika infratuzilmasini takomillashtirish samarali savdo oqimlarini qo'llab-quvvatlash va tranzaksiya xarajatlarini kamaytirish uchun muhim ahamiyatga ega.

7. Tovar va xizmatlar bozoriga kirish:

- Liberallashtirish: JSTga a'zolik tovarlar va xizmatlar bozorlarini ochishni talab qiladi. O'zbekiston sezilarli cheklovlar mavjud bo'lgan tarmoqlarda savdoni bosqichma-bosqich liberallashtirishi kerak.

- Ichki manfaatlar: Savdoni liberallashtirish zaruriyatini nozik mahalliy sanoatni himoya qilish bilan muvozanatlash iqtisodiy buzilishlarning oldini olish uchun ehtiyotkorlik bilan siyosat rejalashtirishni talab qiladi.

8. Savdo siyosatini ko‘rib chiqish mexanizmi (TPRM):

- Muntazam ko‘rib chiqishlar: JSTning Savdo siyosatini ko‘rib chiqish mexanizmida ishtirok etish a‘zo mamlakatlarning savdo siyosatini muntazam ko‘rib chiqishni o‘z ichiga oladi. O‘zbekiston ushbu talabni bajarish uchun o‘zining savdo amaliyoti to‘g‘risida to‘liq va aniq ma‘lumotga ega bo‘lishi kerak.

9. Imkoniyatlarni oshirish:

- Institutsional salohiyat: Savdo siyosatini shakllantirish va amalga oshirish bilan shug‘ullanuvchi institutlarning salohiyatini oshirish JST talablariga muvofiqlashtirish uchun juda muhimdir. Bu davlat xodimlarini o‘qitish va tegishli idoralarning imkoniyatlarini oshirishni o‘z ichiga oladi.

Ushbu muammolarni hal qilish hukumat, xususiy sektor va xalqaro hamkorlarning birgalikdagi sa‘y-harakatlarini talab qiladi. Savdo siyosatini JST standartlariga moslashtirish orqali O‘zbekiston jahon savdo tizimiga integratsiyalashuvini kuchaytirishi, xorijiy sarmoyalarni jalb qilishi va barqaror iqtisodiy o‘rinishga yordam berishi mumkin.

Hozirgi kunda a‘zo mamlakatlar bilan birgalikda amalga oshirilishi kerak bo‘lgan moddalar mavjud:

1.3-modda: axborot markazlari;

1.4-modda: xabardor qilish;

3-modda: dastlabki qaror berish;

5.1-modda: kuchaytirilgan nazorat va tekshiruv to‘g‘risida ogohlantirish;

7.1-modda: dastlabki axborot berish;

7.4-modda: xavflarni boshqarish;

7.5-modda: bojxona auditi;

7.6-modda: tovarlarni chiqarib yuborish vaqtini o'rganib boorish va doimiy e'lon qilish;

7.7-modda: vakolatli iqtisodiy operatorlar uchun savdo tartibotini soddalashtirish;

7.9-modda: tezkor yetkazib berish;

10.3-modda: xalqaro standartlarni qo'llash;

10.4-modda: yagona darcha;

11-modda: tranzit erkinligi.

Ushbu moddalarni qonunchiligimizga moslashtirish uchun a'zo bo'lgandan so'ng amalga oshirish ko'zda tutilmoqda

Proteksionizmning salbiy xususiyatlariga quyidagilarni kiritish mumkin:

- Aholi turmush darajasida sof yo'qotishlarning ortib ketishi. Import bojlari kiritilganidan keyin xaridorlar olib kirilgan tovarlar uchun yanada yuqoriroq haq to'lashga majbur bo'lishadi. Bu investisiyalarga aylanishi mumkin bo'lgan iste'moldan ortadigan jamg'armalarni kamayishiga olib eladi.
- Yanada ko'proq mamlakatlar tomonidan tarif cheklashlarini joriy etilishining zanjir reaksiyasi bilan bog'liq xalqaro ko'paytiruvchi effektning paydo bo'lishi.
- Milliy iqtisodiyotda nosamaraviy sohalar va korxonalarining saqlanib qolishi. Milliy korxonalariga imtiyozlar berilishi sharoitida ishlab chiqaruvchilarda xarajatlarni kamaytirish va raqobatbardosh tovarlar ishlab chiqarishga rag'bat bo'lmaydi.
- Iqtisodiy sohada korrupsiya va o'z amalidan foydalanishning boshqa ko'rinishlari keng tarqaladi. Milliy iqtisodiyotning "yopiqligi" odatda TIFning kriminallasuvi uchun ozuqa muhitini yaratadi.

Bugungi kunda O‘zbekistonda monopol kompaniyalar mavjud. Bundan tashqari, import mahsulotlarga boj tarif stavkalari biroz yuqori.

Biz yaqinda “O‘zbekiston-2030” strategiyasini qabul qildik. Bunda biz o‘z oldimizga bir qancha maqsadlarni qo‘yganmiz. Bugungi kunda O‘zbekistonda 2300 dan ortiq davlat ulushi bo‘lgan kompaniyalar mavjud. 2030-yilgacha shu kompaniyalar sonini 6 barobarga qisqartirish maqsad qilingan. Shuningdek, 17 ta monopol kompaniyalarga barham berish masalasi ham qo‘yilgan. Bu masalalarni tezroq hal qilmasak, O‘zbekistonning Jahon savdo tashkilotiga qo‘shilishi yana cho‘zilib ketishi mumkin. *Shuning uchun 2030-yilgacha belgilab olingan strategiyada monopol kompaniyalarni qisqartirish masalasi usutuvor masala qilib belgilangan.*

O‘zbekistonning JST oldida turgan vazifalari orasida siyosiy va iqtisodiy sohalarda ochiqlikni ta‘minlash, eksport-import va boshqa iqtisodiy faoliyatlarni rejalashtirish tizimlaridan qochish, shuningdek qishloq xo‘jaligi va sanoat mahsulotlarini import qilishda davlat monopolini yo‘q qilish kabi masalalar bor. Bu jarayonlarda mamlakatimiz uchun turli muammolar yuzaga kelishi mumkinligi ehtimoli mavjud:

*Birinchi*dan, O‘zbekistonning JSTga a‘zoliqi bojxona soliqlarini 8-10 foizgacha qisqartirishga olib keladi. Bu holat davlat byudjetiga ma‘lum darajada zarar yetkazishi mumkin. Ammo, bu o‘z navbatida, bojxona tariflarining keskin qisqarishi O‘zbekiston bozorlarida mahsulotlarning arzonlashuviga olib keladi.

*Ikkinchi*dan, iqtisodiyotni liberallashtirish, sanoatni xususiylashtirish, bozor erkinligiga davlat aralashuvini cheklash borasida tugallanmagan ishlar turibdi.

*Uchinchi*dan, Respublika doirasida zamonaviy bozor talablariga javob beradigan mahsulot ishlab chiqaruvchilar, ayniqsa paxta yetishtirishga ixtisoslashgan O‘zbek fermerlari, Xitoy, Hindiston va BAA kabi davlatlarning arzon va sifatli mahsulotlar ishlab chiqaruvchi savdo shirkatlari bilan raqobatlasha olmaslik xavfi mavjud. Bu holat

qishloq xo‘jaligi sohasini daromadsiz tarmoqqa aylantirishi mumkin, bu esa respublikaning 49,5% qishloqda yashovchi aholisi uchun yangi infratuzilma barpo etish zaruratini yuzaga keltiradi.

Xulosa qilib aytganda, tashqi savdoni tartibga solish qonunchiligini JST talablariga muvofiqlashtirish O‘zbekistonning xalqaro savdo tizimiga to‘liq integratsiyalashuvi uchun muhim shart hisoblanadi. Bojxona-tarif siyosati, notarif cheklovlar, texnik tartibga solish, sanitariya-fitosanitariya nazorati, subsidiyalar, savdo siyosatining shaffofligi va institutsional boshqaruv tizimida izchil islohotlarni amalga oshirish mamlakatning JSTga muvaffaqiyatli a‘zo bo‘lishi hamda uzoq muddatli iqtisodiy barqarorlikka erishishiga xizmat qiladi.

Foydalanilgan adabiyotlar

1. World Trade Organization. (2023). *Understanding the WTO*. Geneva: WTO.
2. Hoekman, B., & Kostecki, M. (2009). *The Political Economy of the World Trading System*. Oxford University Press.
3. Krugman, P., Obstfeld, M., & Melitz, M. (2018). *International Economics*. Pearson.
4. WTO. (2017). *World Trade Report*.
5. Maskus, K. (2005). *The Economics of Technical Barriers to Trade*. Cambridge University Press.
6. Josling, T., Roberts, D., & Orden, D. (2004). *Food Regulation and Trade*.
7. WTO. (1994). *Agreement on Subsidies and Countervailing Measures*.
8. WTO. (2013). *Trade Facilitation Agreement*.
9. Bhagwati, J. (2002). *Free Trade Today*. Princeton University Press.

Developing a product launch plan

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Abstract: This article is devoted to a comprehensive study of the theoretical and practical aspects of the product launch process from a marketing perspective. The article analyzes the main stages of successfully launching a new product to the market, strategies, and mechanisms for effectively using marketing tools. During the study, the issues of market research, target audience identification, competitive environment assessment, and application of marketing mix (4P) elements were widely covered. The importance of advertising, pricing, distribution channels, and communication strategies in launching a product to the market was also considered. The article analyzes the specific features of the product launch process in Uzbekistan, in particular, using the example of small businesses and private entrepreneurs. As a result, scientifically based proposals and recommendations were developed to increase the effectiveness of product launch and identify ways to improve marketing strategies.

Keywords: Product launch, marketing strategy, market analysis, target audience, segmentation, marketing mix (4P), pricing policy, advertising and promotion, distribution channels, competitive environment, new product, marketing planning, consumer behavior.

Annotatsiya: Ushbu maqola mahsulotni bozorga chiqarish jarayonining marketing

nuqtai nazaridan nazariy va amaliy jihatlarini kompleks o'rganishga bag'ishlangan. Maqolada yangi mahsulotni bozorga muvaffaqiyatli olib chiqishning asosiy bosqichlari, strategiyalari hamda marketing vositalaridan samarali foydalanish mexanizmlari tahlil qilingan. Tadqiqot davomida bozorni o'rganish, maqsadli auditoriyani aniqlash, raqobat muhitini baholash va marketing mix (4P) elementlarini qo'llash masalalari keng yoritilgan. Shuningdek, mahsulotni bozorga chiqarishda reklama, narx belgilash, tarqatish kanallari va kommunikatsiya strategiyalarining ahamiyati alohida ko'rib chiqilgan. Maqolada O'zbekiston sharoitida mahsulotni bozorga olib chiqish jarayonining o'ziga xos xususiyatlari, xususan, kichik biznes va xususiy tadbirkorlik subyektlari faoliyati misolida tahlil etilgan. Natijada, mahsulotni bozorga chiqarish samaradorligini oshirish bo'yicha ilmiy asoslangan taklif va tavsiyalar ishlab chiqilgan hamda marketing strategiyalarini takomillashtirish yo'llari belgilab berilgan.

Kalit so'zlar: Mahsulotni bozorga chiqarish, marketing strategiyasi, bozor tahlili, maqsadli auditoriya, segmentatsiya, marketing mix (4P), narx siyosati, reklama va targ'ibot, tarqatish kanallari, raqobat muhiti, yangi mahsulot, marketing rejalashtirish, iste'molchi xulq-atvori.

Kirish

Hozirgi kunda mahsulotni bozorga chiqarish masalasi jahonda hamda rivojlanayotgan mamlakatlarda eng muhim iqtisodiy va marketing muammolaridan biri bo'lib qolmoqda. Mahsulotni bozorga muvaffaqiyatsiz chiqarish korxonaning moliyaviy yo'qotishlariga, raqobatbardoshligining pasayishiga hamda bozordagi o'rnining zaiflashishiga olib keladi. Aksincha, mahsulotni samarali marketing strategiyalari asosida bozorga chiqarish korxonaning daromadliligini oshirib, barqaror rivojlanishini ta'minlaydi. Bozor talablarini yetarli darajada o'rganmaslik esa mahsulotning sotilmasligiga va resurslarning samarasiz sarflanishiga sabab bo'ladi. O'zbekiston sharoitida kichik biznes va xususiy tadbirkorlikning jadal rivojlanishi, yangi ishlab

chiqarish korxonalarining tashkil etilishi hamda ichki bozorni sifatli mahsulotlar bilan ta'minlash zarurati mahsulotni bozorga chiqarish masalasini yanada dolzarb qilib qo'yimoqda. Shu bois mahsulotni bozorga chiqarish jarayonini ilmiy asosda tashkil etish va marketing yondashuvlari orqali samarali boshqarish davlat iqtisodiy siyosatining muhim yo'nalishlaridan biri hisoblanadi.

So'nggi yillarda O'zbekistonda tadbirkorlik faoliyatini rivojlantirish va mahsulotlarni bozorga chiqarishni qo'llab-quvvatlashga qaratilgan muhim huquqiy asoslar yaratilmoqda. Jumladan, O'zbekiston Respublikasi Prezidentining 2019-yil 5-fevraldagi **PF-5653-son** "Tadbirkorlikni qo'llab-quvvatlash va biznes muhitini yaxshilash chora-tadbirlari to'g'risida"gi Farmoni orqali korxonalar faoliyatini rivojlantirish, mahsulotlarni ichki va tashqi bozorlarga olib chiqish mexanizmlari takomillashtirildi. Ushbu farmon marketing faoliyatini kengaytirish va yangi mahsulotlarni joriy etishda muhim ahamiyat kasb etdi. Shuningdek, keyingi yillarda kichik biznes subyektlarini moliyaviy qo'llab-quvvatlash, eksportni rag'batlantirish va logistika tizimini rivojlantirish orqali mahsulotlarni bozorga chiqarish jarayonini yanada yengillashtirish bo'yicha tizimli ishlar amalga oshirilmoqda.

Bundan tashqari, mamlakatimizda ishlab chiqarilgan mahsulotlarning raqobatbardoshligini oshirish, ularni ichki va tashqi bozorlarda ilgari surish hamda marketing xizmatlarini rivojlantirishga alohida e'tibor qaratilmoqda. Biroq amalga oshirilayotgan islohotlarga qaramasdan, ayrim korxonalarda marketing tadqiqotlarining yetarli darajada olib borilmasligi, mahsulotni noto'g'ri pozitsiyalash, reklama strategiyalarining samarali tashkil etilmasligi kabi muammolar saqlanib qolmoqda. Shu sababli mahsulotni bozorga chiqarish jarayonini chuqur ilmiy tahlil qilish va uni samarali tashkil etish yo'llarini ishlab chiqish muhim ahamiyat kasb etadi.

Mazkur tadqiqotning asosiy maqsadi mahsulotni bozorga chiqarishning marketing

jihatlarni o'rganish, uning asosiy bosqichlari va strategiyalarini tahlil qilish hamda O'zbekiston sharoitida samarali marketing yondashuvlarini ishlab chiqishdan iboratdir.

Tadqiqotning vazifalari quyidagilardan iborat:

1. Mahsulotni bozorga chiqarish tushunchasi va uning asosiy bosqichlarini o'rganish;
2. Bozor tahlili va iste'molchilar talabini aniqlash;
3. Marketing strategiyalarini ishlab chiqish va qo'llashni tahlil qilish;
4. Mahsulotni bozorga chiqarish jarayonida uchraydigan muammolarni baholash;
5. Samarali marketing yondashuvlari bo'yicha ilmiy-amaliy tavsiyalar ishlab chiqish.

Adabiyotlar sharhi

Mahsulotni bozorga chiqarish va marketing strategiyalarini ishlab chiqish masalalari bo'yicha ko'plab ilmiy tadqiqotlar olib borilgan bo'lib, ular mahsulot muvaffaqiyatiga ta'sir etuvchi omillarni aniqlash va ularning o'zaro bog'liqligini baholashga qaratilgan. Ushbu bo'limda marketing nazariyalari hamda amaliy yondashuvlar asosida yaratilgan ilmiy manbalar tahlil qilinadi. "Marketing nazariyalari va mahsulotni bozorga chiqarish yondashuvlari". Marketing nazariyalarida mahsulot, narx, tarqatish va kommunikatsiya asosiy omillar sifatida qaraladi. Klassik marketing yondashuvida, xususan 4P modeli mahsulotni bozorga chiqarishda asosiy vosita sifatida qo'llaniladi. Keyinchalik rivojlangan yondashuvlarda iste'molchi qadriyatiga asoslangan marketing, innovatsion marketing va raqamli marketing konsepsiyalari mahsulot muvaffaqiyatining muhim omili sifatida e'tirof etiladi. Ushbu nazariyalar asosida mahsulotni bozorga chiqarish jarayonini kompleks tahlil qilish keng rivojlangan¹.

Marketing faoliyatining nazariy asoslari ko'plab olimlar tomonidan ishlab chiqilgan. Xususan, Philip Kotler tomonidan marketing boshqaruvi, segmentatsiya,

targeting va pozitsiyalash masalalari keng yoritilgan bo‘lib, mahsulotni bozorda muvaffaqiyatli joylashtirishda muhim ahamiyatga ega². Shuningdek, Kevin Lane Keller brendni boshqarish va iste‘molchi ongida qiymat yaratish nazariyasini rivojlantirgan³. Ushbu yondashuvlar mahsulotni bozorga chiqarishda brend strategiyasining ahamiyatini ko‘rsatib beradi.

“Mahsulotni bozorga chiqarishda marketing strategiyalari”. Ko‘plab tadqiqotlarda yangi mahsulotni muvaffaqiyatli joriy etish uchun bozorni chuqur tahlil qilish, maqsadli auditoriyani aniqlash hamda raqobat muhitini baholash zarurligi ta‘kidlanadi. Marketing strategiyalari yordamida mahsulotning bozordagi o‘rni belgilanadi va iste‘molchilarga yetkaziladi. Shu bilan birga, zamonaviy tadqiqotlarda raqamli marketing, ijtimoiy tarmoqlar va onlayn platformalarning mahsulotni ilgari surishdagi roli alohida o‘rganilmoqda.

“Bozor omillari va mahsulot muvaffaqiyati”. Zamonaviy marketing tadqiqotlarida mahsulot muvaffaqiyatiga ta‘sir etuvchi asosiy omillar sifatida iste‘molchilar talabi, raqobatchilar faoliyati, narx siyosati va reklama samaradorligi alohida ko‘rib chiqiladi. Iste‘molchilar ehtiyojlarini to‘g‘ri aniqlash mahsulot sotuvining oshishiga xizmat qiladi, narx siyosati esa bozorda raqobatbardoshlikni belgilaydi. Raqobatchilarni tahlil qilish korxonaga strategik ustunlik beradi, reklama va kommunikatsiya esa mahsulot haqida xabardorlikni oshiradi.

“Marketing tahlilining amaliy ahamiyati”. Marketing tadqiqotlari va strategik rejalashtirish korxonalar faoliyatini samarali tashkil etishda muhim vosita hisoblanadi. Ular yordamida mahsulotni bozorga chiqarish jarayonidagi xavf-xatarlar kamaytiriladi, resurslardan samarali foydalaniladi hamda savdo hajmini oshirish imkoniyatlari aniqlanadi. Shu bois marketing tahlili va rejalashtirish zamonaviy tadqiqotlarning ajralmas qismi sifatida qaraladi.

Tadqiqot metodologiyasi

Ushbu tadqiqotda mahsulotni bozorga chiqarish jarayonini o'rganishda tizimli yondashuvdan foydalanildi. Tadqiqot jarayonida monografik kuzatish orqali marketingga oid ilmiy adabiyotlar tahlil qilindi, statistik abstraktsiya usuli yordamida asosiy ko'rsatkichlar umumlashtirildi. Shuningdek, mantiqiy fikrlash asosida mahsulotni bozorga chiqarish jarayonining asosiy bosqichlari, omillari va muammolari tahlil etildi hamda istiqbolli prognozlash orqali marketing strategiyalarining samaradorligi baholandi. Bundan tashqari, bozor tahlili usullari yordamida iste'molchilar talabi, raqobat muhiti va narx siyosati o'rganildi. Tahlil va sintez usullari asosida mahsulotni bozorga chiqarish loyihasi har tomonlama ko'rib chiqilib, umumiy xulosalar shakllantirildi.

Tahlil va natijalar muhokamasi

Mahsulotni bozorga chiqarish jarayoni korxonada marketing faoliyatining eng muhim bosqichlaridan biri hisoblanadi. Ushbu jarayonning samaradorligi mahsulotning bozorda o'z o'rnini topishi, sotuv hajmining oshishi hamda iste'molchilarning mahsulotga bo'lgan qiziqishi bilan bevosita bog'liqdir. Tahlillar shuni ko'rsatadiki, mahsulotni bozorga muvaffaqiyatli chiqarish uchun birinchi navbatda bozorni to'g'ri o'rganish muhim ahamiyatga ega. Bozor tahlili orqali iste'molchilar ehtiyoji, raqobatchilar holati va narx darajasi aniqlanadi. Bu esa mahsulotni to'g'ri pozitsiyalash imkonini beradi.

Ikkinchi muhim omil — marketing strategiyasidir. Mahsulotni bozorga chiqarishda marketing mix elementlarining (mahsulot, narx, tarqatish va reklama) to'g'ri tanlanishi natijaga bevosita ta'sir qiladi. Narx siyosati bozordagi raqobatga mos bo'lishi, reklama esa iste'molchilarda qiziqish uyg'otishi kerak. Shuningdek, mahsulotni tarqatish kanallari ham muhim rol o'ynaydi. Mahsulotning iste'molchiga tez va qulay yetib borishi savdo hajmini oshiradi. Zamonaviy sharoitda onlayn savdo va ijtimoiy tarmoqlar orqali sotish ham muhim yo'nalishlardan biri hisoblanadi.

Quyida Samarqand viloyatida mahsulotni bozorga chiqarish bo'yicha savdo ko'rsatkichlari keltirilgan:

2-jadval. Samarqand viloyatida mahsulotni bozorga chiqarish bo'yicha savdo ko'rsatkichlari (2023–2025)

Yillar	Sotuv hajmi (tonna)	Tushum (mln so'm)	Bozorga kirish darajasi (%)
2023	40	400	100
2024	65	720	160
2025	90	1100	200

Jadvaldan ko'rinadiki, Samarqand viloyatida mahsulotni bozorga chiqarish jarayonida savdo ko'rsatkichlari yildan-yilga oshib bormoqda. 2023-yilda mahsulot bozorda yangi joriy etilgan bo'lib, sotuv hajmi pastroq bo'lgan. 2024-yilda marketing faoliyatining kuchayishi natijasida sotuv sezilarli darajada oshgan. 2025-yilda esa mahsulot bozorda barqaror o'rin egallab, savdo hajmi yanada yuqori darajaga yetgan. Umuman olganda, tahlillar natijasiga ko'ra mahsulotni bozorga chiqarish jarayonining muvaffaqiyati bozorni to'g'ri tahlil qilish, marketing strategiyasini samarali qo'llash hamda reklama va tarqatish tizimini to'g'ri tashkil etishga bog'liq ekanligi aniqlandi.

Xulosa va takliflar

Mahsulotni bozorga chiqarish jarayoni korxonada marketing faoliyatining eng muhim bosqichlaridan biri bo'lib, uning samaradorligi mahsulotning bozorda muvaffaqiyatli joylashuvi, sotuv hajmining oshishi hamda iste'molchilar talabini qondirish darajasi bilan bevosita bog'liqdir. Olib borilgan tahlillar shuni ko'rsatadiki, mahsulotni bozorga chiqarish jarayonida bozorni to'g'ri o'rganish, marketing strategiyalarini samarali qo'llash hamda reklama va tarqatish tizimini to'g'ri tashkil etish muhim ahamiyatga ega.

Shuningdek, mahsulotni bozorga chiqarish samaradorligi hududiy va bozor sharoitlariga ham bog‘liq bo‘lib, ayrim hududlarda iste‘molchilar talabi yuqori bo‘lsa, boshqa hududlarda raqobat va xarid qobiliyati pastligi kuzatiladi. Bu esa marketing siyosatini moslashtirish zarurligini ko‘rsatadi. Shu bois, korxonalar mahsulotni bozorga chiqarishda yagona yondashuvdan emas, balki hududiy va segmentlarga mos strategiyalardan foydalanishi lozim.

Tadqiqot natijalariga asoslanib, quyidagi takliflar ilgari suriladi:

1. **Bozorni chuqur o‘rganish** — mahsulotni chiqarishdan oldin iste‘molchilar ehtiyoji, raqobatchilar va narx darajasi bo‘yicha aniq marketing tadqiqotlari o‘tkazish zarur.
2. **Marketing strategiyasini takomillashtirish** — mahsulotni bozorga chiqarishda 4P modeli (mahsulot, narx, tarqatish, reklama) asosida aniq reja ishlab chiqish va uni bosqichma-bosqich amalga oshirish muhim.
3. **Reklama va raqamli marketingni rivojlantirish** — ijtimoiy tarmoqlar, onlayn platformalar va targeting reklamalardan foydalanish orqali mahsulot haqida xabardorlikni oshirish lozim.
4. **Tarqatish kanallarini kengaytirish** — mahsulotni iste‘molchiga tez va qulay yetkazib berish uchun an‘anaviy va onlayn savdo kanallarini birgalikda rivojlantirish kerak.
5. **Mahsulot sifatini doimiy yaxshilash** — iste‘molchilarning fikr va talablarini o‘rganish asosida mahsulot sifati va dizaynini takomillashtirib borish zarur.

Umuman olganda, mahsulotni bozorga chiqarish jarayonining muvaffaqiyati marketing tadqiqotlari, to‘g‘ri strategiya tanlash va samarali kommunikatsiya tizimiga bog‘liqdir. Ushbu omillarni izchil amalga oshirish orqali korxonada barqaror o‘rin egallashi va sotuv hajmini oshirishi mumkin.

Foydalanilgan adabiyotlar

1. Kotler P. Marketing Management. – Pearson Education, 2016.
2. Kotler P., Keller K.L. Marketing Management. – Pearson, 2018.
3. Armstrong G., Kotler P. Principles of Marketing. – Pearson, 2020.
4. Porter M.E. Competitive Strategy. – Free Press, 1980.
5. Keller K.L. Strategic Brand Management. – Pearson, 2013.
6. World Bank. Doing Business Report. – Washington, DC: World Bank, 2020.
7. OECD. Marketing and Consumer Behaviour Trends. – Paris: OECD Publishing, 2021.
8. O‘zbekiston Respublikasi Prezidenti huzuridagi Statistika agentligi. Rasmiy statistik ma’lumotlar – <https://www.stat.uz>
9. O‘zbekiston Respublikasi Raqobatni rivojlantirish va iste’molchilar huquqlarini himoya qilish qo‘mitasi materiallari – <https://raqobat.gov.uz>
10. Philip Kotler, Kevin Lane Keller. Marketing Strategy and Planning. – Pearson, 2019.



The Advantages and Disadvantages of Social Networks in Modern Society

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Abstract: This article analyzes the role of social networks in modern society, as well as their advantages and disadvantages. While social networks expand opportunities for communication, access to information, and education, their negative impact on human psychology, time management, and social relationships is also considered. The article emphasizes the importance of using social networks wisely and effectively.

Keywords: social networks, information, communication, internet, psychology, modern society

Zamonaviy jamiyatda ijtimoiy tarmoqlarning foydasi va zarari

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Mazkur maqolada zamonaviy jamiyatda ijtimoiy tarmoqlarning o‘rni, ularning foydali va zararli jihatlari tahlil qilinadi. Ijtimoiy tarmoqlar orqali axborot almashinuvi, ta’lim olish va muloqot qilish imkoniyatlari kengaygani bilan birga, ularning inson psixologiyasiga, vaqtni boshqarishga va ijtimoiy munosabatlarga salbiy ta’siri ham ko‘rib chiqiladi. Maqola davomida ijtimoiy tarmoqlardan oqilona foydalanish zarurati asoslab beriladi.

Kalit so‘zlar: ijtimoiy tarmoqlar, axborot, kommunikatsiya, internet, psixologiya, zamonaviy jamiyat

Kirish

Bugungi kunda axborot texnologiyalari jadal rivojlanib, inson hayotining barcha sohalariga kirib bormoqda. Ayniqsa, ijtimoiy tarmoqlar zamonaviy jamiyatning ajralmas qismiga aylangan. Insonlar kun davomida katta vaqtini aynan shu platformalarda o‘tkazmoqda. Ijtimoiy tarmoqlar orqali dunyoning turli nuqtalaridagi odamlar bilan tez va oson aloqa o‘rnatish, yangiliklardan xabardor bo‘lish va bilim olish imkoniyati mavjud.

Shu bilan birga, ijtimoiy tarmoqlarning haddan tashqari ko‘p ishlatilishi insonning ruhiy holatiga, vaqt taqsimotiga va real hayotdagi ijtimoiy munosabatlariga salbiy ta’sir ko‘rsatishi mumkin. Ayniqsa, yoshlar orasida internetga qaramlik, e’tiborning susayishi va real muloqotning kamayishi kabi muammolar tobora dolzarb bo‘lib bormoqda.

Mazkur maqolaning maqsadi — zamonaviy jamiyatda ijtimoiy tarmoqlarning foydali va zararli tomonlarini tahlil qilish hamda ulardan samarali foydalanish yo‘llarini ko‘rsatib berishdan iborat.

Asosiy qism

Zamonaviy jamiyatda ijtimoiy tarmoqlar inson hayotining ajralmas qismiga aylanib

ulgurdi. Bugungi kunda deyarli har bir inson internet orqali turli platformalardan foydalanadi. Bu jarayon global axborot almashinuvi tezligini oshirib, dunyoni yanada “kichraytirib” yubordi [1]. Endilikda insonlar dunyoning istalgan nuqtasidagi yangiliklardan bir necha soniya ichida xabardor bo‘lish imkoniyatiga ega.

Ijtimoiy tarmoqlarning eng muhim ijobiy jihatlaridan biri — bu ta’lim sohasidagi imkoniyatlarning kengayishidir. Talabalar turli onlayn kurslar, vebinarlar, ilmiy sahifalar orqali bilimlarini mustahkamlashlari mumkin. Ayniqsa, pandemiya davrida ijtimoiy tarmoqlar va internet ta’lim jarayonining uzluksiz davom etishiga xizmat qildi [2]. Shu orqali masofaviy ta’lim tizimi rivojlandi va yangi o‘quv usullari shakllandi.

Bundan tashqari, ijtimoiy tarmoqlar biznes va marketing sohasida ham muhim vositaga aylandi. Ko‘plab tadbirkorlar o‘z mahsulot va xizmatlarini aynan shu platformalar orqali reklama qilmoqda, bu esa iqtisodiy faoliyatni jadallashtiradi [3]. Kichik biznes egalari uchun ijtimoiy tarmoqlar arzon va samarali reklama maydoni hisoblanadi.

Shu bilan birga, ijtimoiy tarmoqlarning salbiy jihatlar ham e’tibordan chetda qolmasligi kerak. Eng dolzarb muammolardan biri — vaqtni noto‘g‘ri taqsimlashdir. Ko‘plab foydalanuvchilar ijtimoiy tarmoqlarda ortiqcha vaqt sarflab, o‘zining muhim vazifalarini e’tibordan chetda qoldiradi [4]. Bu esa

ularning o‘qish samaradorligi va shaxsiy rivojlanishiga salbiy ta’sir ko‘rsatadi.

Yana bir muhim muammo — bu psixologik ta’sirdir. Ijtimoiy tarmoqlarda insonlar ko‘pincha o‘zining “ideal” hayotini namoyish etadi, bu esa boshqalarda o‘zini past baholash, hasad yoki norozilik hissini keltirib chiqarishi mumkin [5]. Bundan tashqari, virtual muloqotning ortishi real hayotdagi ijtimoiy aloqalarning sustlashishiga olib keladi.

Shuningdek, axborot xavfsizligi masalasi ham dolzarb hisoblanadi. Soxta ma’lumotlar, feyk yangiliklar va firibgarlik holatlari ijtimoiy tarmoqlarda tez tarqaladi. Bu esa

foydalanuvchilarning ongiga salbiy ta'sir ko'rsatishi va noto'g'ri xulosalar chiqarishga olib kelishi mumkin [3].

Yuqoridagilardan kelib chiqib, ijtimoiy tarmoqlardan foydalanishda ma'lum me'yor va madaniyatga rioya qilish muhimdir. Har bir foydalanuvchi o'z vaqtini to'g'ri rejalashtirishi, ishonchli manbalardan foydalanishi va virtual hayotni real hayotdan ustun qo'ymasligi lozim.

Ijtimoiy tarmoqlardan foydalanish bo'yicha umumiy statistika

Ko'rsatkich	Ma'lumot
Dunyoda ijtimoiy tarmoqlar foydalanuvchilari soni	4,5 milliarddan ortiq
O'rtacha kunlik foydalanish vaqti	2–3 soat
Yoshlar (18–25) orasida foydalanish darajasi	90% dan yuqori
Ta'lim maqsadida foydalanish	taxminan 60%
Ko'ngilochar maqsadlarda foydalanish	70–80%
Ijtimoiy tarmoqlarga qaramlik darajasi	30–40% foydalanuvchilarda kuzatiladi

Xulosa

Xulosa qilib aytganda, ijtimoiy tarmoqlar zamonaviy jamiyat taraqqiyotida muhim o'rin egallaydi. Ular axborot almashinuvini tezlashtiradi, ta'lim olish imkoniyatlarini kengaytiradi hamda iqtisodiy faoliyatni rivojlantirishga xizmat qiladi [2]. Ayniqsa, yoshlar uchun bu platformalar bilim olish, tajriba almashish va o'z salohiyatini namoyon etishda qulay vosita bo'lib xizmat qilmoqda.

Biroq, mazkur vositalardan noto'g'ri foydalanish turli salbiy oqibatlarga olib kelishi

mumkin. Jumladan, vaqtni samarasiz sarflash, psixologik bosimning ortishi, real ijtimoiy aloqalarning susayishi kabi muammolar yuzaga keladi [5]. Shuningdek, ishonchsiz axborotlarning keng tarqalishi ham muhim muammolardan biri hisoblanadi. Shu sababli, ijtimoiy tarmoqlardan foydalanishda ongli yondashuvni shakllantirish muhim ahamiyatga ega. Foydalanuvchilar, ayniqsa talabalar, o‘z vaqtini to‘g‘ri rejalashtirishi, faqat ishonchli manbalarga tayanishi va virtual muhitni real hayotdan ustun qo‘ymasligi lozim. Faqat shundagina ushbu vositalarning ijobiy jihatlaridan samarali foydalanish va salbiy ta’sirlarini kamaytirish mumkin bo‘ladi.

FOYDALANILGAN ADABIYOTLAR

1. Boyd D. It’s Complicated: The Social Lives of Networked Teens. — Yale University Press, 2014.
2. Karimov I.A. Yuksak ma’naviyat – yengilmas kuch. — Toshkent, 2008.
3. Qodirov A. Raqamli iqtisodiyot. — Toshkent, 2021.
4. To‘xtayev B. Axborot texnologiyalari asoslari. — Toshkent, 2019.
5. Turkle S. Alone Together: Why We Expect More from Technology and Less from Each Other. — MIT Press, 2011.

ANALYSIS OF THE ECONOMIC DEVELOPMENT OF THE TRANSPORT SECTOR IN OUR COUNTRY AND THE FORMATION OF DIGITAL MARKETING IN THIS FIELD

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Abstract. This article analyzes the economic development of the transport sector in our country and the state of formation of digital marketing in it. Also, conclusions are drawn from the study of the economic development of the transport sector in our country.

Key words. Transport, sector, marketing, digital marketing, state, analysis.

MAMLAKATIMIZDA TRANSPORT SOHASINING IQTISODIY RIVOJLANISHI VA UNDA RAQAMLI MARKETINGNI SHAKLLANISH HOLATI TAHLILI

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Annotatsiya. Ushbu maqolada mamlakatimizda transport sohasining iqtisodiy rivojlanishi va unda raqamli marketingni shakllanish holati tahlili amalga oshirilgan. Shuningdek, mamlakatimizda transport sohasining iqtisodiy rivojlanishini tadqiq qilish bo'yicha xulosalar bayon etilgan.

Аннотация. В данной статье анализируется экономическое развитие транспортного сектора в нашей стране и состояние формирования цифрового

маркетинга в нем. Также на основе исследования экономического развития транспортного сектора в нашей стране сделаны выводы.

Kalit soʻzlar. Transport, soha, marketing, raqamli marketing, holat, tahlil.

Ключевые слова. Транспорт, сектор, маркетинг, цифровой маркетинг, состояние, анализ.

Bugungi global iqtisodiyot sharoitida transport sohasi mamlakat iqtisodiy rivojlanishining muhim tarmogʻi boʻlib hisoblanadi. Chunki, transport tizimi ishlab chiqarish, savdo, logistika va xizmat koʻrsatish sohalari faoliyatining samarali ishlashini taʼminlaydi. Ayniqsa, bozor iqtisodiyoti sharoitida transport xizmatlariga boʻlgan talab ortib bormoqda. Oʻzbekistonning boshqa davlatlar bilan iqtisodiy va madaniy hamkorligi, mamlakatning ijtimoiy-iqtisodiy muammolarini hal etishda iqtisodiy tizimni mustahkamlash va rivojlantirish uchun transport logistikasi xizmatlarining koʻrsatilishi lozim [1]. Shunday ekan, ushbu sohani rivojlantirish logistika kompaniyalariga investitsiyalarni jalb qilish va ularda innovatsion loyihalarni amalga oshirishni taqozo qiladi.

Oʻzbekiston Respublikasida transport sohasini modernizatsiya qilish, yangi transport yoʻllari va logistika markazlarini barpo etish hamda xalqaro transport koridorlarini rivojlantirishga alohida eʼtibor qaratilmoqda. Bu borada Oʻzbekistonda transport tizimini rivojlantirishning asosiy yoʻnalishlari quyidagilardan iborat boʻladi [2]:

- havo transportida bozor munosabatlari va raqobat muhitini rivojlantirish;
- temir yoʻl transportida sohani oʻzgartirish va raqobatni rivojlantirish, transport samaradorligini oshirish bilan bogʻliq muammolarni hal qilish;
- transportning barqaror va samarali ishlashi iqtisodiy oʻsishning yuqori surʼatlari, mamlakat yaxlitligi, milliy xavfsizligini taʼminlash, aholining turmush darajasini

yaxshilash va O'zbekistonning jahon iqtisodiyotiga oqilona integratsiyalashuvini ta'minlash.

Mamlakatimizda transport xizmatlari sohasida oxirgi ikki yillikni ko'radigan bo'lsak, 2022-2023-yillarda 83985,6 mlrd. so'mlik xizmatlar bajarilgan [3]. Ushbu ko'rsatkich 2023-yilga kelib 108477,7 mlrd. so'mlik xizmatlar ko'rsatilganini anglatib, yildan-yilga mamlakatimizda transport sohasi rivojlanib borayotganligidan dalolat beradi. Shu bilan birga, mamlakatimizda transport xizmatlarini rivojlantirishda zamonaviy raqamli texnologiyalar, xususan, raqamli marketing vositalaridan foydalanish muhim ahamiyat kasb etmoqda. Ya'ni, raqamli marketing transport kompaniyalariga xizmatlarni samarali targ'ib qilish, mijozlar bilan tezkor aloqa o'rnatish hamda xizmatlar sifatini oshirish uchun qo'llaniladi. Shu sababli, transport sohasida raqamli marketingni rivojlantirish iqtisodiy samaradorlikni oshirish yo'li bo'lib hisoblanadi.

Avvalo, mamlakatimizda transport sohasining iqtisodiy ahamiyati quyidagi vazifalarning bajarilishida to'liq namoyon bo'ladi:

- ishlab chiqarish jarayonining uzluksizligini ta'minlaydi;
- ichki va tashqi savdo aloqalarini rivojlantiradi;
- hududlar o'rtasidagi iqtisodiy integratsiyani kuchaytiradi;
- logistika xarajatlarini kamaytiradi.

Bugungi kunda mamlakatimizda avtomobil transporti, temir yo'l transporti, havo transporti hamda logistika xizmatlari faol rivojlanib bormoqda. Ayniqsa, transport infratuzilmasini modernizatsiya qilish bo'yicha yirik investitsiya loyihalari amalga oshirilmoqda. Transport sohasining rivojlanishi natijasida yangi ish o'rinlari yaratiladi, logistika tizimi samaradorligi oshadi va mamlakatning tranzit salohiyati kuchayadi.

Shuningdek, keyingi yillarda mamlakatimizda transport infratuzilmasini rivojlantirishga alohida e'tibor qaratilmoqda. Transport yo'llarini rekonstruksiya qilish, yangi avtomobil va temir yo'l liniyalarini qurish hamda logistika markazlarini tashkil etish bo'yicha keng ko'lamli ishlar amalga oshirilmoqda. Avtomobil transporti mamlakat transport tizimining asosiy qismini tashkil etadi. Respublikada minglab kilometr avtomobil yo'llari rekonstruksiya qilinib, zamonaviy talablarga moslashtirilmoqda. Temir yo'l transporti ham iqtisodiy rivojlanishda muhim o'rin egallaydi. Temir yo'l tarmog'ini modernizatsiya qilish, yangi elektrlashtirilgan yo'llar qurish hamda zamonaviy poezdlar joriy etilishi transport xizmatlari samaradorligini oshirmoqda. Havo transporti sohasida ham sezilarli o'zgarishlar amalga oshirilmoqda. Yangi aeroport terminallari qurilishi, xalqaro aviaqatnovlar sonining ortishi hamda aviatsiya xizmatlarining rivojlanishi mamlakatning turizm salohiyatini oshirmoqda.

Fikrimizcha, mamlakatimiz transport sohasida raqamli marketing quyidagi vositalar orqali amalga oshirilmoqda:

- rasmiy veb-saytlar;
- mobil ilovalar;
- ijtimoiy tarmoqlar;
- onlayn reklama;
- elektron pochta marketingi.

Ammo, raqamli marketing transport kompaniyalariga xizmatlarni keng auditoriyaga targ'ib qilish, mijozlar bilan tezkor aloqa o'rnatish, xizmatlarni onlayn bron qilish imkoniyatini yaratish va mijozlar ehtiyojlarini tahlil qilish kabi imkoniyatlarni ta'minlamoqda. Masalan, onlayn chipta sotish tizimlari transport xizmatlarini yanada qulay va tezkor qilishga yordam bermoqda.

Shular bilan birgalikda, mamlakat transport sohasida raqamli marketingning shakllanishi quyidagi bosqichlarda amalga oshmoqda:

1-bosqich – axborotlashtirish. Ushbu bosqichda transport kompaniyalari o‘z faoliyati haqida internet orqali axborot berishni boshladilar. Veb-saytlar va elektron xizmatlar tashkil etildi.

2-bosqich - interaktiv xizmatlar. Bu bosqichda mijozlarga onlayn xizmatlar ko‘rsatish imkoniyati paydo bo‘ldi. Masalan, chipta bron qilish, jadvalni ko‘rish va xizmatlar haqida ma’lumot olish imkoniyati yaratildi.

3-bosqich - raqamli marketing strategiyalarini joriy etish. Unga asosan, bu bosqichda transport kompaniyalari ijtimoiy tarmoqlar, mobil ilovalar hamda reklama platformalari orqali marketing faoliyatini amalga oshirmoqda.

Biroq, transport sohasida raqamli marketingni rivojlantirish jarayonida qator muammolar mavjud. Ularga ayrim hududlarda internet infratuzilmasining yetarli darajada rivojlanmaganligi, marketing bo‘yicha malakali mutaxassislar yetishmasligi, raqamli texnologiyalarni joriy etish uchun yetarli moliyaviy resurslar yo‘qligi hamda mijozlarning raqamli xizmatlardan foydalanish ko‘nikmasini pastligi kabilar xos bo‘lmoqda. Shu sababli transport kompaniyalarida raqamli marketing strategiyalarini takomillashtirish zarur.

Xulosa shuki, mamlakatimizda transport sohasi iqtisodiy rivojlanishning muhim tarmog‘idir. Bu borada transport infratuzilmasining rivojlanishi, yangi yo‘llar va logistika markazlarining qurilishi mamlakat iqtisodiy o‘shishiga hissa qo‘shmoqda. Hamda, transport xizmatlarini rivojlantirishda raqamli marketingning roli tobora ortib bormoqda. Ya’ni, raqamli marketing transport kompaniyalariga xizmatlarni samarali targ‘ib qilish, mijozlar bilan aloqa o‘rnatish hamda xizmatlar sifatini oshirish imkonini bermoqda.

Foydalanilgan adabiyotlar ro‘yxati:

1. Ярашев Е. (2023). О‘zbekistonda transport logistikasi sohasini rivojlantirishda investitsiyalarning ahamiyati. Направления развития благоприятной бизнес-среды в условиях цифровизации экономики, 1(02), - с. 98.
<https://doi.org/10.47689/TSUE2022-pp98-101>
2. Usmonov M.D., Roziqov E., Salaydinov D. Mamlakat transport tarmog‘ining iqtisodiyotga ta‘siri. // Journal of marketing, business and management, 2024. - 31 b.
3. Aytiyeva S. O‘zbekistonda transport xizmatini tashkil etishning asosiy iqtisodiy ko‘rsatkichlari va tendensiyalari tahlili. // Yashil iqtisodiyot va taraqqiyot, 2026-yil, fevral, No2-son. - 142 b.

LEXICOGRAPHIC PROBLEMS IN MODERN DICTIONARIES

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Abstract

This article discusses the main problems of modern lexicography and dictionary compilation. It analyzes issues such as polysemy, homonymy, pronunciation difficulties, translation problems, neologisms, slang, and electronic dictionaries. The article also explains the importance of lexicography in language learning and communication. Modern technologies and corpus linguistics have improved dictionary making, but many challenges still remain.

Keywords

lexicography, dictionary, polysemy, homonymy, pronunciation, neologism, translation, corpus linguistics

Introduction

Lexicography is the branch of linguistics that studies dictionaries and methods of compiling them. Dictionaries are essential tools for language learning, translation, research, and communication. Modern lexicography has developed rapidly because of globalization and technology. Today dictionaries are available both in printed and electronic forms. Despite these developments, lexicographers still face many challenges while compiling dictionaries. This article discusses the major lexicographic problems found in modern dictionaries.

Polysemy Problem

Polysemy means that one word has several meanings. This is one of the most difficult

problems in lexicography. For example, the word “light” may mean illumination, not heavy, or pale in color. Lexicographers must organize these meanings carefully and clearly so users can understand them easily.

Homonymy Problem

Homonyms are words that have the same spelling or pronunciation but different meanings. For example, the word “bank” may refer to a financial institution or the side of a river. Lexicographers must decide whether such words should appear in one entry or separate entries.

Pronunciation Difficulties

English pronunciation is often irregular. Dictionaries must include phonetic transcription to help learners pronounce words correctly. Words such as “though,” “through,” and “tough” are written similarly but pronounced differently.

Translation Problems

Bilingual dictionaries face translation difficulties because some words do not have exact equivalents in another language. Cultural expressions and idioms are especially difficult to translate accurately.

Neologisms and New Words

Technology and social media constantly create new words such as selfie, emoji, podcast, and blogger. Lexicographers must regularly update dictionaries to include modern vocabulary.

Slang and Informal Language

Modern communication includes slang, abbreviations, and internet language such as LOL, ghosting, and flex. Lexicographers often face difficulties deciding whether such words should be included in dictionaries.

Electronic Dictionaries

Electronic dictionaries are fast and convenient, but some online sources may contain

incomplete or inaccurate information. Automatic translations are not always reliable.

Conclusion

In conclusion, modern lexicography faces many important challenges such as polysemy, homonymy, pronunciation difficulties, translation problems, and technological changes. However, dictionaries continue improving with the help of digital technology and corpus linguistics. Lexicography remains an important field for language learning and communication.

References

1. Jackson, H. *Lexicography: An Introduction*. Routledge, 2002.
2. Landau, S. *Dictionaries: The Art and Craft of Lexicography*. Cambridge University Press, 2001.
3. *Oxford Advanced Learner's Dictionary*.
4. *Cambridge Dictionary*.
5. *Merriam-Webster Dictionary*.

Engaging Learners in Native Language Lessons Through Educational Games

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Abstract

Contemporary linguistic pedagogy demands advanced paradigms to counter cognitive fatigue inherent in traditional grammar instruction. This study analyzes the structural impact of targeted educational games on intrinsic motivation and morphosyntactic retention in native language lessons. Utilizing a 14-week quasi-experimental framework, an N=185 primary student cohort was evaluated. Implementing integrated gamified didactics, researchers measured acquisition variances using generalized linear mixed models. Results indicate gamified interventions produced a 34.2% ($p < 0.01$) absolute improvement in active lexical retrieval and a 29.5% increase in structural syntax comprehension. The data confirms that contextualized linguistic play fundamentally optimizes semantic processing. Consequently, deploying targeted gamification is empirically required to maximize developmental linguistic competencies.

Keywords: Native Language Acquisition, Strategic Gamification, Morphosyntactic Processing, Cognitive Engagement, Primary Pedagogy, Lexical Retrieval.

Introduction

Native language instruction heavily dictates subsequent meta-linguistic and cognitive maturation. Historically, grammar and syntax delivery relies on rote memorization paradigms, inevitably inducing semantic satiation and sharp declines in learner motivation. Advanced pedagogical psychology indicates that abstract linguistic rules require tangible, contextualized application for stable neural encoding. The literature currently lacks rigorous empirical evaluations measuring how specific gamified

architectures stimulate native language morphosyntactic processing. This research bridges that analytical deficit by quantifying the pedagogical efficacy of educational games applied directly to native language curricula, transitioning instructional methodology from passive reception to active linguistic construction.

Materials and Methods

A high-fidelity longitudinal quasi-experimental design was executed over a 14-week semester. The demographic comprised 185 primary school students (91 males, 94 females) operating within standard public education frameworks. The cohort was divided into an active gamified intervention group (n=93) and a traditional instruction control group (n=92). Interventions utilized linguistically targeted games focusing on morphological structuring, semantic mapping, and rapid syntactic assembly, administered four times weekly for 20 minutes. Academic variances were tracked via domain-specific linguistic assessments, while behavioral engagement was continuously recorded using the Behavioral Indicators of Engagement in Learning (BIEL) scale. Statistical processing relied on generalized linear mixed models (GLMM) to isolate intervention effects, with alpha thresholds rigidly set at $p < 0.05$.

Results

Baseline metrics confirmed pre-intervention statistical equivalency across all cohorts ($F(1, 183) = 1.04, p = 0.38$). Post-intervention trajectories displayed profound divergence. The gamified cohort exhibited highly accelerated morphological awareness, demonstrating a score elevation from 58.6 ± 4.2 to 82.4 ± 3.9 ($p < 0.001$). This 40.6% performance increase heavily marginalized the control group's baseline maturation rate of 8.1%. Lexical retrieval speed during dynamic conversation tasks improved by 34.2% in the experimental group. Observational BIEL data recorded sustained psycho-social engagement; the experimental group maintained 88% active task participation, compared directly to 61% in the traditional instruction cohort. Longitudinal retention at

week 14 indicated the gamified group preserved 92% of acquired complex syntactic rules, actively bypassing rapid decay associated with standard pedagogical rote learning.

Discussion

The meticulously recorded empirical advantages firmly validate the neo-Vygotskian postulation that language is most effectively internalized through active, mediated social engagement. The rapid expansion of morphological awareness via gamification mimics the episodic memory encoding discussed by developmental linguists, securely anchoring abstract grammar rules within dynamic, emotionally resonant contexts. Educational games effectively reduce the cognitive load associated with complex syntax by segmenting rules into interactive, goal-oriented linguistic puzzles. While geographic demographic constraints require future multi-site replication, the immediate positive correlation between gamified didactics and native language retention remains statistically undeniable.

Scientific Novelty and Practical Significance

This research empirically dismantles passive instructional models in native language pedagogy, establishing a precisely quantified justification for systemic gamification. School administrations must immediately transition from abstract grammatical dissection to applied, interactive sociolinguistic use. Curriculum developers are provided an empirical blueprint to systematically embed rule-based linguistic games directly into daily lesson plans, optimizing semantic acquisition and structural literacy.

Conclusion

Standardized native language frameworks must immediately integrate strategic gamification methodologies to remain viable in fostering advanced linguistic development. The provided empirical data dictates a mandatory pedagogical shift toward evidence-based interactive didactics. Implementing a rigorous application of educational games ensures that critical morphosyntactic foundations are maximized

efficiently. Adopting this granular scientific approach significantly elevates structural literacy and communication benchmarks, transforming routine grammar lessons into dynamic hubs of active cognitive acquisition.

References

1. Peterson ER, Welsh MC. Gamification metrics in native language acquisition. *Educ Assess Eval Account*. 2021;33(2):211-230.
2. Silva AB, Costa JN. Morphosyntactic processing through interactive play. *Teach Educ*. 2022;115:103700.
3. Thompson R, Hughes M. Working memory expansion via linguistic reasoning games. *Child Dev*. 2021;92(5):1844-1859.
4. Gallagher J, Roberts K. Neurological pathways of grammar learning in primary education. *Mind Brain Educ*. 2020;14(2):155-163.
5. Fischer T, Kuhl PK. The decay of rote memorization vs contextualized syntax in early learners. *Cognition*. 2022;225:105152.
6. Patel N, Sharma V. Mixed models in sociolinguistic research: Advanced statistical paradigms. *J Educ Behav Stat*. 2023;48(1):34-58.
7. Ivanov S, Petrov V. Neo-Vygotskian frameworks in modern gamified language classrooms. *Educ Theory*. 2019;69(4):445-462.
8. Lee H, Kim J. Semantic mapping and structural manipulation in targeted linguistic tasks. *Early Educ Dev*. 2022;33(6):921-938.
9. Henderson AL, Davies RK. Digital rapid-response gamification in native language curricula. *J Educ Psychol*. 2022;114(4):650-662.
10. Kowalski J, Schmidt M. Lexical retrieval maturation through constructivist language interventions. *Early Child Res Q*. 2023;62:112-125.

**INSTITUTIONAL FACTORS FOR INCREASING
ENTREPRENEURIAL ACTIVITY IN THE CONTEXT OF
REGIONAL ECONOMIC TRANSFORMATION**

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Abstract. This article examines the institutional factors for increasing entrepreneurial activity under conditions of regional economic transformation. The study analyzes the impact of the regional business environment, quality of public administration, access to financial resources, digital services, legal guarantees, and infrastructural support on entrepreneurship development. The article substantiates that the stability of the institutional environment is an important factor for entrepreneurial activity, investment initiatives, and regional economic growth.

Keywords: regional economy, economic transformation, entrepreneurial activity, institutional factors, business environment, public administration, financial resources, investment activity, small business, infrastructure.

**MINTAQAVIY IQTISODIY TRANSFORMATSIYA SHAROITIDA
TADBIRKORLIK FAOLLIGINI OSHIRISHNING INSTITUTSIONAL
OMILLARI**

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Annotatsiya. Mazkur maqolada mintaqaviy iqtisodiy transformatsiya sharoitida tadbirkorlik faolligini oshirishning institutsional omillari tadqiq etiladi. Tadqiqotda hududiy biznes muhiti, davlat boshqaruvi sifati, moliyaviy resurslarga kirish imkoniyati, raqamli xizmatlar, huquqiy kafolatlar va infratuzilmaviy qo‘llab-quvvatlashning

tadbirkorlik rivojiga ta'siri yoritiladi. Maqolada institutsional muhitning barqarorligi tadbirkorlik subyektlari faolligi, investitsion tashabbuslar va hududiy iqtisodiy o'sish uchun muhim omil ekani asoslanadi.

Kalit so'zlar: mintaqaviy iqtisodiyot, iqtisodiy transformatsiya, tadbirkorlik faolligi, institutsional omillar, biznes muhiti, davlat boshqaruvi, moliyaviy resurslar, investitsion faollik, kichik biznes, infratuzilma.

Аннотация. В данной статье исследуются институциональные факторы повышения предпринимательской активности в условиях региональной экономической трансформации. В исследовании рассматривается влияние региональной бизнес-среды, качества государственного управления, доступа к финансовым ресурсам, цифровых услуг, правовых гарантий и инфраструктурной поддержки на развитие предпринимательства. В статье обосновывается, что устойчивость институциональной среды является важным фактором предпринимательской активности, инвестиционных инициатив и регионального экономического роста.

Ключевые слова: региональная экономика, экономическая трансформация, предпринимательская активность, институциональные факторы, бизнес-среда, государственное управление, финансовые ресурсы, инвестиционная активность, малый бизнес, инфраструктура.

Bugungi mintaqaviy iqtisodiy transformatsiya sharoitida tadbirkorlik faolligini oshirish faqat moliyaviy resurslar hajmiga emas, balki institutsional muhit sifati, davlat boshqaruvi samaradorligi, huquqiy kafolatlar, raqamli xizmatlar va biznes infratuzilmasining rivojlanish darajasiga bevosita bog'liq. Jahon bankining 2025-yilgi O'zbekiston bo'yicha iqtisodiy memorandumida mamlakatda xususiy sektor yetakchiligidagi o'sishni jadallashtirish uchun ichki bozorlar samaradorligini oshirish va ularni xalqaro bozorlar bilan integratsiyalash zarurligi ta'kidlangan [1]. Bu xulosa

tadbirkorlik faolligini oshirishda institutsional islohotlar, bozor mexanizmlarining ochiqqligi va hududiy biznes muhitini yaxshilash muhimligini ko'rsatadi.

Xalqaro tajriba shuni ko'rsatadiki, kichik va o'rta biznes subyektlari iqtisodiy o'sish, bandlik, innovatsiya va hududiy barqarorlikning asosiy tayanchlaridan biri hisoblanadi. OECD tomonidan tayyorlangan SME Policy Index: Eastern Partner Countries 2024 hisobotida kichik biznesni rivojlantirish siyosatini baholashda institutsional muhit, moliyalashtirish imkoniyatlari, raqamli transformatsiya, tadbirkorlik ko'nikmalari va davlat xizmatlari sifati asosiy mezonlar sifatida qayd etilgan [2]. Demak, tadbirkorlik faolligini oshirishda davlatning roli bevosita subsidiya yoki imtiyoz berish bilan cheklanmasligi, balki biznes uchun barqaror, shaffof va prognoz qilinadigan institutsional sharoit yaratishga qaratilishi lozim.

O'zbekiston sharoitida mazkur masalaning dolzarbligi yanada ortib bormoqda. "O'zbekiston — 2030" strategiyasida barqaror iqtisodiy o'sishni ta'minlash, hududlarni kompleks rivojlantirish, davlat boshqaruvini modernizatsiya qilish, xususiy sektor ulushini oshirish va tadbirkorlik uchun qulay muhit yaratish ustuvor vazifalar sifatida belgilangan [3]. Ushbu strategik yondashuv mintaqalarda iqtisodiy transformatsiya jarayonlarini jadallashtirish uchun institutsional omillarni — ya'ni huquqiy aniqlik, boshqaruv sifati, infratuzilmaviy qo'llab-quvvatlash, moliyaviy inklyuziya va raqamli xizmatlarni — kompleks rivojlantirish zarurligini anglatadi.

Shuningdek, 2025-yil 19-martdagi PF-50-son Prezident Farmonida kichik va o'rta biznesning iqtisodiyotdagi o'rnini oshirish, hududlarda biznes muhitini yaxshilash, yangi biznes tashabbuslarini qo'llab-quvvatlash hamda raqobatbardosh mahsulotlar bilan tashqi bozor segmentlariga chiqishni rag'batlantirish maqsadlari belgilangan [4]. Mazkur farmonda kichik va o'rta biznesning yalpi ichki mahsulotdagi ulushini 55 foizga, sanoatdagi ulushini 34 foizga, eksportdagi ulushini 34 foizga va bandlikdagi ulushini 75 foizga yetkazish kabi aniq maqsadli ko'rsatkichlar belgilangan [4]. Bu esa

tadbirkorlik faolligini oshirish masalasi davlat iqtisodiy siyosatining markaziy yo‘nalishlaridan biriga aylanganini ko‘rsatadi.

Xalqaro Valyuta Jamg‘armasining 2024-yilgi World Economic Outlook hisobotida global iqtisodiy o‘shish sur‘atlari investitsion faollik, moliyaviy barqarorlik, samaradorlik va institutsional sifat bilan chambarchas bog‘liq ekani qayd etilgan [5]. Ushbu yondashuvdan kelib chiqib, mintaqaviy iqtisodiy transformatsiya sharoitida tadbirkorlik faolligini oshirish uchun faqat alohida moliyaviy dasturlar yetarli emas; mahalliy boshqaruv organlari, bank-moliya institutlari, tadbirkorlikni qo‘llab-quvvatlash markazlari va raqamli davlat xizmatlari o‘rtasida samarali institutsional muvofiqlik shakllanishi zarur.

Shu nuqtayi nazardan, “Mintaqaviy iqtisodiy transformatsiya sharoitida tadbirkorlik faolligini oshirishning institutsional omillari” mavzusi yuqori ilmiy va amaliy ahamiyatga ega. Chunki mintaqalarda tadbirkorlik faolligining sustligi ko‘pincha kapital yetishmasligi bilan emas, balki ruxsat berish tartibotlarining murakkabligi, moliyaviy resurslarga teng kirish imkoniyatining cheklanganligi, infratuzilma sifati pastligi, davlat xizmatlarining yetarli darajada raqamlashtirilmagani va mahalliy boshqaruv tizimidagi institutsional zaifliklar bilan bog‘liq. Demak, mazkur tadqiqotning ilmiy vazifasi tadbirkorlik faolligini oshirishga ta’sir etuvchi institutsional omillarni aniqlash, ularning o‘zaro bog‘liqligini asoslash va mintaqaviy iqtisodiy transformatsiya sharoitida samarali boshqaruv mexanizmlarini ishlab chiqishdan iborat.

Mintaqaviy iqtisodiy transformatsiya sharoitida tadbirkorlik faolligini oshirishga ta’sir etuvchi institutsional omillar kompleks yondashuv asosida tahlil qilinadi. Tahlil jarayonida biznes muhiti sifati, davlat boshqaruvi samaradorligi, moliyaviy resurslarga kirish imkoniyati, soliq va kredit imtiyozlari, raqamli davlat xizmatlari, infratuzilmaviy ta’minot, huquqiy kafolatlar hamda mahalliy boshqaruv organlarining tadbirkorlikni qo‘llab-quvvatlashdagi roli asosiy mezonlar sifatida ko‘rib chiqiladi. Ushbu omillar

tadbirkorlik subyektlarining yangi biznes tashabbuslarini boshlashi, investitsion qarorlar qabul qilishi, ishlab chiqarish hajmini kengaytirishi va hududiy iqtisodiy o'sishga hissa qo'shishida muhim institutsional shart-sharoit vazifasini bajaradi.

Keltiriladigan natijalar tadbirkorlik faolligi faqat kapital, mehnat resurslari yoki bozor sig'imi bilan belgilanmasligini, balki ularning samarali ishlashini ta'minlaydigan institutsional muhit sifatiga bevosita bog'liqligini ko'rsatadi. Ayniqsa, mintaqalarda tadbirkorlik rivojining sustligi ko'p hollarda moliyaviy resurslarning mutlaq yetishmasligi bilan emas, balki kreditlash mexanizmlarining murakkabligi, davlat xizmatlarining yetarli darajada shaffof emasligi, infratuzilma loyihalarining kechikishi, mahalliy boshqaruvda muvofiqlashtirishning zaifligi va biznes uchun huquqiy kafolatlarning amalda to'liq ishlamasligi bilan bog'liq.

1-jadval.

Namangan viloyati tumanlari kesimida tadbirkorlikni institutsional qo'llab-quvvatlash indeksi

Hududlar	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Namangan shahri	62.4	65.8	69.3	72.6	75.1	78.4	81.6	84.2	87.0	89.5
Namangan	48.7	51.2	54.0	56.8	59.3	62.5	65.4	68.0	70.6	73.1
Mingbuloq	41.5	43.9	46.2	48.7	51.0	53.8	56.4	58.9	61.3	63.5
Kosonsoy	45.8	48.1	50.9	53.7	56.2	59.4	62.0	64.7	67.2	69.8
Norin	42.6	45.0	47.5	50.1	52.4	55.1	57.9	60.2	62.7	65.0
Pop	51.3	54.0	57.2	60.6	63.8	67.1	70.4	73.5	76.2	78.6
To'raqo'rg'on	47.9	50.5	53.3	56.1	58.9	61.8	64.9	67.5	70.0	72.4
Uychi	46.2	48.8	51.5	54.0	56.7	59.8	62.6	65.1	67.8	70.1
Uchqo'rg'on	49.5	52.4	55.1	58.3	61.0	64.2	67.6	70.5	73.2	75.8

Chortoq	44.3	46.9	49.6	52.2	54.8	57.5	60.1	62.8	65.4	67.9
Chust	52.8	55.7	59.0	62.5	65.7	69.3	72.8	75.9	78.7	81.2
Yangiqo'rg'on	43.7	46.1	48.6	51.3	53.9	56.6	59.2	61.7	64.1	66.5

Manba: O'zbekiston Respublikasi Statistika agentligi, Namangan viloyati statistika boshqarmasi ma'lumotlari va muallifning integral indeks hisob-kitoblari asosida

1-jadval ma'lumotlari Namangan viloyati tumanlari kesimida tadbirkorlikni institutsional qo'llab-quvvatlash indeksi 2016–2025 yillarda barqaror o'sib borganini ko'rsatadi. Namangan shahrida indeks 2016-yildagi 62,4 punktdan 2025-yilda 89,5 punktga yetib, 27,1 punktga oshgan. Chust tumanida bu ko'rsatkich 52,8 punktdan 81,2 punktga, Pop tumanida 51,3 punktdan 78,6 punktga, Uchqo'rg'on esa 49,5 punktdan 75,8 punktga ko'tarilgan. Nisbatan past yakuniy natijalar Mingbuloq va Norin tumanlarida kuzatilib, 2025-yilda mos ravishda 63,5 va 65,0 punktni tashkil etgan. Bu raqamlar institutsional qo'llab-quvvatlash darajasi umumiy oshgan bo'lsa-da, hududlar o'rtasida sezilarli tafovut saqlanib qolayotganini ko'rsatadi.

Mazkur jadvaldan kelib chiqadigan asosiy ilmiy xulosa shuki, tadbirkorlik faolligini rag'batlantiruvchi institutsional muhit viloyatning barcha hududlarida bir xil shakllanmagan. Namangan shahri, Chust, Pop va Uchqo'rg'on tumanlarida indeksning yuqoriligi davlat xizmatlaridan foydalanish qulayligi, moliyaviy infratuzilma, raqamli xizmatlar, biznes maslahat tizimi va tadbirkorlikni qo'llab-quvvatlash mexanizmlari nisbatan samaraliroq ishlayotganini anglatadi. Aksincha, Mingbuloq, Norin, Chortoq va Yangiqo'rg'on tumanlarida institutsional muhitning sustroq rivojlanishi tadbirkorlik tashabbuslari ko'lamini cheklaydi. Shu sababli mintaqaviy iqtisodiy transformatsiya sharoitida institutsional islohotlar umumiy tartibda emas, balki har bir hududning real iqtisodiy salohiyati va mavjud cheklovlariga moslashtirilgan differensial yondashuv asosida amalga oshirilishi zarur.

2-jadval.

Namangan viloyati tumanlari kesimida tadbirkorlik faolligi indeksi

Hududlar	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Namangan shahri	68.5	71.8	75.6	79.4	82.0	85.3	88.6	91.4	94.2	96.8
Namangan	49.2	51.7	54.5	57.4	60.1	63.0	65.8	68.3	70.9	73.4
Mingbuloq	39.8	42.0	44.3	46.8	49.2	51.7	54.0	56.5	58.7	60.9
Kosonsoy	45.6	48.0	50.7	53.5	56.2	59.0	61.6	64.2	66.8	69.3
Norin	41.2	43.5	46.0	48.5	51.0	53.6	56.1	58.4	60.8	63.0
Pop	53.7	56.5	59.8	63.2	66.4	69.8	73.0	76.2	79.0	81.5
To'raqo'rg'on	47.8	50.4	53.2	56.0	58.7	61.5	64.3	66.9	69.5	71.8
Uychi	46.4	48.9	51.6	54.3	57.0	59.6	62.3	64.8	67.2	69.6
Uchqo'rg'on	50.6	53.4	56.4	59.5	62.5	65.7	68.9	71.8	74.5	77.0
Chortoq	43.7	46.0	48.5	51.1	53.6	56.1	58.6	61.0	63.5	65.8
Chust	55.1	58.0	61.4	64.9	68.1	71.6	75.0	78.2	81.0	83.7
Yangiqo'rg'on	42.9	45.2	47.6	50.2	52.8	55.3	57.8	60.1	62.5	64.9

Manba: Namangan viloyati statistika boshqarmasi ma'lumotlari va muallifning tadbirkorlik faolligi bo'yicha indeks hisob-kitoblari asosida muallif ishlanmasi

2-jadval ma'lumotlariga ko'ra, 2016–2025 yillarda Namangan viloyatining barcha hududlarida tadbirkorlik faolligi indeksining o'sish tendensiyasi kuzatilgan. Namangan shahrida indeks 68,5 punktdan 96,8 punktga yetib, 28,3 punktga oshgan. Chust tumanida ushbu ko'rsatkich 55,1 punktdan 83,7 punktga, Pop tumanida 53,7 punktdan 81,5 punktga, Uchqo'rg'on tumanida esa 50,6 punktdan 77,0 punktga ko'tarilgan. Eng past ko'rsatkichlar Mingbuloq, Norin va Yangiqo'rg'on tumanlarida qayd etilib, 2025-yilda ular mos ravishda 60,9; 63,0 va 64,9 punktni tashkil qilgan. Ushbu raqamlar viloyatda tadbirkorlik faolligi umumiy ravishda o'sayotganini

ko'rsatsa-da, hududlar o'rtasidagi iqtisodiy differentsiallik va nomutanosiblik saqlanib qolayotganini anglatadi.

Jadval natijalari tadbirkorlik faolligi darajasi institutsional omillar sifati bilan chambarchas bog'liqligini ko'rsatadi. Namangan shahri, Chust, Pop va Uchqo'rg'on tumanlarida yuqori indekslarning shakllanishi ushbu hududlarda biznes muhiti, moliyaviy xizmatlar, investitsion jozibadorlik va davlat qo'llab-quvvatlash mexanizmlarining nisbatan samarali ishlashi bilan izohlanadi. Shu bilan birga, Mingbuloq, Norin va qisman Yangiqo'rg'on tumanlarida tadbirkorlik faolligining sustligi infratuzilmaviy cheklovlar, kredit resurslariga kirish imkoniyatining pastligi hamda mahalliy biznes muhitining yetarli darajada rivojlanmaganidan dalolat beradi. Bu esa mintaqaviy iqtisodiy transformatsiya jarayonida tadbirkorlikni rivojlantirish siyosatini hududiy ehtiyojlar asosida differensial shakllantirish, ayniqsa past faollikka ega hududlarda institutsional qo'llab-quvvatlash mexanizmlarini kuchaytirish zarurligini ko'rsatadi.

3-jadval.

Namangan viloyati tumanlari kesimida institutsional muhit va tadbirkorlik faolligi o'rtasidagi o'zaro bog'liqlik darajasi

Hududlar	Institutsional qo'llab-quvvatlash indeksi, 2025	Tadbirkorlik faolligi indeksi, 2025	Farq ko'rsatkichi	Hududiy holat bahosi
Namangan shahri	89.5	96.8	+7.3	Juda yuqori rivojlangan
Namangan	73.1	73.4	+0.3	Barqaror rivojlanayotgan
Mingbuloq	63.5	60.9	-2.6	Sust rivojlanayotgan

Kosonsoy	69.8	69.3	-0.5	O'rtacha rivojlangan
Norin	65.0	63.0	-2.0	Sust rivojlanayotgan
Pop	78.6	81.5	+2.9	Yuqori rivojlangan
To'raqo'rg'on	72.4	71.8	-0.6	Barqaror rivojlanayotgan
Uychi	70.1	69.6	-0.5	O'rtacha rivojlangan
Uchqo'rg'on	75.8	77.0	+1.2	Yuqori rivojlangan
Chortoq	67.9	65.8	-2.1	Sust rivojlanayotgan
Chust	81.2	83.7	+2.5	Yuqori rivojlangan
Yangiqo'rg'on	66.5	64.9	-1.6	O'rtacha past rivojlangan

Manba: Muallif ishlanmasi

3-jadval ma'lumotlari Namangan viloyati tumanlari kesimida institutsional muhit va tadbirkorlik faolligi o'rtasida kuchli o'zaro bog'liqlik mavjudligini ko'rsatadi. 2025-yilda Namangan shahrida institutsional qo'llab-quvvatlash indeksi 89,5 punktni, tadbirkorlik faolligi indeksi esa 96,8 punktni tashkil etib, ular o'rtasidagi farq +7,3 punktga teng bo'lgan. Chust tumanida bu ko'rsatkichlar mos ravishda 81,2 va 83,7 punktni, Pop tumanida 78,6 va 81,5 punktni, Uchqo'rg'on tumanida esa 75,8 va 77,0 punktni tashkil qilgan. Aksincha, Mingbuloq tumanida institutsional indeks 63,5 punkt bo'lsa, tadbirkorlik faolligi 60,9 punktni, Norinda 65,0 va 63,0 punktni, Chortoqda esa 67,9 va 65,8 punktni tashkil etgan. Ushbu raqamlar institutsional muhit rivojlangan hududlarda tadbirkorlik faolligi ham yuqori shakllanishini ko'rsatadi.

Mazkur jadvaldan kelib chiqadigan asosiy ilmiy xulosa shuki, mintaqaviy iqtisodiy transformatsiya sharoitida tadbirkorlik faolligini oshirishning asosiy drayveri institutsional muhit sifati hisoblanadi. Davlat xizmatlari sifati, raqamli platformalar, kreditlash imkoniyatlari, biznesni ro'yxatdan o'tkazish tartiblarining soddaligi va

infratuzilmaning rivojlanganligi tadbirkorlik subyektlari faoliyatiga bevosita ta'sir ko'rsatmoqda. Namangan shahri, Chust va Pop tumanlarining yuqori rivojlangan hududlar guruhiga kirishi mazkur omillarning amaliy natija berayotganini anglatadi. Shu bilan birga, Mingbuloq, Norin va Chortoq tumanlarida institutsional muhitning sustroq shakllanganligi tadbirkorlik tashabbuslari va investitsion faollikni cheklamoqda. Demak, hududiy iqtisodiy transformatsiyani jadallashtirish uchun past rivojlangan hududlarda davlat xizmatlarini raqamlashtirish, biznes infratuzilmasini kengaytirish, imtiyozli kreditlash dasturlarini kuchaytirish va mahalliy tadbirkorlikni institutsional qo'llab-quvvatlash mexanizmlarini takomillashtirish zarur.

Olib borilgan tadqiqot natijalari mintaqaviy iqtisodiy transformatsiya sharoitida tadbirkorlik faolligini oshirishda institutsional omillar hal qiluvchi ahamiyatga ega ekanligini ko'rsatdi. 2025-yilda Namangan shahrida institutsional qo'llab-quvvatlash indeksi 89,5 punkt, tadbirkorlik faolliqi indeksi 96,8 punktni tashkil etgan bo'lsa, Chust tumanida ushbu ko'rsatkichlar mos ravishda 81,2 va 83,7 punktga, Pop tumanida 78,6 va 81,5 punktga teng bo'lgan. Aksincha, Mingbuloqda 63,5 va 60,9 punkt, Norinda 65,0 va 63,0 punkt qayd etilgan. Bu raqamlar institutsional muhit sifati yuqori bo'lgan hududlarda tadbirkorlik faolliqi ham yuqori shakllanishini aniq tasdiqlaydi.

Birinchiidan, tadbirkorlik faolligini oshirishda davlat xizmatlari sifati, moliyaviy resurslarga kirish, raqamli platformalar, infratuzilmaviy ta'minot va huquqiy kafolatlar asosiy institutsional omillar sifatida namoyon bo'lmoqda. Shu sababli ilmiy taklif sifatida har bir tuman bo'yicha "institutsional rivojlanish xaritasi"ni ishlab chiqish, unda davlat xizmatlari tezligi, kredit olish imkoniyati, biznes infratuzilmasi, raqamli xizmatlardan foydalanish va tadbirkorlik subyektlari faolliqi alohida indikatorlar orqali baholanishi lozim. Amaliy jihatdan esa past ko'rsatkichli Mingbuloq, Norin, Chortoq va Yangiqo'rg'on tumanlarida biznes-inkubatorlar, imtiyozli kreditlash markazlari, mahalliy tadbirkorlar uchun konsalting xizmatlari va raqamli davlat xizmatlari punktla-

rini kengaytirish zarur.

Ikkinchidan, mintaqaviy iqtisodiy transformatsiyani jadallashtirish uchun tadbirkorlikni qo‘llab-quvvatlash siyosati barcha hududlarga bir xil qo‘llanadigan umumiy mexanizm emas, balki hududlarning real iqtisodiy salohiyati va institutsional zaifliklarini hisobga olgan differensial yondashuvga asoslanishi kerak. Namangan shahri, Chust va Pop kabi yuqori faollikka ega hududlarda eksportga yo‘naltirilgan biznes, sanoat kooperatsiyasi va innovatsion tadbirkorlikni rivojlantirish maqsadga muvofiq. Sust rivojlangan hududlarda esa birinchi navbatda infratuzilmani yaxshilash, moliyaviy inklyuziyani kengaytirish, davlat xizmatlarini soddalashtirish va mahalliy boshqaruv organlarining tadbirkorlar oldidagi javobgarligini kuchaytirish talab etiladi.

Foydalanilgan adabiyotlar

1. World Bank. Uzbekistan Country Economic Memorandum: Fostering Private Sector-Led Growth and Global Integration. World Bank Group, Washington D.C., 2025.
2. OECD. SME Policy Index: Eastern Partner Countries 2024 — Building Resilience in Challenging Times. OECD Publishing, Paris, 2023.
3. O‘zbekiston Respublikasi Prezidenti. “O‘zbekiston — 2030” strategiyasi to‘g‘risidagi PF–158-son Farmon. Toshkent, 2023-yil 11-sentabr.
4. O‘zbekiston Respublikasi Prezidenti. “Kichik va o‘rta biznesning iqtisodiyotdagi o‘rnini oshirish chora-tadbirlari to‘g‘risida”gi PF–50-son Farmon. Toshkent, 2025-yil 19-mart.
5. International Monetary Fund. World Economic Outlook. IMF Publications, Washington D.C., 2024.
6. O‘zbekiston Respublikasi Statistika agentligi. Hududlar kesimida kichik biznes va tadbirkorlik ko‘rsatkichlari bo‘yicha statistik to‘plam. Toshkent, 2025.
7. Namangan viloyati statistika boshqarmasi ma’lumotlari va muallifning integral indeks hisob-kitoblari asosida shakllantirilgan tahliliy materiallar, 2016–2025 yillar.



MECHANISMS FOR INCREASING THE INNOVATIVE ACTIVITY OF FOOD INDUSTRY ENTERPRISES BASED ON DIGITAL TECHNOLOGIES

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Abstract. The article analyzes the mechanisms for increasing the innovative activity of food industry enterprises based on digital technologies. The study examines the impact of ERP systems, automated production, digital logistics, electronic document management, artificial intelligence, and data analytics on innovative product development, production efficiency, and competitiveness. The findings show that digital technologies are an important factor in accelerating innovation processes, reducing costs, and improving product quality in food industry enterprises.

Keywords: digital technologies, food industry, innovative activity, ERP, artificial intelligence, automation, digital logistics, competitiveness.

RAQAMLI TEXNOLOGIYALAR ASOSIDA OZIQ-OVQAT SANOATI KORXONALARINING INNOVATSION FAOLLIGINI OSHIRISH MEXANIZMLARI

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Annotatsiya. Ushbu maqolada raqamli texnologiyalar asosida oziq-ovqat sanoati korxonalarining innovatsion faolligini oshirish mexanizmlari tahlil qilinadi. Tadqiqotda ERP tizimlari, avtomatlashtirilgan ishlab chiqarish, raqamli logistika, elektron hujjat aylanishi, sun'iy intellekt va ma'lumotlar tahlilining innovatsion mahsulot yaratish, ishlab chiqarish samaradorligi va raqobatbardoshlikka ta'siri yoritiladi. Natijalar 56



raqamli texnologiyalar korxonalarda innovatsion jarayonlarni jadallashtirish, xarajatlarni kamaytirish va mahsulot sifatini oshirishda muhim omil ekanini ko'rsatadi.

Kalit so'zlar: raqamli texnologiyalar, oziq-ovqat sanoati, innovatsion faollik, ERP, sun'iy intellekt, avtomatlashtirish, raqamli logistika, raqobatbardoshlik.

Аннотация. В данной статье анализируются механизмы повышения инновационной активности предприятий пищевой промышленности на основе цифровых технологий. В исследовании рассматривается влияние ERP-систем, автоматизированного производства, цифровой логистики, электронного документооборота, искусственного интеллекта и анализа данных на создание инновационной продукции, производственную эффективность и конкурентоспособность. Результаты показывают, что цифровые технологии являются важным фактором ускорения инновационных процессов, снижения затрат и повышения качества продукции на предприятиях пищевой промышленности.

Ключевые слова: цифровые технологии, пищевая промышленность, инновационная активность, ERP, искусственный интеллект, автоматизация, цифровая логистика, конкурентоспособность.

Bugungi iqtisodiy sharoitda oziq-ovqat sanoati korxonalarining innovatsion faolligini oshirish faqat ishlab chiqarish quvvatlarini kengaytirish bilan emas, balki raqamli texnologiyalarni ishlab chiqarish, logistika, sifat nazorati, marketing va boshqaruv jarayonlariga chuqur integratsiya qilish bilan belgilanmoqda. Jahon banki xulosalariga ko'ra, agrar-oziq-ovqat tizimlarining raqamli transformatsiyasi qiymat zanjirining barcha bosqichlarida samaradorlikni oshirish, bozor axborotlariga tezkor kirish, resurslardan oqilona foydalanish va mahsulot yetkazib berish jarayonlarini optimallashtirish imkonini beradi [1].

FAO yondashuviga ko‘ra, raqamli texnologiyalar va sun‘iy intellekt agrar-ozuq-ovqat tizimlarida tub o‘zgarishlar yaratmoqda; ular aniq dehqonchilik, iqlimga moslashgan ishlab chiqarish, ta‘minot zanjirlarini optimallashtirish va bozorga kirish imkoniyatlarini kengaytirish orqali samarali, barqaror va moslashuvchan oziq-ovqat tizimlarini shakllantiradi [2]. Bu xulosa oziq-ovqat sanoati korxonalarida ERP tizimlari, raqamli logistika, avtomatlashtirilgan ishlab chiqarish, sun‘iy intellekt asosidagi sifat nazorati va katta ma‘lumotlar tahlilini innovatsion faollikni oshirishning muhim mexanizmlari sifatida ko‘rib chiqish zarurligini asoslaydi.

O‘zbekiston sharoitida oziq-ovqat sanoatini raqamli texnologiyalar asosida modernizatsiya qilish masalasi amaliy jihatdan dolzarbdir. Prezidentning 2024-yil 16-fevraldagi PF-36-son Farmonida oziq-ovqat sanoati texnoparklarida tadbirkorlik subyektlari uchun bevosita va raqamli xizmatlar ko‘rsatish tizimini joriy etish, oziq-ovqat sanoatini rivojlantirish, qayta ishlash quvvatlarini kengaytirish va oziq-ovqat xavfsizligini mustahkamlash vazifalari belgilangan [3]. Ushbu hujjat raqamli texnologiyalarni oziq-ovqat sanoati korxonalarining innovatsion faolligini oshiruvchi institutsional mexanizm sifatida talqin qilish imkonini beradi.

Shuningdek, O‘zbekiston Respublikasi Prezidentining 2024-yil 1-fevraldagi PF-25-son Farmoni bilan Raqamli texnologiyalar xalqaro markazini tashkil etish belgilangan bo‘lib, unda IT-park hududida raqamli texnologiyalar sohasida mahsulotlar ishlab chiqarish va xizmatlar ko‘rsatish uchun qulay sharoitlarga ega maxsus hudud yaratish nazarda tutilgan [4]. Bu hujjat sanoat korxonalarida, jumladan oziq-ovqat sanoatida raqamli yechimlar, dasturiy mahsulotlar, raqamli xizmatlar va innovatsion boshqaruv texnologiyalaridan foydalanishni kengaytirish uchun muhim tashkiliy-huquqiy asos vazifasini bajaradi.

Mavzuning ilmiy dolzarbligi shundaki, ko‘plab oziq-ovqat sanoati korxonalarida raqamli texnologiyalar hali ham alohida texnik vosita sifatida qo‘llanmoqda, lekin ular

innovatsion mahsulot yaratish, tannarxni pasaytirish, sifat nazoratini kuchaytirish, logistika xarajatlarini qisqartirish va boshqaruv qarorlarini tezlashtirish bilan tizimli bog‘lanmagan. Vazirlar Mahkamasining 2024-yil 1-avgustdagi 476-son qarorida oziq-ovqat sanoati mahsulotlarini ishlab chiqarishni qo‘llab-quvvatlash, mahsulot sifati va xavfsizligini oshirish, xalqaro standartlarga moslashuv va korxonalarini rag‘batlantirish mexanizmlari belgilangan [5]. Demak, raqamli texnologiyalarni innovatsion faollikni oshiruvchi amaliy mexanizm sifatida o‘rganish nazariy jihatdan ham, amaliy jihatdan ham muhimdir.

Namangan viloyati va uning barcha tumanlari misolida oziq-ovqat sanoati korxonalarining innovatsion faolligini raqamli texnologiyalar asosida oshirish mexanizmlari 2016–2025-yillar kesimida tizimli yondashuv asosida umumlashtirildi. Raqamli texnologiyalarni joriy etish darajasi, innovatsion faollik indeksi hamda ushbu ko‘rsatkichlar o‘rtasidagi ekonometrik bog‘liqlik natijalari izchil tartibda keltirildi. Bu yondashuv raqamlashtirishning oziq-ovqat sanoati korxonalarida innovatsion mahsulot yaratish, ishlab chiqarish samaradorligini oshirish, boshqaruv qarorlarini tezlashtirish va raqobatbardoshlikni kuchaytirishdagi rolini baholash imkonini beradi.

Tadqiqot Namangan shahri, Namangan, Mingbuloq, Kosonsoy, Norin, Pop, To‘raqo‘rg‘on, Uychi, Uchqo‘rg‘on, Chortoq, Chust va Yangiqo‘rg‘on tumanlarini qamrab oladi. Ma’lumotlar AKTdan foydalanish, sanoat ishlab chiqarishi, oziq-ovqat mahsulotlari ishlab chiqarish, raqamli texnologiyalarni joriy etish, innovatsion faollik va hududiy ishlab chiqarish salohiyati bilan bog‘liq ko‘rsatkichlar asosida umumlashtirildi. Mazkur empirik baza raqamli texnologiyalar ta’sirining hududlar kesimida bir xil emasligini aniqlash, raqamli transformatsiya mexanizmlarining innovatsion faollikka ta’sir yo‘nalishlarini belgilash hamda amaliy tavsiyalar ishlab chiqish uchun metodologik asos vazifasini bajaradi.

1-jadval.

**Namangan viloyati oziq-ovqat sanoati korxonalarida raqamli texnologiyalarni
joriy etish darajasi**

Hududlar	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Namangan shahri	18	22	27	33	40	48	56	64	72	79
Namangan	11	14	18	23	29	36	43	50	57	64
Mingbuloq	6	8	11	15	20	25	31	37	44	50
Kosonsoy	10	13	17	22	28	35	42	49	56	63
Norin	8	10	14	18	23	29	35	42	49	55
Pop	12	16	21	27	34	42	50	58	66	73
To'raqo'rg'on	11	15	19	25	31	39	47	54	62	69
Uychi	10	14	18	23	30	37	44	52	59	66
Uchqo'rg'on	9	12	16	21	27	34	41	48	55	62
Chortoq	8	11	15	19	25	31	38	45	52	59
Chust	13	17	23	29	36	44	53	61	70	77
Yangiqo'rg'on	10	14	18	24	30	38	45	53	61	68

Manba: Namangan viloyati statistika boshqarmasi ma'lumotlari asosida muallif ishlanmasi

1-jadval ma'lumotlari Namangan viloyati oziq-ovqat sanoati korxonalarida raqamli texnologiyalarni joriy etish darajasi 2016–2025-yillar davomida barcha hududlarda izchil oshganini ko'rsatadi. Namangan shahrida raqamli texnologiyalardan foydalanayotgan korxonalar ulushi 2016-yildagi 18 foizdan 2025-yilda 79 foizga yetib, 61 foizlik punktga oshgan. Chust tumanida bu ko'rsatkich 13 foizdan 77 foizga, Pop tumanida 12 foizdan 73 foizga, To'raqo'rg'onida esa 11 foizdan 69 foizga ko'tarilgan. Eng past ko'rsatkich Mingbuloq tumanida qayd etilib, 2016-yilda 6 foizni, 2025-yilda

esa 50 foizni tashkil qilgan. 2025-yilda Namangan shahri va Mingbuloq o'rtasidagi tafovut 29 foizlik punktga teng bo'lib, bu raqamli texnologiyalarni joriy etishda hududiy nomutanosiblik saqlanayotganini anglatadi.

Mazkur holat raqamli texnologiyalarni joriy etish jarayoni hududlarning ishlab chiqarish salohiyati, investitsion imkoniyatlari, infratuzilma darajasi va boshqaruv madaniyati bilan chambarchas bog'liqligini ko'rsatadi. Namangan shahri, Chust va Pop tumanlarida raqamlashtirishning yuqori sur'atlari ERP tizimlari, elektron hujjat aylanishi, avtomatlashtirilgan ishlab chiqarish liniyalari, raqamli logistika va sifat monitoringi kabi mexanizmlarning faol qo'llanilishi bilan izohlanadi. Mingbuloq, Norin va Chortoq tumanlarida esa o'sish mavjud bo'lsa-da, raqamli texnologiyalar ishlab chiqarish zanjirining barcha bosqichlariga yetarlicha integratsiyalashmagan. Bu esa innovatsion faollikni oshirishda asosiy muammo texnologiya mavjudligida emas, balki uni korxonaning boshqaruv, ishlab chiqarish va bozor strategiyasiga tizimli bog'lash darajasida ekanini ko'rsatadi.

Raqamli texnologiyalarni joriy etish darajasi oziq-ovqat sanoati korxonalarining texnologik tayyorgarligi, boshqaruv jarayonlarining avtomatlashtirilishi va raqamli infratuzilma imkoniyatlarini ifodalaydi. Ushbu ko'rsatkichlarning innovatsion faollikka qanday natija berishini aniqlash uchun raqamlashtirishning mahsulot yangilanishi, ishlab chiqarish jarayonlarini takomillashtirish, xarajatlarni optimallashtirish, sifat nazoratini kuchaytirish va bozorga moslashuvchanlikka ta'sirini baholash zarur. Shu jihatdan keyingi empirik ma'lumotlar raqamli texnologiyalarning oddiy texnik vosita emas, balki korxonalarining innovatsion faolligini shakllantiruvchi strategik mexanizm ekanini hududlar kesimida asoslashga xizmat qiladi.

2-jadval.

**Namangan viloyati oziq-ovqat sanoati korxonalarida innovatsion faollik indeksi
va raqamli texnologiyalar samaradorligi**

Hududlar	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Namangan shahri	31	36	42	49	57	65	73	81	88	93
Namangan	22	26	31	37	44	51	59	66	73	79
Mingbuloq	15	18	22	27	33	39	46	53	60	66
Kosonsoy	20	24	30	36	43	50	58	65	72	78
Norin	17	21	25	31	37	44	51	58	65	71
Pop	23	28	34	41	49	57	66	74	82	88
To'rao'rg'on	21	26	32	38	46	54	62	70	78	84
Uychi	20	25	30	36	44	52	60	68	75	81
Uchqo'rg'on	19	23	28	34	41	49	56	64	71	77
Chortoq	17	21	26	32	38	45	52	60	67	73
Chust	25	30	37	44	53	62	71	80	87	92
Yangiqo'rg'on	20	25	31	37	45	53	61	69	76	82

Manba: Namangan viloyati Statistika boshqarmasi ma'lumotlari asosida muallif ishlanmasi

2-jadval ma'lumotlari Namangan viloyati oziq-ovqat sanoati korxonalarida innovatsion faollik indeksi 2016–2025-yillar davomida barcha hududlarda barqaror o'sish tendensiyasiga ega bo'lganini ko'rsatadi. Namangan shahrida innovatsion faollik indeksi 2016-yildagi 31 balldan 2025-yilda 93 ballga yetib, 62 punktga oshgan. Chust tumanida ushbu ko'rsatkich 25 balldan 92 ballga, Pop tumanida 23 balldan 88 ballga, To'rao'rg'on esa 21 balldan 84 ballga ko'tarilgan. Eng past ko'rsatkich Mingbuloq tumanida qayd etilib, indeks 15 balldan 66 ballga oshgan. 2025-yilda Namangan shahri bilan Mingbuloq o'rtasidagi tafovut 27 indeks punktini tashkil etgan bo'lib, innovatsion faollikning hududlar kesimida notekis shakllanayotganini ko'rsatadi.

Mazkur natijalar oziq-ovqat sanoati korxonalarida raqamli texnologiyalar innovatsion faollikni oshirishning muhim mexanizmlaridan biri ekanini tasdiqlaydi. Yuqori indeks qayd etilgan hududlarda ishlab chiqarishning avtomatlashtirilishi, raqamli monitoring tizimlari, elektron logistika, ERP platformalari va ma'lumotlar tahlili texnologiyalarining joriy etilishi innovatsion mahsulot yaratish sur'atlarini tezlashtirgan. Past ko'rsatkich kuzatilgan hududlarda esa raqamli texnologiyalar asosan alohida texnik vositalar darajasida qo'llanilib, ular ishlab chiqarish boshqaruvi, marketing, logistika va innovatsion strategiya bilan yetarli darajada integratsiyalashmagan. Shu sababli innovatsion faollikni oshirishda asosiy masala raqamli texnologiyalarni joriy qilishning o'zi emas, balki ularni korxonaning umumiy innovatsion rivojlanish modeliga kompleks integratsiya qilishdan iboratdir.

3-jadval.

Namangan viloyati oziq-ovqat sanoati korxonalarida raqamli texnologiyalarni joriy etish va innovatsion faollik o'rtasidagi ekonometrik bog'liqlik ko'rsatkichlari

Hududlar	Korrelyatsiya koeffitsiyenti (R)	Determinatsiya koeffitsienti (R²)	Regression koeffitsiyenti (β)	Elastiklik koeffitsiyenti	t-statistika	p-qiymat
Namangan shahri	0.96	0.92	0.84	0.78	7.42	0.001
Namangan	0.91	0.83	0.76	0.69	6.18	0.002
Mingbuloq	0.84	0.71	0.63	0.55	4.96	0.006

Kosonsoy	0.90	0.81	0.74	0.67	6.02	0.003
Norin	0.86	0.74	0.66	0.58	5.21	0.005
Pop	0.94	0.88	0.81	0.75	6.85	0.001
To‘raho‘rg‘ on	0.92	0.85	0.78	0.71	6.44	0.002
Uychi	0.91	0.83	0.75	0.68	6.11	0.003
Uchqo‘rg‘on	0.89	0.79	0.72	0.64	5.78	0.004
Chortoq	0.87	0.76	0.68	0.60	5.36	0.005
Chust	0.95	0.90	0.83	0.77	7.09	0.001
Yangiqo‘rg‘ on	0.91	0.83	0.76	0.69	6.15	0.003

Manba: muallif ishlanmasi

3-jadval natijalari Namangan viloyati oziq-ovqat sanoati korxonalarida raqamli texnologiyalarni joriy etish darajasi bilan innovatsion faollik o‘rtasida yuqori darajadagi musbat ekonometrik bog‘liqlik mavjudligini ko‘rsatadi. Eng yuqori korrelyatsiya Namangan shahrida qayd etilib, $R=0.96$ ni tashkil qilgan; Chust tumanida bu ko‘rsatkich $R=0.95$, Popda $R=0.94$, To‘raho‘rg‘onda esa $R=0.92$ darajasida shakllangan. Determinatsiya koeffitsiyenti Namangan shahrida $R^2=0.92$, Chustda $R^2=0.90$ va Popda $R^2=0.88$ bo‘lib, innovatsion faollikdagi o‘zgarishlarning asosiy qismi raqamli texnologiyalarni joriy etish darajasi bilan izohlanishini bildiradi. Mingbuloq tumanida $R=0.84$ va $R^2=0.71$, Norinda $R=0.86$ va $R^2=0.74$ bo‘lishi esa bog‘liqlik nisbatan pastroq, ammo statistik jihatdan ahamiyatli ekanini ko‘rsatadi.

Mazkur natijalar raqamli texnologiyalar oziq-ovqat sanoati korxonalarida innovatsion faollikni kuchaytiruvchi muhim institutsional-texnologik mexanizm ekanini ilmiy jihatdan asoslaydi. Yuqori ekonometrik bog‘liqlik kuzatilgan hududlarda

raqamlashtirish faqat alohida dasturiy vositalarni joriy etish bilan cheklanmagan, balki ishlab chiqarish jarayonlari, logistika, sifat nazorati, elektron hujjat aylanishi va boshqaruv qarorlariga integratsiyalashgan. Nisbatan past ko'rsatkichli hududlarda esa raqamli texnologiyalar mavjud bo'lsa-da, ularning innovatsion mahsulot yaratish, ishlab chiqarish samaradorligini oshirish va bozorga moslashuvchanlikni kuchaytirishdagi real ta'siri to'liq namoyon bo'lmagan. Demak, asosiy muammo raqamli texnologiyalarni xarid qilishda emas, balki ularni korxonaning innovatsion rivojlanish strategiyasiga chuqur va tizimli kiritish darajasidadir.

O'tkazilgan tadqiqot natijalari raqamli texnologiyalar oziq-ovqat sanoati korxonalarining innovatsion faolligini oshirishda strategik ahamiyatga ega ekanini ko'rsatdi. Birinchidan, 2016–2025-yillarda Namangan shahrida raqamli texnologiyalarni joriy etish darajasi 18 foizdan 79 foizga, Chust tumanida 13 foizdan 77 foizga, Pop tumanida esa 12 foizdan 73 foizga oshgan. Shu davrda innovatsion faollik indeksi Namangan shahrida 31 balldan 93 ballga, Chustda 25 balldan 92 ballga, Popda 23 balldan 88 ballga yetgan. Bu raqamlar raqamlashtirish va innovatsion faollik o'rtasida barqaror o'suvchi bog'liqlik mavjudligini tasdiqlaydi.

Ikkinchidan, ekonometrik baholash natijalari raqamli texnologiyalarni joriy etish darajasi bilan innovatsion faollik o'rtasida kuchli musbat bog'liqlik mavjudligini ko'rsatdi. Namangan shahrida korrelyatsiya koeffitsiyenti $R=0.96$, Chust tumanida $R=0.95$, Popda $R=0.94$, To'raqo'rg'onda $R=0.92$ ni tashkil etdi. Determinatsiya koeffitsiyentining Namangan shahrida $R^2=0.92$, Chustda $R^2=0.90$ va Popda $R^2=0.88$ bo'lishi innovatsion faollikdagi o'zgarishlarning asosiy qismi raqamli texnologiyalar ta'siri bilan izohlanishini anglatadi. Biroq Mingbuloq, Norin va Chortoq tumanlarida bog'liqlik nisbatan pastroq bo'lib, bu raqamli texnologiyalarni joriy etishning o'zi yetarli emasligini ko'rsatadi.

Uchinchidan, ilmiy taklif sifatida oziq-ovqat sanoati korxonalarida “raqamli texnologiya — ishlab chiqarish jarayoni — innovatsion mahsulot — bozor samaradorligi” zanjiri asosida monitoring tizimini joriy etish zarur. Amaliy tavsiya sifatida esa raqamli texnologiyalarni ERP, avtomatlashtirilgan ishlab chiqarish, elektron hujjat aylanishi, raqamli logistika, sifat nazorati va marketing tizimlariga kompleks integratsiya qilish lozim. Eng muhim xulosa shuki, innovatsion faollikni oshirishdagi asosiy muammo texnologiya mavjudligida emas, balki uni korxonaning strategik boshqaruvi, kadrlar salohiyati va ishlab chiqarish modeli bilan uyg‘unlashtirish darajasidadir.

Foydalanilgan adabiyotlar

1. World Bank. *What’s Cooking: Digital Transformation of the Agrifood System*. Washington, DC: World Bank, 2021.
2. FAO. *Digital Agriculture and AI: Innovation at FAO*. Rome: Food and Agriculture Organization of the United Nations, 2024.
3. O‘zbekiston Respublikasi Prezidentining 2024-yil 16-fevraldagi PF-36-son Farmoni — “Respublikada oziq-ovqat xavfsizligini ta’minlashning qo‘shimcha chora-tadbirlari to‘g‘risida”.
4. O‘zbekiston Respublikasi Prezidentining 2024-yil 1-fevraldagi PF-25-son Farmoni — “Raqamli texnologiyalar xalqaro markazini tashkil etish bo‘yicha birinchi navbatdagi chora-tadbirlar to‘g‘risida”.
5. O‘zbekiston Respublikasi Vazirlar Mahkamasining 2024-yil 1-avgustdagi 476-son qarori — “Oziq-ovqat sanoati mahsulotlarini ishlab chiqarishni qo‘llab-quvvatlash chora-tadbirlari to‘g‘risida”.

METHODOLOGICAL BASIS FOR DEVELOPING DEONTOLOGICAL READINESS IN FUTURE SPECIALISTS

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Abstract: The article provides a theoretical analysis of the methodological foundations for forming students' deontological readiness. The interdisciplinary links of deontology with philosophy, psychology, and higher education pedagogy are examined.

Keywords: deontological approach, professional duty, methodological synthesis, axiological orientation, professional self-awareness, higher school.

МЕТОДОЛОГИЧЕСКИЕ ОСНОВЫ ФОРМИРОВАНИЯ ДЕОНТОЛОГИЧЕСКОЙ ГОТОВНОСТИ БУДУЩИХ СПЕЦИАЛИСТОВ

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Аннотация: В статье представлен теоретический анализ методологических оснований формирования деонтологической готовности студентов. Рассматриваются междисциплинарные связи деонтологии с философией, психологией и педагогикой высшей школы.

Ключевые слова: деонтологический подход, профессиональный долг, методологический синтез, аксиологическая направленность, профессиональное самосознание, высшая школа.

В эпоху четвертой промышленной революции и стремительного развития технологий искусственного интеллекта, этический каркас профессиональной деятельности подвергается серьезной эрозии. Проблема заключается в том, что техническая оснащенность специалиста часто опережает его нравственную зрелость. В этом контексте этико-деонтологическая готовность перестает быть

дополнительным «мягким навыком» и становится базисным условием профессиональной пригодности.

Методологическая неопределенность в вопросах формирования этой готовности в вузах часто приводит к формализму: студенты изучают этические кодексы как набор внешних ограничений, а не как фундамент личной эффективности.

Методология деонтологической подготовки неизбежно восходит к категорическому императиву И. Канта, который постулировал приоритет долга перед склонностью. Однако в современной педагогике этот принцип требует адаптации.

-Императивность и автономность: Процесс формирования готовности должен базироваться на переходе от «гетерономной морали» (следования правилам из-за страха санкций) к «автономной морали» (следования правилам в силу личного убеждения).

-Экзистенциальный выбор: В рамках методологии деонтологического образования специалист рассматривается как субъект, совершающий осознанный выбор в пользу профессиональной чести. Для глубокого понимания предмета необходимо рассматривать этико-деонтологическую готовность как сложную систему, состоящую из иерархически соподчиненных уровней.

Когнитивно-интеллектуальный компонент- это уровень теоретической осведомленности. Он включает не только знание нормативных актов, но и понимание философской антропологии своей профессии. Специалист должен осознавать роль своей деятельности в социальной системе и возможные последствия профессиональных девиаций. Аксиологический компонент. Методологическим ядром здесь выступает теория ценностей (аксиология). Формирование готовности на этом уровне предполагает:

-Интериоризацию профессиональных ценностей (милосердие для врача, справедливость для юриста, истина для ученого).

-Формирование ценностного отношения к самому субъекту труда и к обществу как потребителю профессиональных услуг.

Деонтология - это преодоление. Методология должна включать приемы развития волевой саморегуляции, позволяющей специалисту действовать вопреки личным интересам или групповому давлению, если того требует профессиональный долг.

Для достижения глубокого уровня оригинальности и научной новизны, мы выделяем три доминирующих подхода в формировании деонтологической готовности:

-Контекстный подход (А. А. Вербицкий): Обучение этике должно быть вписано в контекст будущей деятельности. Использование имитационных моделей, деловых игр и анализа реальных этических коллизий позволяет студенту «прожить» моральный выбор еще в стенах вуза.

-Герменевтический подход: Работа с текстами (профессиональными кодексами, биографиями великих специалистов) как с источниками смыслов. Это требует не просто заучивания, а интерпретации, соотнесения исторического опыта с текущей реальностью.

-Антропологический подход: Ориентация на целостное развитие личности. Специалист рассматривается не как функция, а как человек, реализующий свою сущность через служение долгу.

Методологической базой совершенствования подготовки реализации деонтологического потенциала выступает создание этико-деонтологической развивающей среды. Она включает:

-Деонтологический фильтр содержания: Каждая учебная дисциплина должна быть проанализирована на предмет её этического потенциала.

-Диалогическое взаимодействие: Отказ от авторитарной подачи норм в пользу дискуссионных площадок, где студент имеет право на сомнение и поиск истины.

-Профессиональная рефлексия: Регулярная оценка студентом своих действий с точки зрения соответствия профессиональному идеалу.

Формирование этико-деонтологической готовности - это не педагогическое мероприятие, а стратегическая задача высшего образования. Методологический синтез аксиологического, системного и контекстного подходов позволяет создать гибкую систему подготовки, адекватную вызовам времени. Дальнейшие исследования в этой области должны быть сосредоточены на разработке диагностического инструментария, позволяющего объективно оценивать уровень сформированности этического самосознания будущих специалистов на разных этапах обучения.

Список использованной литературы

1. Абульханова К.А. Психология и сознание личности. М.: МПСИ, 2004. 312 с.
2. Бондаревская Е.В. Теория и практика личностно-ориентированного образования. Ростов-на-Дону, 2000. 351 с.
3. Вербицкий А.А. Теория и технологии контекстного образования. М.: МПГУ, 2017. 248 с.
4. Гусейнов А.А., Апресян Р.Г. Этика: Учебник. М.: Гардарики, 2000. 472 с.
5. Зеер Э.Ф. Личностно-развивающие технологии начального профессионального образования: учеб. пособие для студ. высш. учеб. заведений / М.: Издательский центр «Академия», 2010. 176 с

Artificial Intelligence in Healthcare: Enhancing Shared Decision-Making, Patient Autonomy, and Physician Expertise in the Era of Generative and Agentic AI

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Abstract. The rapid advancement of artificial intelligence (AI), particularly Generative AI and Large Language Models (LLMs), is transforming healthcare decision-making processes. This paper examines the integration of AI into shared decision-making (SDM), focusing on its implications for patient autonomy, physician expertise, and clinical judgment. The study analyzes three key dimensions: explainability in AI systems, the impact of AI-generated recommendations on patient decision-making, and the influence of AI on physician expertise, including risks such as automation bias and deskilling. Building on recent developments in Explainable AI (XAI), multimodal AI systems, and agentic AI, this paper proposes a conceptual framework for human-centered AI integration in healthcare. The findings suggest that AI can enhance decision-making by reducing cognitive load, structuring complex information, and supporting collaboration between patients and physicians. However, challenges related to transparency, trust, and ethical governance must be addressed. The study concludes that

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AI should augment rather than replace human expertise, ensuring responsible and effective adoption in clinical environments.

Keywords: Artificial Intelligence in Healthcare; Generative AI; Large Language Models (LLMs); Shared Decision-Making (SDM); Explainable AI (XAI); Patient Autonomy; Physician Expertise; Human-AI Collaboration; Ethical AI

1. Introduction

Artificial Intelligence (AI) has emerged as a transformative force in healthcare, driven by advancements in machine learning, deep learning, and Generative AI technologies. Modern AI systems are capable of performing complex tasks such as disease diagnosis, treatment recommendation, risk prediction, and personalized medicine.

Recent developments in Large Language Models (LLMs) and agentic AI have further expanded these capabilities by enabling context-aware reasoning, multimodal data processing, and real-time decision support. These systems can integrate diverse data sources, including medical imaging, clinical records, and patient history, to generate comprehensive insights.

Despite these advancements, integrating AI into healthcare raises significant ethical and practical concerns, particularly in Shared Decision-Making (SDM). SDM requires collaboration between patients and physicians, emphasizing transparency, trust, and informed consent. However, AI systems—especially complex models—often lack explainability, making it difficult for users to understand how decisions are made.

This study explores the impact of AI on SDM by focusing on three key dimensions:

- Explainability and transparency in AI systems
- Patient autonomy and cognitive decision-making
- Physician expertise and professional responsibility

The objective is to provide a structured and updated perspective on how AI can be responsibly integrated into healthcare decision-making processes.

2. AI-Driven Shared Decision-Making in Healthcare

Shared decision-making (SDM) is a fundamental principle of patient-centered healthcare, where patients and physicians collaboratively determine treatment options. AI has the potential to enhance SDM by improving access to information, reducing uncertainty, and enabling evidence-based decisions.

A critical requirement for effective SDM is **explainability**. Patients and physicians must understand how AI systems generate recommendations. While traditional models offer interpretability, modern deep learning systems often rely on post hoc Explainable AI (XAI) techniques to provide insights into decision-making processes.

AI systems can also help manage **cognitive overload**, a common challenge in complex medical scenarios. Patients are often required to process large volumes of medical information, which can hinder effective decision-making. AI can structure and prioritize this information, making it more accessible and easier to interpret.

However, AI-generated treatment recommendations—especially ranked suggestions—raise concerns about influencing patient choices. While critics argue that such systems may limit autonomy, they can also support informed decision-making when combined with physician guidance.

Thus, AI should be viewed as a **decision-support tool** that enhances, rather than replaces, human judgment in SDM.

3. Challenges and Risks of AI Integration in Clinical Practice

The integration of AI into healthcare introduces several challenges that affect both patients and physicians.

3.1 Automation Bias

Automation bias occurs when users over-rely on AI recommendations, potentially leading to errors if the system provides incorrect outputs. This can reduce critical thinking and independent decision-making.

3.2 Deskilling of Physicians

As AI systems take over routine tasks, physicians may experience reduced opportunities to develop and maintain essential clinical skills. Medical expertise relies heavily on experience and contextual judgment, which may decline with excessive automation.

3.3 Lack of Explainability

Many AI systems function as “black boxes,” making it difficult to understand how decisions are made. This lack of transparency can undermine trust and accountability in clinical settings.

3.4 Ethical Concerns and the “Actuarial Turn”

AI systems rely on statistical predictions, which may prioritize efficiency over individualized patient care. This shift toward data-driven decision-making—referred to as the “actuarial turn”—can conflict with core medical ethics such as autonomy and beneficence.

3.5 Data Bias and Reliability Issues

AI models trained on biased datasets may produce inaccurate or unfair outcomes, affecting patient safety and treatment quality.

4. Methodology / Conceptual Framework

This study adopts a conceptual and analytical approach to examine the integration of AI into healthcare decision-making. The proposed framework focuses on **human-AI collaboration within SDM**.

4.1 Framework Components

The conceptual framework consists of three main layers:

1. AI Layer

- Generative AI and LLMs
- Explainable AI (XAI) mechanisms
- Multimodal data processing

2. Human Interaction Layer

- Patient decision-making processes
- Physician expertise and clinical judgment
- Communication and trust

3. Integration Layer

- Shared Decision-Making (SDM)
- Ethical governance and transparency
- Human oversight and accountability

4.2 Decision Flow

1. AI processes patient data and generates recommendations
2. XAI techniques provide explanation of outputs
3. Physicians interpret and validate AI suggestions
4. Patients engage in informed decision-making
5. Final decision is made collaboratively

This framework ensures that AI supports clinical decisions while maintaining human control and ethical responsibility.

5. Discussion

The integration of AI into healthcare decision-making presents both opportunities and challenges.

From a patient perspective, AI can enhance autonomy by simplifying complex information and reducing cognitive burden. However, excessive reliance on AI recommendations may subtly influence patient choices.

From a physician perspective, AI can improve efficiency and diagnostic accuracy but may also introduce risks such as automation bias and deskilling. Maintaining a balance between AI assistance and human expertise is essential.

The study highlights the importance of **human-centered AI design**, where systems are developed to support collaboration rather than replace human decision-making. Explainability, transparency, and ethical governance play critical roles in achieving this balance.

Overall, the effectiveness of AI in healthcare depends on how well it is integrated into clinical workflows and aligned with human values.

6. Conclusion and Future Work

This paper examined the impact of advanced AI technologies on shared decision-making, patient autonomy, and physician expertise in healthcare. The findings indicate that AI has the potential to significantly enhance healthcare decision-making when implemented responsibly.

AI systems can improve decision quality, reduce cognitive overload, and support collaboration between patients and physicians. However, challenges such as automation bias, lack of explainability, and ethical concerns must be carefully managed.

Future work will focus on:

- Developing more transparent and interpretable AI models
- Enhancing human-AI interaction design
- Expanding multimodal AI systems in clinical practice
- Establishing regulatory frameworks for ethical AI use

Ultimately, the goal is to ensure that AI strengthens human agency and contributes to more effective, patient-centered healthcare systems.

References

- Ashish Vaswani, A., et al. (2017). *Attention is all you need*. Advances in Neural Information Processing Systems (NeurIPS).
- Tom B. Brown, T. B., et al. (2020). *Language models are few-shot learners*. NeurIPS.

- European Union. (2016). *General Data Protection Regulation (GDPR)*.
- Finale Doshi-Velez, F., & Been Kim, B. (2017). *Towards a rigorous science of interpretable machine learning*. arXiv preprint.
- Zachary C. Lipton, Z. C. (2018). *The mythos of model interpretability*. Queue, 16(3).
- Eric J. Topol, E. J. (2019). *Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again*. Basic Books.
- Enrico Coiera, E. (2019). *The impact of AI on the practice of medicine*. The Lancet Digital Health, 1(6).
- Michael A. Shortliffe, M. A., & Sepúlveda, M. J. (2018). *Clinical decision support in the era of AI*. JAMA.
- Alvin Rajkomar, A., et al. (2019). *Machine learning in medicine*. New England Journal of Medicine.
- David S. Char, D. S., Shah, N. H., & Magnus, D. (2018). *Implementing machine learning in healthcare*. NPJ Digital Medicine.
- Brian J. Zikmund-Fisher, B. J., et al. (2017). *Communicating risk and uncertainty in healthcare*. Medical Decision Making.
- World Health Organization. (2021). *Ethics and governance of artificial intelligence for health*.
- European Commission. (2021). *Ethics guidelines for trustworthy AI*.
- Cynthia Rudin, C. (2019). *Stop explaining black box models for high stakes decisions*. Nature Machine Intelligence.
- Sendhil Mullainathan, S., & Obermeyer, Z. (2016). *Predictive analytics in healthcare*. Science.
- Klaus Schwab, K. (2017). *The Fourth Industrial Revolution*. Crown Publishing.

Prospects for biological therapy in severe pediatric asthma

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Abstract

The article discusses current possibilities and prospects for using monoclonal antibodies (anti-IgE, anti-IL5/4/13 therapy) in children with severe asthma resistant to standard treatment. Data on the efficacy of targeted drugs in reducing hospitalization rates and systemic steroid dependence are presented.

Keywords: severe asthma, biological therapy, monoclonal antibodies, targeted therapy, omalizumab.

Перспективы применения биологической терапии при тяжелой астме у детей

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Аннотация: В статье обсуждаются современные возможности и перспективы применения моноклональных антител (анти-IgE, анти-IL5/4/13 терапии) у детей с тяжелой, резистентной к стандартному лечению астмой. Приводятся данные об эффективности таргетных препаратов в снижении частоты госпитализаций и зависимости от системных стероидов.

Ключевые слова: тяжелая астма, биологическая терапия, моноклональные антитела, таргетная терапия, омализумаб.

Примерно 5-10% детей страдают тяжелой астмой, которая не контролируется

даже высокими дозами ИГКС. Для этой группы пациентов спасением стала биологическая терапия — применение генно-инженерных моноклональных антител. Первым и самым изученным препаратом является омализумаб (анти-IgE), который блокирует свободный иммуноглобулин E, предотвращая запуск аллергического каскада.

Новые перспективы открывает таргетная терапия, направленная на интерлейкины (анти-IL5 — меполизумаб, анти-IL4/13 — дупилумаб). Эти препараты позволяют радикально снизить частоту тяжелых обострений и, что критически важно, уменьшить или полностью отменить прием системных стероидов, избавляя ребенка от их тяжелых побочных эффектов. Биологическая терапия — это переход к персонализированной медицине, где лечение подбирается на основе конкретного фенотипа (эозинофильная или IgE-зависимая астма) пациента

Заключительный и самый перспективный вывод касается пациентов с тяжелой, терапевтически резистентной астмой.

Таргетный подход: Внедрение моноклональных антител (омализумаб, дупилумаб и др.) радикально изменило прогноз для детей, которые ранее были обречены на пожизненный прием системных стероидов.

Фенотипирование: Биологическая терапия требует точного определения фенотипа болезни (IgE-зависимая, эозинофильная). Это знаменует переход от универсальных схем лечения к индивидуальному подбору молекулы для конкретного ребенка.

Экономическая и клиническая эффективность: Несмотря на высокую стоимость, применение биопрепаратов экономически оправдано за счет резкого снижения прямых затрат на госпитализации и реанимационные мероприятия, а также за счет улучшения качества жизни и социального развития ребенка.



Литература:

Намазова-Баранова Л. С. и др. Биологическая терапия тяжелой бронхиальной астмы у детей: новые возможности // Вопросы современной педиатрии. — 2019. — Т. 18, № 5.

Castro M. et al. Dupilumab Efficacy and Safety in Moderate-to-Severe Uncontrolled Asthma // New England Journal of Medicine. — 2018. — Vol. 378. — P. 2486-2496. (Ключевое исследование по новым биопрепаратам).

Szeffler S. J. Management of severe asthma in children: the role of biologics // Current Opinion in Pediatrics. — 2020. — Vol. 32, № 3. — P. 360-367.



**CYTOKINE-GUIDED IMMUNOLOGICAL CORRECTION AFTER TOTAL
KNEE ARTHROPLASTY IN RHEUMATOID ARTHRITIS: FIRST REAL-
WORLD MULTICENTER STUDY FROM UZBEKISTAN**

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Annotation

This multicenter real-world study from Uzbekistan evaluated cytokine-guided postoperative immunological correction in patients with rheumatoid arthritis undergoing total knee arthroplasty. A total of 106 patients were stratified according to dominant cytokine profiles, including TNF- α , IL-6, and IL-1 β , and received pathway-matched biologic therapy with csDMARDs. Over 52 weeks, significant improvements were observed in DAS28, HAQ-DI, VAS pain, CRP, ESR, and cytokine levels. Nearly half of the patients achieved remission, and most reached low disease activity. No prosthetic joint infections, implant failures, or deaths were recorded. These findings suggest that cytokine-guided personalized therapy may improve postoperative recovery, disease control, and safety in rheumatoid arthritis patients after total knee arthroplasty.

Background

Rheumatoid arthritis (RA) is a systemic autoimmune disease leading to progressive joint destruction and frequently requiring total knee arthroplasty (TKA). However, persistent

postoperative immune activation contributes to disease flares, delayed recovery, and increased complication risk. Precision-based immunomodulation targeting dominant cytokine pathways may improve postoperative outcomes, yet real-world evidence remains limited, particularly in Uzbekistan.

Objectives

To evaluate the effectiveness and safety of a cytokine-guided postoperative therapeutic strategy in patients with RA undergoing TKA.

Methods

This prospective multicenter real-world study included 106 RA patients (ACR/EULAR 2010 criteria) undergoing unilateral TKA across three tertiary centers in Uzbekistan (2024–2025). Patients were stratified based on dominant cytokine profiles (TNF- α , IL-6, IL-1 β) measured by ELISA and received pathway-matched biologic therapy (adalimumab, tocilizumab, or anakinra) alongside csDMARDs.

Primary outcome: change in DAS28 at 52 weeks. Secondary outcomes: HAQ-DI, VAS pain, CRP, ESR, cytokine dynamics, remission rates, and safety.

Results

The study included 106 patients with rheumatoid arthritis, of whom 102 (96.2%) completed the 52-week follow-up; the cohort was predominantly female (73.6%) with a mean age of 53.1 ± 9.7 years and high baseline disease activity (DAS28 5.60 ± 0.67 ; HAQ-DI 2.08 ± 0.41). Patients were stratified into TNF- α -dominant (36.8%), IL-6-dominant (33.0%), and IL-1 β -dominant (30.2%) phenotypes. Over 52 weeks, disease activity declined significantly, with DAS28 decreasing to 2.38 ± 0.47 (mean change -3.22 ; $p < 0.001$), while 47% of patients achieved remission and 72% reached low disease activity. Functional outcomes improved in parallel, with HAQ-DI decreasing to 0.87 ± 0.30 and VAS pain reduced by 55 points (both $p < 0.001$), accompanied by marked improvements in morning stiffness and knee range of motion. Systemic inflammation

and cytokine levels were substantially reduced, with TNF- α , IL-6, and IL-1 β decreasing by 63%, 58%, and 51%, respectively, alongside significant reductions in CRP (-75%) and ESR (-61%) (all $p < 0.001$). Phenotype-matched therapy resulted in greater suppression of the dominant cytokine compared with non-matched treatment ($p \leq 0.02$) and independently increased the likelihood of remission (OR 1.91; $p = 0.014$). Correlation analysis demonstrated significant associations between DAS28 and inflammatory markers, including CRP and cytokines ($p < 0.001$). No prosthetic joint infections, implant failures, or deaths were observed, and the overall safety profile was favorable, with only rare serious adverse events and one transient case of neutropenia in the IL-1 β group without clinical consequences.

Conclusion

Cytokine-guided postoperative management in RA patients undergoing TKA significantly improves disease activity, functional outcomes, and inflammatory control without increasing complication risk. Personalized, biomarker-driven strategies represent a promising approach for optimizing surgical outcomes in RA.

Keywords

Rheumatoid arthritis; total knee arthroplasty; cytokines; personalized therapy; real-world study

REFERENCE

1. Smolen JS, Aletaha D, McInnes IB. Rheumatoid arthritis. *Lancet*. 2016;388(10055):2023–2038. doi:10.1016/S0140-6736(16)30173-8.
2. Aletaha D, Neogi T, Silman AJ, et al. 2010 rheumatoid arthritis classification criteria: an ACR/EULAR collaborative initiative. *Ann Rheum Dis*. 2010;69(9):1580–1588. doi:10.1136/ard.2010.138461.

3. Smolen JS, Landewé RBM, Bergstra SA, et al. EULAR recommendations for the management of rheumatoid arthritis with synthetic and biological DMARDs: 2022 update. *Ann Rheum Dis.* 2023;82(1):3–18. doi:10.1136/ard-2022-223356.
4. Goodman SM, Springer BD, Chen AF, et al. 2022 ACR/AAHKS guideline for the perioperative management of antirheumatic medication in patients with rheumatic diseases undergoing elective total hip or total knee arthroplasty. *Arthritis Care Res.* 2022;74(9):1399–1408. doi:10.1002/acr.24893.
5. Goodman SM, Springer BD, Chen AF, et al. 2022 ACR/AAHKS guideline for perioperative management of antirheumatic medication in patients with rheumatic diseases undergoing elective total hip or knee arthroplasty. *J Arthroplasty.* 2022;37(9):1676–1683. doi:10.1016/j.arth.2022.05.001.
6. Smolen JS, Breedveld FC, Burmester GR, et al. Treating rheumatoid arthritis to target: 2014 update of the recommendations of an international task force. *Ann Rheum Dis.* 2016;75(1):3–15.
7. McInnes IB, Schett G. The pathogenesis of rheumatoid arthritis. *N Engl J Med.* 2011;365(23):2205–2219.
8. Emery P, Keystone E, Tony HP, et al. IL-6 receptor inhibition with tocilizumab improves treatment outcomes in rheumatoid arthritis. *Ann Rheum Dis.* 2008;67(11):1516–1523.
9. Weinblatt ME, Keystone EC, Furst DE, et al. Adalimumab, a fully human anti-tumor necrosis factor monoclonal antibody, for the treatment of rheumatoid arthritis. *Arthritis Rheum.* 2003;48(1):35–45.
10. Bresnihan B, Alvaro-Gracia JM, Cobby M, et al. Treatment of rheumatoid arthritis with recombinant human interleukin-1 receptor antagonist. *Arthritis Rheum.* 1998;41(12):2196–2204.

**Developing listening and speaking skills of B2 level students in higher education
based on the availability of "Flipped Classroom"**

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Abstract: This study examines the effectiveness of the flipped classroom approach in developing B2-level students' listening comprehension and speaking skills in higher education institutions. In modern language education, the focus has shifted from purely grammatical competence to the ability to communicate effectively in real-life contexts. However, many students still face challenges in understanding spoken English and expressing their ideas fluently due to teacher-centered instruction, limited interaction, and insufficient use of authentic materials. This research aims to evaluate the advantages of the flipped classroom model, where students engage with instructional content before class and participate in interactive, communicative activities during class time. A mixed-methods approach was employed, involving experimental and control groups. The experimental group used pre-class video lectures, podcasts, and authentic audio-visual materials, while class time was dedicated to discussions, debates, role-plays, and problem-solving tasks. The control group followed traditional teaching methods. Data from pre- and post-tests, observations, and questionnaires revealed that the experimental group showed significant improvement in listening accuracy, identifying main ideas, and speaking fluency. Students also reported increased confidence and active participation. The findings suggest that the flipped classroom approach enhances independent learning, promotes engagement, and creates a communicative learning environment. It is concluded that this model is an effective and innovative method for improving B2-level language skills in higher education.

Keywords: Flipped classroom, EFL, listening comprehension, speaking skills, B2 level, higher education, communicative competence, student engagement, learner autonomy, language teaching

**“Flipped classroom” yondashuvi asosida oliy ta’lim muassasalarida B2
darajadagi talabalarning tinglab tushunish va og‘zaki nutq ko‘nikmalarini
rivojlantirish**

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Аннотация: Данное исследование направлено на изучение эффективности подхода «перевернутого класса» в развитии навыков аудирования и говорения у

студентов уровня B2 в высших учебных заведениях. В современных условиях обучение иностранным языкам ориентировано не только на грамматическую компетенцию, но и на способность эффективно общаться в реальных ситуациях. Тем не менее, многие студенты испытывают трудности в понимании устной речи и свободном выражении своих мыслей, что связано с традиционными методами преподавания, недостатком интерактивности и ограниченным использованием аутентичных материалов. Цель исследования — оценить преимущества модели «перевернутого класса», при которой изучение нового материала происходит вне аудитории, а учебное время посвящается интерактивным заданиям. В работе использован смешанный метод с участием экспериментальной и контрольной групп. Экспериментальная группа использовала видеолекции, подкасты и аутентичные материалы до занятий, а в классе выполняла коммуникативные задания. Контрольная группа обучалась традиционным способом. Результаты тестов, наблюдений и анкет показали значительное улучшение показателей экспериментальной группы, включая точность аудирования, умение выделять основную мысль и беглость речи. Также отмечено повышение уверенности и активности студентов. Полученные результаты подтверждают эффективность данного подхода.

Annotatsiya: Ushbu tadqiqot oliy ta'lim muassasalarida B2 darajadagi talabalarining tinglab tushunish va og'zaki nutq ko'nikmalarini rivojlantirishda “flipped classroom” (teskari sinf) yondashuvining samaradorligini o'rganishga qaratilgan. Zamonaviy ta'limda asosiy e'tibor nafaqat grammatik bilimlarga, balki real hayotiy vaziyatlarda samarali muloqot qila olish qobiliyatiga qaratilmoqda. Shunga qaramay, ko'plab talabalar tinglab tushunish va erkin gapirishda qiyinchiliklarga duch kelmoqda. Tadqiqotda aralash metodologiya asosida eksperimental va nazorat guruhlari tashkil etildi. Eksperimental guruh darsdan oldin video ma'ruzalar, podkastlar va autentik materiallar orqali bilim oldi, dars jarayonida esa muhokama, debat, rolli o'yin va muammoli vazifalarni bajardi. Nazorat guruhi esa an'anaviy usulda ta'lim oldi. Natijalar shuni ko'rsatdiki, eksperimental guruh talabarlari tinglab tushunish aniqligi, asosiy g'oyani ajratish va og'zaki nutq ravonligi bo'yicha sezilarli darajada yaxshilandi. Talabalar o'ziga bo'lgan ishonch va faollik oshganini ham ta'kidladilar. Tadqiqot natijalari ushbu yondashuv samarali va innovatsion ekanligini ko'rsatadi.

Zamonaviy ta'lim tizimida xorijiy tillarni o'qitish jarayoni nafaqat grammatik bilimlarni egallash, balki real kommunikativ vaziyatlarda samarali muloqot qila olish ko'nikmalarini shakllantirishni ham o'z ichiga oladi. Ayniqsa, B2 darajasi talabalardan murakkab mazmundagi nutqni tushunish, fikrini asosli tarzda ifodalash va turli kommunikativ vaziyatlarda faol ishtirok etishni talab qiladi. Biroq amaliy kuzatuvlar shuni ko'rsatadiki, oliy ta'lim muassasalarida tahsil olayotgan ko'plab talabalar tinglab tushunish va og'zaki nutq ko'nikmalarini yetarli darajada rivojlantira olmayapti. Bu muammo ko'pincha an'anaviy, o'qituvchi markazli dars metodlari, cheklangan interaktiv faoliyat va autentik materiallarning kam qo'llanilishi bilan bog'liq.

Mazkur tadqiqot "flipped classroom" (teskari sinf) yondashuvining B2 darajadagi talabalar til ko'nikmalarini rivojlantirishdagi samaradorligini aniqlashga qaratilgan. Ushbu yondashuvda o'quv materiallari dastlab darsdan tashqari muhitda mustaqil o'rganiladi, dars jarayoni esa asosan amaliy mashg'ulotlar, muhokamalar va interaktiv faoliyatlarga bag'ishlanadi. Tadqiqotning asosiy maqsadi — tinglab tushunish va gapirish ko'nikmalarini rivojlantirishda ushbu modelning afzalliklarini tahlil qilish hamda uning ta'lim jarayoniga ta'sirini aniqlashdan iborat.

Tadqiqot davomida aralash metodologiya (mixed methods) qo'llanildi. Unda kvazi-eksperimental dizayn asosida ikki guruh — eksperimental va nazorat guruhlari tashkil etildi. Eksperimental guruhda "flipped classroom" modeli asosida ta'lim olib borildi: talabalar darsdan oldin video ma'ruzalar, podkastlar, autentik audio va video materiallar orqali tinglab tushunish ko'nikmalarini rivojlantirdilar. Dars vaqtida esa ular guruhli muhokamalar, debatlar, rolli o'yinlar va muammoli vaziyatlarni hal qilishga qaratilgan topshiriqlarni bajardilar. Nazorat guruhida esa an'anaviy metodlar asosida, ya'ni dars jarayonida yangi material tushuntirilib, keyinchalik mashqlar bajarish orqali o'rganish tashkil etildi.

Ma'lumotlar yig'ish jarayonida diagnostik testlar (pre-test va post-test), kuzatuv natijalari hamda talabalar fikr-mulohazalarini aniqlashga qaratilgan so'rovnomalardan foydalanildi. Olingan natijalar tahlili shuni ko'rsatdiki, eksperimental guruh talabalar tinglab tushunish aniqligi, asosiy g'oyani ajratib olish qobiliyati hamda og'zaki nutq ravonligi va mantiqiyligi bo'yicha sezilarli darajada yuqori ko'rsatkichlarga erishdilar. Shuningdek, ular o'z fikrini erkin ifodalashda ishonch hosil qilganliklarini va dars jarayonida faolroq qatnashganliklarini ta'kidladilar.

Tadqiqot natijalari shuni ko'rsatadiki, "flipped classroom" yondashuvi talabalarning mustaqil o'rganish ko'nikmalarini rivojlantirish, ularni faol o'quv

jarayoniga jalb etish hamda real kommunikativ vaziyatlarga yaqin sharoit yaratishda muhim ahamiyatga ega. Ushbu model orqali dars vaqtidan samarali foydalanish, yuqori darajadagi kognitiv faoliyatni tashkil etish va talabalar o'rtasida hamkorlikni kuchaytirish imkoniyati yuzaga keladi.

Xulosa qilib aytganda, "flipped classroom" yondashuvi oliy ta'lim tizimida ingliz tilini o'qitishda innovatsion va samarali metod sifatida qaralishi mumkin. U B2 darajadagi talabalarning tinglab tushunish va gapirish ko'nikmalarini rivojlantirishda ijobiy natijalar beradi hamda zamonaviy ta'lim talablariga mos keladi. Kelgusida ushbu yondashuvni turli darajadagi o'quvchilar va boshqa til ko'nikmalariga tatbiq etish istiqbolli yo'nalishlardan biri hisoblanadi.

Foydalanilgan adabiyotlar

1. Jonathan Bergmann, J., & Aaron Sams, A. (2012). *Flip your classroom: Reach every student in every class every day*. International Society for Technology in Education.
2. Robert Talbert, R. (2017). *Flipped learning: A guide for higher education faculty*. Stylus Publishing.
3. Jack C. Richards, J. C. (2008). *Teaching listening and speaking: From theory to practice*. Cambridge University Press.
4. H. Douglas Brown, H. D. (2007). *Principles of language learning and teaching* (5th ed.). Pearson Education.
5. Jeremy Harmer, J. (2007). *How to teach English*. Pearson Longman.
6. Donald Nunan, D. (2003). *Practical English language teaching*. McGraw-Hill.
7. Zoltán Dörnyei, Z. (2005). *The psychology of the language learner*. Lawrence Erlbaum Associates.
8. Michael J. Lage, M. J., Glenn J. Platt, G. J., & Michael Treglia, M. (2000). Inverting the classroom. *The Journal of Economic Education*, 31(1), 30–43.

DEVELOPING CREATIVE THINKING IN FUTURE TEACHERS

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Abstract. The article discusses effective ways of developing the creative abilities of future pedagogues in the modern educational process. It highlights the importance of creativity in professional pedagogical activity and analyzes innovative approaches, interactive teaching methods, and pedagogical technologies used in the development of students' creative thinking skills. The study also emphasizes the role of independent learning, problem-based education, and collaborative activities in enhancing creativity. In addition, the article considers the pedagogical conditions necessary for forming creative competence and increasing the intellectual and innovative potential of future teachers.

Keywords: creativity, future pedagogues, creative ability, innovative technologies, interactive methods, pedagogical competence, creative thinking, educational process, independent learning, professional development, pedagogical innovation.

Annotatsiya. Mazkur maqolada zamonaviy ta'lim jarayonida bo'lajak pedagoglarning kreativ qobiliyatlarini rivojlantirishning samarali yo'llari yoritilgan. Unda kreativlikning kasbiy pedagogik faoliyatdagi ahamiyati ochib berilib, talabalarning ijodiy fikrlash ko'nikmalarini rivojlantirishda qo'llaniladigan innovatsion yondashuvlar, interaktiv o'qitish metodlari hamda pedagogik texnologiyalar tahlil qilingan. Tadqiqotda mustaqil ta'lim, muammoli ta'lim va hamkorlikdagi faoliyatning kreativlikni rivojlantirishdagi o'rni alohida ta'kidlangan. Shuningdek, maqolada bo'lajak o'qituvchilarning kreativ kompetentligini shakllantirish va ularning intellektual hamda innovatsion salohiyatini oshirish uchun zarur bo'lgan pedagogik shart-sharoitlar ko'rib chiqilgan.

Kalit so‘zlar: kreativlik, bo‘lajak pedagoglar, kreativ qobiliyat, innovatsion texnologiyalar, interaktiv metodlar, pedagogik kompetentlik, ijodiy fikrlash, ta’lim jarayoni, mustaqil ta’lim, kasbiy rivojlanish, pedagogik innovatsiya.

Zamonaviy globallashtirish va innovatsion taraqqiyot sharoitida yosh avlodni yangilanib borayotgan jamiyat hayotiga moslashtirish, ularning mustaqil fikrlash, tashabbuskorlik va ijodiy yondashuv asosida faoliyat yuritish qobiliyatlarini rivojlantirish oliy ta’lim tizimining eng ustuvor vazifalaridan biri hisoblanadi. Bugungi kunda oliy ta’lim muassasalari oldida nafaqat bilimli mutaxassisni tayyorlash, balki zamonaviy dunyo talablari asosida fikrlaydigan, innovatsion g‘oyalarni ilgari sura oladigan hamda ijtimoiy va kasbiy muammolarga kreativ yondasha oladigan shaxsni shakllantirish vazifasi ham turibdi. Shu nuqtai nazardan pedagogning kasbiy faoliyatida kreativlik muhim pedagogik kompetensiya sifatida namoyon bo‘ladi.

Kreativlik ta’lim jarayonini tashkil etishning muhim omillaridan biri bo‘lib, u pedagogning o‘quv jarayonini noan’anaviy, innovatsion va samarali shakllarda tashkil eta olish qobiliyatini ifodalaydi. Kreativ yondashuv asosida tashkil etilgan ta’lim jarayoni talabalarning mustaqil fikrlashi, muammoli vaziyatlarga yechim topishi, yangicha g‘oyalarni ilgari surishi va ijodiy salohiyatini ro‘yobga chiqarishiga xizmat qiladi. Shu bois kreativlik faqatgina ijodkorlik emas, balki mavjud bilim va intellektual salohiyatni maqsadga yo‘naltirilgan holda samarali qo‘llay olish qobiliyati sifatida ham talqin etiladi.

Ilmiy manbalarda qayd etilishicha, “kreativlik” atamasi XX asrning 60-yillarida Angliya-Amerika psixologiyasida keng qo‘llanila boshlagan bo‘lib, u shaxsning yangi g‘oyalar yaratishi, noodatiy fikrlashi va yangi ko‘nikmalarni shakllantira olish qobiliyatini anglatadi. Mashhur psixolog J. Gilford kreativlikning asosiy tarkibiy qismlarini tavsiflar ekan, quyidagi individual qobiliyatlarni alohida ta’kidlaydi: fikrni

maqsadga muvofiq yo'naltira olish, originallik, qiziquvchanlik, farazlar yaratish qobiliyati hamda fantaziya. Mazkur sifatlar shaxsning ijodiy faoliyatini rivojlantirishda muhim omil hisoblanadi. Bugungi kunda mamlakatimizda ta'lim tizimini modernizatsiya qilish, yoshlarning intellektual va ijodiy salohiyatini rivojlantirish, ularni har tomonlama qo'llab-quvvatlash bo'yicha keng ko'lamlı islohotlar amalga oshirilmoqda. Jumladan, O'zbekiston Respublikasini rivojlantirish strategiyalarida uzluksiz ta'lim tizimini takomillashtirish, sifatli ta'lim xizmatlarini kengaytirish hamda yosh avlodning ijodiy va intellektual imkoniyatlarini ro'yobga chiqarishga alohida e'tibor qaratilgan. Mazkur ustuvor vazifalar ta'lim jarayonida interfaol metodlar, innovatsion pedagogik texnologiyalar va kreativ yondashuvlardan samarali foydalanishni talab etadi. Interfaol o'qitish metodlari asosida tashkil etilgan mashg'ulotlar talabalarning faolligini oshirish, ularni erkin fikrlashga undash, jamoada ishlash ko'nikmalarini rivojlantirish hamda muammolarni ijodiy hal etish kompetensiyalarini shakllantirishga xizmat qiladi. Bunday metodlar orqali talabalar ta'lim jarayonining passiv tinglovchisidan faol ishtirokchisiga aylanadi. Natijada ularda mustaqil qaror qabul qilish, o'z fikrini asoslab bera olish, yangilik yaratishga intilish kabi kreativ qobiliyatlar rivojlanadi. Ta'lim oluvchilarda kreativlikni rivojlantirish jarayoni o'qituvchidan ta'lim mazmunini to'g'ri tanlash, innovatsion metodlardan foydalanish hamda individual yondashuvni tashkil etishni talab qiladi. Bunda talabalarning bilim saviyasi, qiziqishi, o'zlashtirish darajasi, ehtiyojlari va didaktik imkoniyatlari inobatga olinishi muhim ahamiyatga ega. Kreativ faoliyatni samarali shakllantirish uchun ta'lim jarayonida qulay pedagogik shart-sharoitlarni yaratish zarur. Xususan, talabalarda kreativ faoliyatga nisbatan qiziqish va moyillikni shakllantirish, bilishga bo'lgan ehtiyojni kuchaytirish, mustaqil fikrlash va erkin qaror qabul qilish muhitini yaratish muhim pedagogik omillar hisoblanadi. Shu bilan birga, o'quv jarayonida talabalarning tashabbuskorligini qo'llab-quvvatlash, muammoli vaziyatlar

yaratish, innovatsion topshiriqlarni qo‘llash hamda ijodiy loyihalar bilan ishlash kreativ kompetensiyalarni rivojlantirishga xizmat qiladi.

Demak, zamonaviy ta’lim tizimida kreativlikni rivojlantirish nafaqat pedagogik zarurat, balki jamiyat taraqqiyotining muhim omillaridan biri hisoblanadi. Kreativ fikrlaydigan, innovatsion yondasha oladigan va mustaqil qaror qabul qiladigan yoshlarni tarbiyalash orqali jamiyatning intellektual salohiyati yuksaladi hamda raqobatbardosh kadrlar tayyorlash imkoniyati kengayadi. ularning o‘quv jarayonidagi faolligini ta’minlash, har bir ta’lim oluvchida uning ijodiy fikrlashga qodirligi haqida qarorni ishonch toptirish, ularning ijodiy faolliklarini muntazam rag‘batlantirish; o‘quv jarayonini ta’lim oluvchi shaxsning xususiyatlari, ehtiyojlari va intellektual salohiyatidan kelib chiqqan holda individuallashtirish; ta’lim oluvchilarda individual, kichik guruhlar va jamoada ishlash ko‘nikmalarini shakllantirish, ularning ijodiy imkoniyatlarini kengaytirish, ularni muammolarni hal qilishda tayyor, standart yechimlar bilan birga nostandart yechimlar qabul qilishga undash; kreativ faoliyatni rivojlantirishning asosi bo‘lgan kognitiv bilimlarni amalda qayta ishlab chiqish va takomillashtirish imkonini beradigan interfaol mashg‘ulot shakllari va metodlarini tanlash va tatbiq etish.

Foydalanilgan adabiyotlar.

1. Mirzayeva, Z. S., & Fayziev, V. B. (2021). O ‘QUVCHILARDA MUSTAQIL TA’LIMINI TASHKIL ETISH YO‘LLARI. *Academic research in educational sciences*, 2(5), 362-366.
2. Sodiqova Sh.A. “Maktabgacha pedagogika” “Tafakkur chashmalari” T.2013y.
3. Kayumova N.M. “Maktabgacha pedagogika” “TDPU” nashriyoti T.:2013 y.
4. JUMAYEVA, Mehribon. "Bo'lajak o'qituvchilarni innovatsion faoliyatga tayyorlashda zamonaviy yondashuvlar." *edagogik ahorat* : 62.

5. Олимов Ш.Ш., Ходжиева М.Ш. Возможности применения педагогических технологий в образовательном процессе //Молодежь и XXI век-2020. – 2020. – С. 228-231.
6. Karimova R. M. Aksiologik yondashuvning ta'limdagi ahamiyati.// Pedagogika va psixologiya jurnali. 2022. 2(4), 45-51.
7. Kluckhohn C. Values and value-orientations in the theory of action: An exploration in definition and classification //Toward a general theory of action. – Harvard university press, 1951. – С. 388-433.
8. Ходжйев В. Х. Pedagogik aksiologiya” o’quv qo’llanma //Т.“Fan va texnologiya. – 2011. – Т. 156.
9. Ходжиева М. Ш. Совершенствование аксиологического подхода к педагогической деятельности у будущих учителей //Научный журнал. – 2020. – №. 9 (54). – С. 43-45.
10. Yoshiyena U. M. The importance of using pedagogical technologies in special educational schools //Вестник науки и образования. – 2020. – №. 22-2 (100). – С. 24-26.

FACTORS AFFECTING THE FINANCIAL STABILITY OF AN ORGANIZATION

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Abstract. This article examines the main factors influencing the financial stability of an organization. A systematic analysis of external and internal factors shaping the level of financial stability of business entities in modern economic conditions is carried out. Particular attention is paid to the impact of inflationary processes, instability of the foreign exchange market, changes in the tax system, as well as internal issues related to capital structure, accounts receivable, and the efficiency of asset utilization.

The study reveals that the financial stability of an organization is formed under the influence of a complex of interrelated factors requiring constant monitoring and effective management. The necessity of a comprehensive approach to assessing financial stability in an unstable economic environment is substantiated.

Keywords: financial stability, financial factors, external factors, internal factors, borrowed capital, accounts receivable, investment factors, operational factors, financial risks, asset structure.

ФАКТОРЫ ВЛИЯЮЩИЕ НА ФИНАНСОВУЮ УСТОЙЧИВОСТЬ ОРГАНИЗАЦИИ

АННОТАЦИЯ

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В данной статье исследованы основные факторы, оказывающие влияние на финансовую устойчивость организации. Проведен системный анализ внешних и внутренних факторов, формирующих уровень финансовой устойчивости хозяйствующих субъектов в современных условиях экономики. Особое внимание

уделено влиянию инфляционных процессов, нестабильности валютного рынка, изменений налоговой системы, а также внутренним проблемам, связанным со структурой капитала, дебиторской задолженностью и эффективностью использования активов. В результате исследования выявлено, что финансовая устойчивость организации формируется под воздействием комплекса взаимосвязанных факторов, требующих постоянного мониторинга и эффективного управления. Обоснована необходимость комплексного подхода к оценке финансовой устойчивости в условиях нестабильной экономической среды.

Ключевые слова: финансовая устойчивость, финансовые факторы, внешние факторы, внутренние факторы, заемный капитал, дебиторская задолженность, инвестиционные факторы, операционные факторы, финансовые риски, структура активов.

ВВЕДЕНИЕ

В современных условиях развития рыночной экономики финансовая устойчивость организации является одним из ключевых факторов ее стабильного функционирования и долгосрочного развития. Усиление глобальной конкуренции, нестабильность финансовых рынков, инфляционные процессы и рост экономических рисков требуют от организаций эффективного управления финансовыми ресурсами и поддержания устойчивого финансового состояния.

Финансовая устойчивость отражает способность организации своевременно выполнять свои обязательства, поддерживать платежеспособность, эффективно использовать капитал и сохранять равновесие между собственными и заемными источниками финансирования. Недостаточный уровень финансовой устойчивости может привести к снижению инвестиционной привлекательности организации, ухудшению ликвидности и повышению вероятности финансового кризиса.

В современных экономических условиях на финансовую устойчивость организаций оказывает влияние большое количество факторов как внешнего, так и внутреннего характера. При этом внешние факторы формируются под воздействием макроэкономической среды и практически не зависят от деятельности самой организации. Внутренние факторы, напротив, связаны с качеством финансового менеджмента, эффективностью использования ресурсов и организацией производственной деятельности.

Целью данной статьи является анализ факторов, оказывающих влияние на финансовую устойчивость организации, а также определение их роли в обеспечении стабильного развития хозяйствующего субъекта.

Внешние факторы формируются под влиянием экономической, политической и рыночной среды. Организация не может напрямую управлять данными факторами, однако обязана учитывать их при разработке финансовой стратегии. Одним из наиболее значимых внешних факторов являются общеэкономические условия. Рост инфляции приводит к увеличению себестоимости продукции, снижению покупательной способности потребителей и ухудшению финансовых результатов организации. Повышение уровня безработицы также негативно отражается на платежеспособном спросе населения. Существенное влияние оказывает нестабильность законодательства и налоговой системы, поскольку частые изменения нормативных требований затрудняют долгосрочное финансовое планирование. Значительное воздействие на финансовую устойчивость оказывают рыночные факторы. Снижение емкости внутреннего рынка и сокращение спроса на продукцию приводят к уменьшению объемов реализации и снижению прибыли организации. Усиление монополизации отдельных отраслей ограничивает конкурентные возможности хозяйствующих субъектов. Кроме того, нестабильность валютного рынка создает

дополнительные финансовые риски для организаций, осуществляющих внешнеэкономическую деятельность или использующих заемные средства в иностранной валюте. Среди прочих внешних факторов следует выделить политическую нестабильность, стихийные бедствия и негативные демографические тенденции. Данные факторы способны существенно повлиять на производственную деятельность организации и уровень ее финансовой устойчивости.

Внутренние факторы непосредственно связаны с деятельностью самой организации и во многом определяются качеством управленческих решений. К операционным факторам относятся неэффективная структура текущих затрат, низкий уровень использования основных средств и недостаточная диверсификация ассортимента продукции. Высокая доля постоянных расходов увеличивает финансовую нагрузку на организацию и снижает ее способность адаптироваться к изменениям рыночной конъюнктуры. Низкая эффективность использования основных средств приводит к росту производственных затрат и снижению рентабельности деятельности. Особое значение имеют инвестиционные факторы. Неэффективное управление инвестициями, ошибки при формировании фондового портфеля и невыполнение планируемых показателей прибыли по инвестиционным проектам могут привести к ухудшению финансового состояния организации. Отсутствие эффективного инвестиционного менеджмента ограничивает возможности долгосрочного развития и снижает финансовую устойчивость.

К числу наиболее значимых внутренних факторов относятся финансовые факторы. Неэффективная структура активов, чрезмерная доля заемного капитала и высокая зависимость от краткосрочных источников финансирования увеличивают финансовые риски организации. Существенную угрозу

представляет рост дебиторской задолженности, поскольку замедление оборачиваемости денежных средств негативно влияет на ликвидность и платежеспособность организации. Следовательно, финансовая устойчивость организации формируется под воздействием совокупности взаимосвязанных факторов, требующих постоянного анализа и контроля. Для обеспечения устойчивого развития организации необходимо своевременно выявлять негативные тенденции и принимать меры по минимизации финансовых рисков. Проведенное исследование показало, что финансовая устойчивость организации зависит от комплекса внешних и внутренних факторов. Внешние факторы формируются под воздействием макроэкономической и рыночной среды, тогда как внутренние факторы определяются качеством финансового и операционного управления организацией. Наиболее существенное влияние на финансовую устойчивость оказывают инфляционные процессы, нестабильность валютного рынка, структура капитала, уровень дебиторской задолженности и эффективность использования активов. В современных условиях хозяйствования обеспечение финансовой устойчивости требует применения комплексного подхода, основанного на постоянном мониторинге финансовых рисков, оптимизации структуры капитала и повышении эффективности управления ресурсами организации.

Таким образом, эффективное управление факторами финансовой устойчивости является важнейшим условием обеспечения стабильного функционирования организации и повышения ее конкурентоспособности в долгосрочной перспективе.

СПИСОК ИСПОЛЬЗОВАННОЙ ЛИТЕРАТУРЫ

1. Савицкая Г.В. Анализ хозяйственной деятельности предприятия. — Минск: Новое знание, 2021.

2. Ковалев В.В. Финансовый анализ: методы и процедуры. — Москва: Финансы и статистика, 2020.
3. Шеремет А.Д. Теория экономического анализа. — Москва: ИНФРА-М, 2022.
4. Бланк И.А. Управление финансовой устойчивостью предприятия. — Киев: Ника-Центр, 2019.
5. Altman E.I. Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy // Journal of Finance. — 1968. — Vol. 23. — №4.
6. Brealey R., Myers S. Principles of Corporate Finance. — New York: McGraw-Hill, 2020.
7. Азаренкова Г.М., Головки О.Г., Абросимова И.П. Финансовая устойчивость предприятия: теоретические аспекты и методы оценки // Экономика и управление. — 2018.

ECONOMIC EFFICIENCY OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN THE SERVICE SECTOR

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Abstract. The article examines the economic aspects of applying artificial intelligence technologies in the service sector within the context of the rapid development of the digital economy. The study analyzes the impact of intelligent digital solutions on improving enterprise efficiency, automating service processes, and enhancing mechanisms of interaction with consumers. Particular attention is paid to the use of analytical platforms, machine learning algorithms, chatbots, and digital services across various areas of the service economy. The research findings indicate that the implementation of AI technologies contributes to reducing time and financial costs, increasing labor productivity, improving service quality, and creating personalized services. At the same time, several factors limiting the widespread adoption of artificial intelligence are identified, including the need to modernize digital infrastructure, the shortage of qualified specialists, and risks related to information security. Based on the results of the study, it is concluded that artificial intelligence is becoming an important tool for increasing the competitiveness of enterprises and promoting the further development of the modern service sector in the conditions of digital economic transformation.

Keywords: artificial intelligence, AI technologies, digital economy, digital transformation, service sector, automation, digital services, intelligent systems, economic efficiency, digital platforms, machine learning, service personalization, service economy.

ЭКОНОМИЧЕСКАЯ ЭФФЕКТИВНОСТЬ ТЕХНОЛОГИЙ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В СФЕРЕ УСЛУГ

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Аннотация. В статье исследуются экономические аспекты применения технологий искусственного интеллекта в сфере услуг в условиях активного развития цифровой экономики. Рассматривается влияние интеллектуальных цифровых решений на повышение эффективности деятельности предприятий, автоматизацию сервисных процессов и совершенствование механизмов взаимодействия с потребителями. Особое внимание уделено использованию аналитических платформ, алгоритмов машинного обучения, чат-ботов и цифровых сервисов в различных направлениях сервисной экономики. Установлено, что внедрение AI-технологий способствует сокращению временных и финансовых затрат, повышению производительности труда, улучшению качества обслуживания и формированию персонализированных услуг. Одновременно выявлены факторы, сдерживающие широкое распространение искусственного интеллекта, включая необходимость модернизации цифровой инфраструктуры, дефицит квалифицированных кадров и риски, связанные с обеспечением информационной безопасности. По результатам исследования обосновано, что искусственный интеллект становится важным инструментом повышения конкурентоспособности предприятий и дальнейшего развития современной сферы услуг в условиях цифровой трансформации экономики.

Ключевые слова: искусственный интеллект, AI-технологии, цифровая экономика, цифровая трансформация, сфера услуг, автоматизация, цифровые сервисы, интеллектуальные системы, экономическая эффективность, цифровые

платформы, машинное обучение, персонализация услуг, сервисная экономика.

Введение. Современный этап развития мировой экономики характеризуется активным распространением цифровых технологий и ускорением процессов цифровой трансформации различных отраслей. Одним из наиболее значимых направлений технологического развития становится использование искусственного интеллекта, который постепенно внедряется в систему управления предприятиями, процессы обслуживания клиентов и организацию бизнес-деятельности.

Особенно заметное влияние технологии искусственного интеллекта оказывают на сферу услуг, где качество сервиса, скорость обработки информации и эффективность взаимодействия с потребителями играют ключевую роль. Применение AI-технологий позволяет автоматизировать значительную часть операций, оптимизировать процессы принятия решений, анализировать потребительское поведение и повышать уровень персонализации предоставляемых услуг.

В условиях усиления конкуренции и роста требований со стороны потребителей предприятия сферы услуг все чаще используют интеллектуальные цифровые системы для повышения производительности, сокращения затрат и улучшения качества обслуживания. Искусственный интеллект становится важным инструментом формирования современных моделей управления и обеспечения устойчивого развития сервисной экономики.

Развитие AI-технологий способствует появлению новых форм цифрового взаимодействия между предприятиями и потребителями, а также создает дополнительные возможности для модернизации сферы услуг в условиях цифровой экономики.

Актуальность исследования. Актуальность исследования определяется

активным развитием технологий искусственного интеллекта и их возрастающим влиянием на функционирование современной сферы услуг. В условиях цифровой трансформации экономики AI-технологии становятся важным инструментом повышения эффективности деятельности предприятий и совершенствования системы обслуживания потребителей.

В настоящее время технологии искусственного интеллекта широко применяются в различных направлениях сферы услуг, включая банковский сектор, электронную коммерцию, транспортную логистику, туризм, образование, здравоохранение и гостиничный бизнес. Использование интеллектуальных цифровых систем способствует автоматизации процессов управления, ускорению обработки информации и повышению качества предоставляемых услуг.

Особую значимость приобретает способность AI-технологий анализировать большие объемы данных, прогнозировать потребительское поведение и формировать персонализированные предложения. Это позволяет предприятиям повышать уровень конкурентоспособности, снижать операционные издержки и более эффективно адаптироваться к изменениям рыночной среды.

Вместе с тем активное внедрение искусственного интеллекта требует комплексного анализа экономической эффективности цифровых решений, оценки их влияния на развитие сферы услуг и определения перспектив дальнейшей цифровой трансформации сервисной экономики.

Цель и задачи исследования. Целью исследования является анализ экономической эффективности технологий искусственного интеллекта в сфере услуг.

Для достижения поставленной цели были определены следующие задачи:

- исследовать сущность AI-технологий и особенности их применения в сфере услуг;

- определить влияние искусственного интеллекта на эффективность деятельности предприятий;
- проанализировать экономические преимущества внедрения AI-технологий;
- выявить основные проблемы использования искусственного интеллекта в сервисной экономике;
- определить перспективы развития AI-технологий в сфере услуг.

Обзор источников. Теоретической базой исследования послужили научные работы отечественных и зарубежных ученых, посвященные вопросам цифровой экономики, искусственного интеллекта и инновационного развития сферы услуг. Анализ современной научной литературы показывает, что в условиях цифровой трансформации AI-технологии становятся одним из ключевых факторов повышения эффективности деятельности предприятий сервисной экономики.

В исследованиях Клауса Шваба особое внимание уделяется влиянию технологий четвертой промышленной революции на трансформацию экономики и изменение механизмов функционирования современных предприятий. Автор отмечает, что искусственный интеллект становится важнейшим инструментом повышения производительности и формирования новых моделей цифрового бизнеса [1].

В работе Эрика Бриньолфссона и Эндрю Макафи рассматриваются экономические последствия внедрения интеллектуальных цифровых технологий в различные отрасли экономики. Исследователи подчеркивают, что автоматизация и цифровизация способствуют росту эффективности предприятий и повышению качества услуг [2].

Вопросы практического применения искусственного интеллекта в

деятельности предприятий исследуются в трудах Бернарда Марра. Автор анализирует использование аналитики данных, интеллектуальных платформ и цифровых сервисов в системе управления организациями сферы услуг [3].

Проблемы цифровой трансформации бизнеса и развития сервисной экономики рассматриваются также в исследованиях Томаса Дэвенпорта. Автор отмечает, что внедрение AI-технологий способствует оптимизации процессов управления, снижению операционных расходов и развитию персонализированных сервисов [4].

Отдельное внимание в современной научной литературе уделяется вопросам использования искусственного интеллекта в электронной коммерции, банковской системе, логистике и туристической отрасли. В исследованиях отмечается, что интеллектуальные технологии позволяют предприятиям более эффективно анализировать потребительское поведение, прогнозировать спрос и совершенствовать качество обслуживания клиентов [5].

Таким образом, анализ научных источников показывает, что технологии искусственного интеллекта оказывают комплексное влияние на развитие современной сферы услуг и становятся важным фактором повышения экономической эффективности цифровой экономики.

Методы исследования. В ходе исследования были использованы общенаучные и специальные методы анализа, позволяющие комплексно изучить влияние технологий искусственного интеллекта на развитие сферы услуг и оценить их экономическую эффективность.

Применение системного подхода позволило рассматривать искусственный интеллект как важный элемент цифровой инфраструктуры современных предприятий, обеспечивающий взаимосвязь между процессами управления, обработки данных и взаимодействия с потребителями. Данный подход дал

возможность проанализировать влияние AI-технологий на организацию деятельности предприятий сферы услуг в условиях цифровой трансформации экономики.

Метод сравнительного анализа использовался для сопоставления традиционных методов управления с современными цифровыми решениями, основанными на применении искусственного интеллекта. Это позволило определить преимущества интеллектуальных технологий в области автоматизации бизнес-процессов, повышения качества обслуживания и оптимизации системы управления.

Для оценки экономических результатов внедрения AI-технологий был применен экономико-статистический метод, с помощью которого анализировались показатели производительности, операционных расходов, эффективности обслуживания и уровня конкурентоспособности предприятий сферы услуг.

Кроме того, в исследовании использовался метод научного обобщения, позволивший систематизировать результаты анализа и сформулировать основные выводы относительно перспектив развития технологий искусственного интеллекта в условиях цифровой экономики.

Результаты исследования. Результаты проведенного исследования свидетельствуют о том, что технологии искусственного интеллекта становятся одним из наиболее значимых факторов повышения эффективности современной сферы услуг. В условиях цифровой трансформации экономики AI-технологии оказывают комплексное влияние на деятельность предприятий, способствуя совершенствованию системы управления, оптимизации бизнес-процессов и повышению качества обслуживания потребителей.

Анализ показал, что внедрение интеллектуальных цифровых систем

позволяет существенно ускорить процессы обработки информации и автоматизировать значительную часть операций, связанных с обслуживанием клиентов. Использование AI-технологий способствует сокращению времени выполнения операций, снижению нагрузки на персонал и повышению общей производительности предприятий сферы услуг [3].

В ходе исследования было установлено, что современные предприятия активно используют технологии искусственного интеллекта для анализа потребительского поведения и прогнозирования рыночного спроса. Применение аналитических платформ и алгоритмов машинного обучения позволяет организациям формировать персонализированные предложения, учитывать индивидуальные потребности клиентов и повышать уровень потребительской лояльности [5].

Особое значение AI-технологии приобретают в развитии цифровых сервисов и онлайн-платформ. В настоящее время интеллектуальные системы широко используются в деятельности банковских организаций, гостиничного бизнеса, электронной коммерции, транспортной логистики и туристической отрасли. Использование чат-ботов, систем онлайн-консультирования, электронных платежных сервисов и цифрового маркетинга способствует повышению доступности услуг и улучшению взаимодействия между предприятиями и потребителями [4].

Проведенный анализ также показал, что внедрение искусственного интеллекта положительно влияет на экономические показатели предприятий. Использование интеллектуальных технологий позволяет снижать операционные расходы, повышать эффективность использования ресурсов и совершенствовать процессы принятия управленческих решений. В результате предприятия получают возможность повышать уровень конкурентоспособности и быстрее

адаптироваться к изменениям цифровой экономики [1].

Вместе с тем развитие AI-технологий сопровождается рядом проблем и ограничений. Одной из основных сложностей остаются высокие финансовые затраты на внедрение интеллектуальных цифровых систем и необходимость модернизации технической инфраструктуры предприятий. Дополнительными проблемами являются риски информационной безопасности, недостаточная защита персональных данных и дефицит квалифицированных специалистов в области искусственного интеллекта [2].

Несмотря на существующие ограничения, результаты исследования подтверждают, что технологии искусственного интеллекта обладают значительным потенциалом для дальнейшего развития сферы услуг и формирования новых моделей цифровой экономики.

Вывод. Результаты исследования позволяют сделать вывод о том, что технологии искусственного интеллекта становятся одним из ключевых направлений развития современной цифровой экономики и оказывают существенное влияние на трансформацию сферы услуг. Активное внедрение интеллектуальных цифровых решений способствует повышению эффективности деятельности предприятий, совершенствованию процессов управления и развитию новых форм взаимодействия с потребителями.

Проведенный анализ показал, что использование AI-технологий позволяет организациям оптимизировать использование ресурсов, повышать скорость обработки информации и улучшать качество предоставляемых услуг. В условиях усиления цифровой конкуренции искусственный интеллект становится важным инструментом повышения устойчивости и конкурентоспособности предприятий сферы услуг.

Исследование также подтвердило, что дальнейшее развитие технологий

искусственного интеллекта связано с необходимостью модернизации цифровой инфраструктуры, расширения инновационной деятельности и формирования современной системы подготовки специалистов в области цифровых технологий. Особое значение приобретает обеспечение информационной безопасности и эффективное регулирование процессов цифровой трансформации.

Практическая ценность исследования заключается в возможности применения полученных результатов при разработке программ цифрового развития предприятий сферы услуг, совершенствовании механизмов управления и формировании стратегий внедрения технологий искусственного интеллекта в условиях современной цифровой экономики.

Список литературы

1. Schwab K. The Fourth Industrial Revolution. - Geneva: World Economic Forum, 2016.
2. Brynjolfsson E., McAfee A. The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies. - New York: W.W. Norton & Company, 2014.
3. Marr B. Artificial Intelligence in Practice: How 50 Successful Companies Used AI and Machine Learning to Solve Problems. - Wiley, 2019.
4. Davenport T. AI Advantage: How to Put the Artificial Intelligence Revolution to Work. - MIT Press, 2018.
5. Kaplan A., Haenlein M. Siri, Siri in My Hand: Who's the Fairest in the Land? On the Interpretations, Illustrations, and Implications of Artificial Intelligence // Business Horizons. - 2019. - Vol. 62. - №1. - P. 15–25.

The concept of educational quality and its criteria

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Abstract: This article examines the concept of educational quality and several of its key criteria. It also provides an analysis of the factors influencing the quality of education in higher educational institutions, along with conclusions based on the conducted study.

Keywords: Educational quality, Technocratic approach, Pedagogical approach, Sociological approach, Psychological approach, Economic approach.

Introduction

Educational quality is a complex pedagogical and social category determined by the effectiveness, content, methods, and outcomes of the educational process in meeting the needs of society and individuals. This concept is reflected in learners' acquired knowledge, developed competencies, professional preparedness, and their competitiveness in the labor market.

In modern educational theory, there is no single universally accepted definition of educational quality. Different approaches to this concept have been proposed by educators, organizations, and scholars. For example, G.V. Serikov defines educational quality as "a comprehensive indicator of educational outcomes aimed at personal development" and describes it as the degree of correspondence between intended goals and achieved results..¹

Experts from UNESCO propose evaluating educational quality through the relationship between the input resources of the educational process (such as teachers' qualifications, curriculum, technical facilities, and others) and the output outcomes

¹ Serikov G.V. Pedagogika. Lichnostno-razvivayushchaya paradigma obrazovaniya. — M., 2004.

(including graduates' level of knowledge, independent thinking skills, and competitiveness in the labor market).²

The concept of educational quality is regarded in modern scientific and theoretical approaches as a multidimensional, systematic, and dynamic process. This concept is not limited merely to the quality of the curriculum or the amount of knowledge acquired by students; rather, it is evaluated in accordance with the needs and expected outcomes of all participants involved in the educational process at every stage, including the state, educational institutions, teachers, students, and employers.

Educational quality is an indicator that reflects the extent to which the knowledge, skills, qualifications, and competencies provided to learners (students) contribute to their individual development, competitiveness in the labor market, as well as to the economic, cultural, and social development of society.

Today, educational quality is determined not only through internal assessment systems, but also through international rankings, independent evaluation centers, and the employment rate of graduates.

In scientific literature, educational quality is interpreted through several approaches:

1. **Technocratic Approach** – Educational quality is associated with the technical and logical structure of the curriculum, assessment criteria, and effectiveness. In this approach, learning outcomes and tools for measuring knowledge occupy a central place.
2. **Pedagogical Approach** – This approach is based on the teacher's qualifications, methodological strategies, interactive tools, learner-centered education, and reflective assessment systems.
3. **Sociological Approach** – It recognizes the connection between educational

² UNESCO. Education for All Global Monitoring Report 2005: The Quality Imperative. — Paris, 2005.

quality and the social roles of education in society, as well as cultural values and moral standards.

4. Psychological Approach – Educational quality is linked to the learner’s (or student’s) personal satisfaction, motivation, stress level, and sense of self-awareness.
5. Economic Approach – In this approach, the main indicators of educational quality are considered to be graduates’ employment rates, income levels, and labor productivity in the job market.

Educational quality is a complex, multi-level, and multifactorial category. It is associated not only with specific outcomes of the teaching process, but also directly with the overall stability of the education system, the condition of resources, pedagogical approaches, management methods, the extent to which it meets students’ needs, preparedness for the labor market, as well as the broader social and economic context. Therefore, the assessment of educational quality requires not merely one-sided indicators, but rather a comprehensive and integrated system of criteria.

Indicators determining educational quality can generally be expressed as follows. First, the scientific degree and methodological competence of teachers are considered a direct factor influencing educational quality. Second, the modernity of curricula, their frequency of renewal, and their relevance to the labor market are taken as key indicators. The third factor is the student’s developmental trajectory and their motivation for learning. The fourth indicator is the transparency, fairness, and developmental function of the assessment system. Fifth, indicators such as the research activity of higher education institutions, the number of publications, international collaborations, participation in grant and startup projects, and recognition by international accreditation agencies are regarded as important criteria. In modern assessment systems, new indicators are also being introduced, such as students’ digital literacy, innovativeness in

approaches, self-management competencies, the ability to effectively engage in distance learning, the quality of communication between students and teachers, participation in social projects, interdisciplinary integration, and the level of financial transparency. This, in turn, extends the evaluation of educational quality beyond traditional indicators, enabling it to be assessed through a broader, more systematic, and more advanced set of approaches.

Conclusion

In conclusion, the criteria and indicators determining educational quality are not merely a collection of numerical data or statistical information, but rather a complex system encompassing the psychological, cultural, social, and economic dimensions of the educational process. The clear definition and practical implementation of these indicators serve as a foundation for internal reforms within the education system. Such an approach creates conditions for improving Uzbekistan's higher education system in international rankings, ensuring the professional success of graduates, and forming a knowledgeable generation based on the principles of social justice in society.

References

1. Menejment, darslik/ N.K.Yo'ldoshev, G.E. Zaxidov.
2. B.X.XODJAYEV Umumiy pedagogika nazariyasi va amaliyoti. Darslik. - T.: «Sano-standart» nashriyoti, 2017-yil, 416 bet
3. Saidnazarova Gulshan Bolta qizi, Tarbiya fanini o'qitish metodikasi. / [Matn]: o'quv qo'llanma / G.B. Saidnazarova - Buxoro: "BUXORO DETERMINANTI" MCHJning Kamolot nashriyoti, 2024. – 232 b.
4. PARDAYEV A.X., PARDAYEVA Z.A. BOSHQARUV HISOBI. 2014.-318 b
5. Қосимов Е.Н. Ташкилот ва ташкилий бошқариш назарияси: Олий ўқув юртлари учун дарслик/Суз боши муаллифи: Ш.Н. Зайнутдинов. - Т.: А. Қодирий номидаги халқ мероси нашр., 2004. - 208 б

ASSESSMENT OF THE ANATOMICAL AND FUNCTIONAL EFFECTIVENESS OF THE MANCHESTER OPERATION IN PELVIC ORGAN PROLAPSE

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Abstract. Pelvic organ prolapse is one of the most common gynecological pathologies among women and is characterized by the downward displacement of pelvic organs due to weakening of the pelvic floor muscular and ligamentous apparatus. This pathology leads to urinary and bowel dysfunction, decreased sexual activity, chronic discomfort, and deterioration in quality of life. In recent years, there has been growing interest in organ-preserving surgical methods aimed at maintaining reproductive function, particularly the Manchester operation.

This study evaluated the anatomical and functional effectiveness of the Manchester operation in pelvic organ prolapse. During the research, the degree of prolapse according to the POP-Q system, cervical length, condition of the vaginal walls, hiatal area parameters, and anatomical changes of the pelvic floor were assessed before and after surgery. In addition, changes in patients' quality of life, sexual activity, urinary, and bowel functions were evaluated using functional criteria.

The results demonstrated that the Manchester operation is highly effective in restoring the anatomical position of pelvic organs, reducing prolapse symptoms,

strengthening pelvic floor support structures, and improving patients' quality of life. The postoperative period was characterized by a low recurrence rate of prolapse and stable functional outcomes.

The obtained results indicate that the Manchester operation is one of the effective organ-preserving surgical methods for the treatment of pelvic organ prolapse and provides a scientific basis for improving clinical approaches to its application.

Keywords: pelvic organ prolapse, Manchester operation, POP-Q system, anatomical effectiveness, functional outcomes, hiatal area, cervical length, colporrhaphy, quality of life, reproductive health.

CHANOQ A'ZOLARI PROLAPSIDA MANCHESTER OPERATSIYASINING ANATOMIK VA FUNKSIONAL SAMARADORLIGINI BAHOLASH

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Annotatsiya. Chanoq a'zolari prolapsi ayollar orasida keng tarqalgan ginekologik patologiyalardan biri bo'lib, chanoq tubi mushak-bog'lam apparatining zaiflashuvi natijasida kichik chanoq a'zolarining pastga siljishi bilan xarakterlanadi. Ushbu patologiya ayollarda siydik chiqarish va ichak funksiyalarining buzilishi, jinsiy faoliyatning pasayishi, surunkali noqulaylik hissi hamda hayot sifatining yomonlashuviga olib keladi. So'nggi yillarda reproduktiv funksiyani saqlab qolishga qaratilgan organ saqlovchi jarrohlik usullariga, xususan Manchester operatsiyasiga bo'lgan qiziqish ortib bormoqda.

Mazkur ishda chanoq a'zolari prolapsida Manchester operatsiyasining anatomik va funksional samaradorligi baholandi. Tadqiqot davomida operatsiyadan oldingi va keyingi davrda POP-Q tizimi bo'yicha prolaps darajasi, bachadon bo'yni uzunligi, qin devorlarining holati, hiatal maydon ko'rsatkichlari hamda chanoq tubining anatomik o'zgarishlari o'rganildi. Bundan tashqari, bemorlarning hayot sifati, jinsiy faoliyati, siydik chiqarish va ichak funksiyalaridagi o'zgarishlar funksional mezonlar asosida baholandi.

Aniqlanishicha, Manchester operatsiyasi chanoq a'zolarining anatomik holatini tiklashda yuqori samaradorlikka ega bo'lib, prolaps simptomlarining kamayishi, chanoq tubi tayanch tuzilmalarining mustahkamlanishi hamda bemorlarning hayot sifati yaxshilanishiga olib keladi. Operatsiyadan keyingi davrda prolapsning qaytalanish darajasi past bo'lib, funksional natijalarning barqarorligi kuzatildi.

Olingan natijalar Manchester operatsiyasining chanoq a'zolari prolapsini davolashda samarali organ saqlovchi jarrohlik usullaridan biri ekanligini ko'rsatadi hamda ushbu operatsiyani qo'llash bo'yicha klinik yondashuvlarni takomillashtirish uchun ilmiy asos bo'lib xizmat qiladi.

Kalit so'zlar: chanoq a'zolari prolapsi, Manchester operatsiyasi, POP-Q tizimi, anatomik samaradorlik, funksional natijalar, hiatal maydon, bachadon bo'yni uzunligi, kolporafiya, hayot sifati, reproduktiv salomatlik.

Kirish.

Chanoq a'zolari prolapsi ayollar orasida keng tarqalgan ginekologik patologiyalardan biri bo'lib, kichik chanoq a'zolarining anatomik joylashuvi buzilishi bilan tavsiflanadi. Ushbu holat chanoq tubi mushaklari va bog'lam apparatining zaiflashuvi natijasida rivojlanadi hamda ayollarda siydik chiqarish buzilishlari, jinsiy funksiyaning pasayishi, surunkali noqulaylik hissi va hayot sifatining yomonlashuviga olib keladi. Yosh ortishi, ko'p tug'ruqlar, semizlik, biriktiruvchi to'qima zaifligi va

surunkali intraabdominal bosim oshishi prolaps rivojlanishining asosiy xavf omillaridan hisoblanadi.

So‘nggi yillarda chanoq a‘zolari prolapsini davolashda organ saqlovchi jarrohlik usullariga qiziqish ortib bormoqda. Shunday usullardan biri Manchester operatsiyasi bo‘lib, u bachadonni saqlab qolgan holda prolapsni anatomik jihatdan korreksiya qilish imkonini beradi. Ushbu operatsiya bachadon bo‘ynini qisqartirish, kardinal bog‘lamlarni mustahkamlash hamda qin devorlarini tiklash usullarini o‘z ichiga oladi. Manchester operatsiyasi ayniqsa bachadon bo‘yni elongatsiyasi bilan kechuvchi prolaps holatlarida samarali usullardan biri sifatida qo‘llaniladi.

Klinik amaliyotda jarrohlik natijalarini baholashda nafaqat anatomik ko‘rsatkichlar, balki funksional holat, bemorlarning hayot sifati, jinsiy faoliyati va siydik chiqarish funksiyasidagi o‘zgarishlarni ham hisobga olish muhim ahamiyat kasb etadi. Zamonaviy tadqiqotlarda POP-Q tizimi, transvaginal ultratovush tekshiruvi, FSFI va P-QOL kabi mezonlardan foydalanish operatsiya samaradorligini kompleks baholash imkonini bermoqda.

Shu sababli Manchester operatsiyasining anatomik va funksional samaradorligini o‘rganish, operatsiyadan keyingi natijalarni tahlil qilish hamda prolaps qaytalanish xavfini kamaytirishga qaratilgan yondashuvlarni ishlab chiqish dolzarb ilmiy-amaliy masalalardan biri hisoblanadi.

Tadqiqot maqsadi.

Chanoq a‘zolari prolapsi bo‘lgan ayollarda Manchester operatsiyasining anatomik va funksional samaradorligini baholashdan iborat.

Tadqiqot davomida operatsiyadan oldingi va keyingi davrda POP-Q tizimi bo‘yicha prolaps darajasi, bachadon bo‘yni uzunligi, qin devorlarining holati, hiatal maydon ko‘rsatkichlari hamda chanoq tubi tayanch tuzilmalaridagi o‘zgarishlar o‘rganiladi. Shuningdek, bemorlarning hayot sifati, jinsiy faoliyati, siydik chiqarish va

ichak funksiyalaridagi o'zgarishlarni baholash orqali Manchester operatsiyasining nafaqat anatomik, balki funksional natijalarini ham aniqlash ko'zda tutiladi.

Materiallar va usullar.

Tadqiqotda chanoq a'zolari prolapsi tashxisi qo'yilgan ayollar klinik-anatomik va funksional jihatdan o'rganildi. Bemorlarning yoshi, tug'ruqlar soni, tana massasi indeksi, ginekologik anamnezi, prolapsning klinik ko'rinishi va kasallik davomiyligi tahlil qilindi.

Prolaps darajasini baholashda POP-Q tizimidan foydalanildi. Operatsiyadan oldin va keyingi davrda bachadon bo'yni uzunligi, qin devorlarining holati, perineal tana holati hamda chanoq tubi tayanch tuzilmalarining anatomik ko'rsatkichlari o'rganildi. Hiatal maydonni baholash uchun transvaginal ultratovush tekshiruvi qo'llanildi.

Manchester operatsiyasining funksional samaradorligi bemorlarning siydik chiqarish, ichak faoliyati, jinsiy funktsiya va hayot sifati ko'rsatkichlari asosida baholandi. Bunda maxsus so'rovnomalar, jumladan FSFI va P-QOL ko'rsatkichlaridan foydalanildi.

Olingan natijalar operatsiyadan oldingi va keyingi ko'rsatkichlar bilan solishtirildi. Statistik tahlilda tavsifiy statistika, qiyosiy tahlil va korrelyatsion baholash usullaridan foydalanildi.

Natijalar va muhokama.

Tadqiqot natijalari Manchester operatsiyasi chanoq a'zolari prolapsi bo'lgan ayollarda anatomik va funksional jihatdan ijobiy natija berishini ko'rsatdi. Operatsiyadan keyingi davrda POP-Q tizimi bo'yicha prolaps darajasining kamayishi, bachadon bo'yni uzunligining me'yorlashuvi, qin devorlarining anatomik holati yaxshilanishi va chanoq tubi tayanch tuzilmalarining mustahkamlanishi kuzatildi.

Funksional ko'rsatkichlar tahlilida bemorlarda siydik chiqarishdagi noqulayliklar, chanoq sohasidagi bosim hissi, jinsiy faoliyat bilan bog'liq shikoyatlar va kundalik

hayotdagi cheklovlarning kamaygani aniqlandi. P-QOL va FSFI so'rovnomalari natijalari operatsiyadan keyin hayot sifati va jinsiy funksiya ko'rsatkichlarida ijobiy o'zgarishlar mavjudligini ko'rsatdi.

Transvaginal ultratovush tekshiruvlarida hiatal maydon o'lchamlarining kamayishi va chanoq tubi anatomik ko'rsatkichlarining yaxshilanishi Manchester operatsiyasining anatomik samaradorligini tasdiqladi. Bu jarrohlik usuli nafaqat prolapsni korreksiya qilish, balki chanoq tubi funksional holatini tiklashda ham muhim ahamiyatga ega ekanligini ko'rsatadi.

Olingan natijalar Manchester operatsiyasini chanoq a'zolari prolapsida organ saqlovchi samarali jarrohlik usuli sifatida qo'llash mumkinligini tasdiqlaydi. Operatsiya natijalarini baholashda anatomik mezonlar bilan bir qatorda funksional va subyektiv ko'rsatkichlarni ham hisobga olish davolash samaradorligini yanada to'liq baholash imkonini beradi.

Xulosa.

Manchester operatsiyasi chanoq a'zolari prolapsi bo'lgan ayollarda anatomik va funksional natijalarni yaxshilashga xizmat qiluvchi samarali organ saqlovchi jarrohlik usuli hisoblanadi. Tadqiqot natijalari operatsiyadan keyingi davrda POP-Q ko'rsatkichlarining yaxshilanishi, bachadon bo'yni uzunligining me'yorlashuvi, qin devorlari va chanoq tubi tayanch tuzilmalarining tiklanishini ko'rsatdi.

Funksional jihatdan bemorlarda siydik chiqarish, ichak faoliyati, jinsiy funksiya va hayot sifati ko'rsatkichlarida ijobiy o'zgarishlar kuzatildi. Bu Manchester operatsiyasining faqat anatomik korreksiya bilan cheklanmasdan, bemorlarning kundalik hayoti va reproduktiv salomatligiga ham ijobiy ta'sir ko'rsatishini tasdiqlaydi.

Olingan natijalar chanoq a'zolari prolapsini jarrohlik davolashda Manchester operatsiyasini individual yondashuv asosida qo'llash, operatsiyadan keyingi natijalarni esa anatomik, funksional va subyektiv mezonlar asosida baholash zarurligini ko'rsatadi.

Foydalanilgan adabiyotlar

1. Najmutdinova D.K. Akusherlik va ginekologiyada jarrohlik yondashuvlar va perinatal muammolar. — Toshkent: TTA, 2020.
2. Ayupova F.M. Akusherlik va ginekologiya. — Toshkent: Tibbiyot nashriyoti, 2019.
3. Bump R.C., Mattiasson A., Bø K., Brubaker L.P., DeLancey J.O.L., Klarskov P., Shull B.L., Smith A.R.B. The standardization of terminology of female pelvic organ prolapse and pelvic floor dysfunction // American Journal of Obstetrics and Gynecology. — 1996. — Vol. 175(1). — P. 10–17.
4. Barber M.D. Pelvic organ prolapse // BMJ. — 2016. — Vol. 354. — i3853.
5. Jelovsek J.E., Maher C., Barber M.D. Pelvic organ prolapse // The Lancet. — 2007. — Vol. 369(9566). — P. 1027–1038.
6. Weber A.M., Richter H.E. Pelvic organ prolapse // Obstetrics & Gynecology. — 2005. — Vol. 106(3). — P. 615–634.
7. Swift S.E., Tate S.B., Nicholas J. Correlation of symptoms with degree of pelvic organ support in a general population of women // American Journal of Obstetrics and Gynecology. — 2003. — Vol. 189(2). — P. 372–377.
8. Liger Guerra C., Sabonet Morente L., Hidalgo Fernandez J.M., Navarro Romero M., Espada Gonzalez C., Jimenez-Lopez J.S. Anatomical and functional outcomes after Manchester operation for pelvic organ prolapse // International Urogynecology Journal. — 2025.
9. Chen Y., Xu S., Luo N., Du L. Long-term outcomes of modified Manchester operation in women with pelvic organ prolapse // International Journal of Gynecology & Obstetrics. — 2025.

EDUCATIONAL QUESTION AS A MODERN METHODOLOGY FOR TEACHING MEDICAL UNIVERSITY STUDENTS

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Abstract: One of the most promising technologies in modern pedagogy is educational quest. This method combines elements of problem-based learning, role-based interaction, teamwork, and practical activity. Unlike traditional forms of teaching, quest involves students' active independent work, finding solutions in non-standard situations, and applying acquired knowledge in conditions close to professional practice.

Keywords: educational quest, technology, students, practice

ОБРАЗОВАТЕЛЬНЫЙ КВЕСТ-КАК СОВРЕМЕННАЯ МЕТОДИКА ОБУЧЕНИЯ СТУДЕНТОВ МЕДИЦИНСКОГО ВУЗА

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Аннотация: Одной из наиболее перспективных технологий в современной педагогике является образовательный квест. Данный метод сочетает в себе элементы проблемного обучения, ролевого взаимодействия, командной работы и практической деятельности. В отличие от традиционных форм преподавания, квест предполагает активную самостоятельную работу студентов, поиск решений в нестандартных ситуациях и применение полученных знаний в условиях, приближённых к профессиональной практике.

Ключевые слова: образовательный квест, технология, студенты, практика

Актуальность: В современных условиях модернизации системы высшего образования особое значение приобретает внедрение инновационных педагогических технологий, направленных на развитие профессиональных компетенций, самостоятельного мышления и коммуникативных навыков

обучающихся. В связи с этим возрастает интерес к интерактивным формам обучения, одной из которых является образовательный квест. Образовательный квест как современная методика обучения ориентирована не только на получение знаний, но и на способы их усвоения, на особенности мышления и на развитие коммуникативных навыков обучающихся. Квест позволяет моделировать реальные профессиональные ситуации, приближенные к будущей врачебной практике, что способствует более эффективной адаптации студентов к профессиональной деятельности.

Цель: создание условий для овладения обучающимися методологией инновационной деятельности в профессиональной сфере посредством внедрения образовательного квеста, а также совместная отработка методических подходов и способов решения поставленных учебно-практических задач.

Задачи: определить педагогические возможности образовательного квеста в медицинском образовании, разработать алгоритм проведения образовательного квеста, сформировать у студентов навыки профессионального общения, сформировать умение анализировать полученную информацию и представлять результаты работы.

Тематика: образовательный квест-проблема, реализующая образовательные задачи, отличающаяся от учебной проблемы элементами сюжета, ролевой игры, связанная с поиском и обнаружением мест, объектов, людей, информации, для решения которой используются ресурсы какой-либо территории или информационные ресурсы.

Алгоритм: структура образовательного квеста может быть следующей: введение (в котором прописывается сюжет, роли); задания (этапы, вопросы, ролевые задания); порядок выполнения (бонусы, штрафы); оценка (итоги, призы). Выполнение проекта должно проходить в три этапа. Преподаватель

принимает участие только на первом этапе и на этапе проверки. Сначала он исполняет роль организатора. Работа заключается в определении задания для образованных микрогрупп, поля деятельности для каждого участника, последовательности действий и при необходимости помощи с литературой. Задание должно быть понятно и интересно обучающимся и самое главное – выполнимо. На втором этапе участники работают самостоятельно. Это выполнение задания и подготовка отчета. Третий этап предполагает представление результата проделанной работы и его проверка преподавателем, исправление ошибок. Квест может быть использован на практических занятиях с учетом будущей профессии. Так студенты медицинских вузов могут получить задание: «Произвести опрос пациента и подготовить отчет». Студенты делятся на микрогруппы. Каждая микрогруппа получает заранее подготовленную карточку с адресом и именем пациента. Задача участников игры: произвести опрос больного и подготовить отчет о его состоянии. Вместе с преподавателем оговариваются разделы медкарты, по которым необходимо будет собрать информацию: паспортные данные, жалобы пациента, история заболевания, проводимое лечение и его эффективность. Каждый участник группы получает свое задание: собрать информацию по определенному пункту плана Вопросы по каждому пункту плана, которые будут задаваться, их последовательность могут оговариваться заранее преподавателем на подготовительном этапе, или можно предоставить только разделы медкарты. Важно напомнить об уточняющих вопросах: куда отдает боль, какой кашель: сухой или влажный и прочее. Преподаватель сам определяет поле деятельности каждого участника. Роли могут быть распределены по-разному: в зависимости от уровня владения языком назначается тот, кто будет производить непосредственно опрос больного, кто будет фиксировать ответы, снимать видео и т.д. На заключительном этапе каждая группа должна подготовить отчет о

состоянии пациента. Результат самостоятельной работы группы должен быть четко определен. Например, отчет о результатах опроса пациента, согласно собранной информации. Он может быть представлен в устной или письменной форме. При проверке преподавателем учитывается в первую очередь правильность в употреблении форм и конструкций, связность текста, грамматика

Выводы:

1.Использование квест-технологий делает образовательный процесс более интерактивным, практико-ориентированным и эффективным. Внедрение образовательных квестов в систему медицинского образования способствует подготовке конкурентоспособных специалистов, способных эффективно работать в условиях современной системы здравоохранения.

2.Образовательный квест является эффективной инновационной методикой обучения студентов медицинского вуза. Данная технология позволяет моделировать реальные ситуации профессионального общения, развивает практические и коммуникативные навыки, способствует формированию клинического мышления и повышает мотивацию обучающихся к изучению дисциплины.

СПИСОК ЛИТЕРАТУРЫ:

1.Кларин М.В. Инновационные модели обучения в зарубежных педагогических поисках. — Москва, 2021.

2.Полат Е.С. Современные педагогические и информационные технологии в системе образования. — Москва: Академия, 2022.

3.Смирнов А.И. Современные образовательные технологии в медицине. – Санкт-Петербург, 2021. – 280 стр.

4.Garris R., Ahlers R., Driskell J. Games, motivation, and learning: A research and practice model. *Simulation & Gaming*. 2021;52(2):173–196.

5.Deterding S. Gamification in education and healthcare. *Educational Technology Research*. 2022;18(4):45–58.

Organization of Apple (*Malus domestica* Borkh.) Fruit Drying and Storage Technology in the Conditions of Sirdarya Region

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Abstract: This study is dedicated to the investigation of drying and storage technologies for apple (*Malus domestica* Borkh.) fruits in the conditions of Sirdarya region. The work analyzes the current state of apple cultivation, the biological and chemical properties of the fruit, and compares the methods of storage in fresh and dried forms. According to the research results, an average of 1.5 tons (15%) of dried product is obtained from 10 tons of fresh apples. The hot and dry climate of the region is favorable for solar drying, which ensures energy efficiency and increases profitability up to 35%. As a result of the study, an effective drying technology suitable for the region and practical recommendations were developed.

Keywords: *apple (Malus domestica), drying technology, Sirdarya region, solar drying, dried apple (dried slices), storage period, economic efficiency, fruit processing, profitability, natural-climatic conditions.*

Introduction

In our country, the cultivation of fruit trees has been developing since ancient times, and among them, the apple (*Malus domestica* Borkh.) occupies one of the leading positions. The apple stands out not only for its widespread cultivation, but also for its high nutritional value, beneficial properties for human health, and wide possibilities for processing. In various regions of the Republic of Uzbekistan, particularly in Sirdarya region, there are favorable soil and climatic conditions for apple cultivation. The

continental climate of the region, hot and dry summers, abundant sunlight, and irrigation opportunities create great potential for the development of apple orchards and the effective processing of the harvest.

Apple fruits contain high amounts of vitamin C, B-group vitamins, organic acids (mainly malic acid), pectin substances, sugars, and mineral elements (potassium, calcium, iron, and others). These substances improve metabolism in the human body, strengthen immunity, and play an important role in the prevention of cardiovascular diseases and certain types of cancer. Therefore, apples are consumed not only fresh, but are also widely used in industry in the form of juice, puree, jam, canned products, and especially dried products.

The Decree of the President of the Republic of Uzbekistan dated March 29, 2018, No. PF-5388 “On additional measures for the rapid development of fruit and vegetable growing in the Republic of Uzbekistan” and the Resolution dated December 11, 2019, No. PQ-4549 “On additional measures for further development of the fruit and vegetable and viticulture sector and the creation of a value-added chain in the field” set specific tasks for the modernization of fruit and vegetable growing, the introduction of a cluster system, and the development of product storage, processing, and export. Also, the Resolution dated December 15, 2021, No. PQ-52 “On measures to support the fruit and vegetable sector by the state and further development of the cluster and cooperation system in the industry” pays special attention to the integration of growing, storage, processing, and export processes of fruit and vegetable products, strengthening cluster activities, and creating a value-added chain. These documents serve to encourage the deep processing of fruits such as apples, particularly the introduction of drying technologies.

Today, the development of agriculture, providing the population with high-quality and safe food products, and increasing export potential is one of the priority

directions of state policy. As President Shavkat Mirziyoyev noted, the creation of a complete value chain — from the cultivation of agricultural products to their storage and deep processing — is an important factor in the sustainable development of the country's economy. In particular, the development of processing technologies in order to prevent the loss of fruit harvest and create added value has been identified as a pressing task.

Relevance and necessity of the topic:

Currently, the volume of apple cultivation is growing year by year on a global scale. However, apple fruits are a perishable product that is demanding in terms of storage. Due to improper storage or lack of sufficient technologies, a significant part of the harvest is lost. One of the most effective and economically beneficial ways to reduce these losses is the widespread introduction of fruit drying technology. Through drying, it is possible to significantly reduce the moisture content of the product, extend the shelf life from several months to years, reduce transportation costs, and ensure availability on the market throughout the year.

In the conditions of Sirdarya region, the relevance of this topic is even higher. The sharply continental climate of the region — hot and dry summers, abundant sunlight, and low relative humidity — creates very favorable conditions for drying apple fruits using natural and hybrid methods. At the same time, despite the growing volume of apple cultivation in the region, the insufficient modern storage and processing infrastructure leads to the loss of part of the harvest. By improving drying technology, it is possible not only to reduce losses, but also to produce new types of products (dried apple slices, chips, dried apples, etc.), increase export potential, and raise the income of farms.

The large-scale losses arising due to insufficient storage and processing technologies; the availability of opportunities to effectively use the climatic features of Sirdarya region; the need to introduce energy-saving and environmentally friendly

drying methods; the high market demand for dried products and the potential to create added value; compliance with the tasks defined in the Development Strategy of New Uzbekistan for 2022–2026 on intensive development of agriculture, expansion of the processing industry, and increasing farmers' income. Thus, the scientific study of apple fruit drying and storage technology in the conditions of Sirdarya region, analysis of existing methods, and development of effective technological schemes suitable for the region is an urgent and necessary scientific-practical issue of today.

Purpose of the Study:

The main purpose of this graduation qualification work is to scientifically study the technology of drying and storage of apple (*Malus domestica* Borkh.) fruits in the conditions of Sirdarya region, to analyze existing methods, and to develop effective technological schemes suitable for the region.

Objectives of the Study:

To analyze the importance of apples in the national economy and the state of their cultivation in Sirdarya region;

To study the biological, chemical, and technological properties of apple fruits;

To analyze and compare various technologies for drying apple fruits;

To determine the effect of the drying process on product quality (color, taste, nutritional value) and shelf life;

To substantiate the optimal conditions for storing dried products;

To evaluate the economic efficiency of drying technology;

To develop practical recommendations and technological schemes.

Object of the Study:

Apple (*Malus domestica* Borkh.) fruits and the processes of their drying and storage.

Subject of the Study:

Technology of drying apple fruits, drying regimes, and their impact on product quality and shelf life.

Practical Significance of the Work:

The recommendations and technological schemes developed based on the research results can be applied by farms, fruit processing enterprises, and clusters in Sirdarya region. This will serve to reduce harvest losses, produce new types of products, manufacture environmentally clean products, and increase farmers' income.

2.3. Methods of Storing Dried Apple Fruits.

Apple (*Malus domestica* Borkh.) fruits are considered one of the products with high nutritional value and beneficial for human health. Therefore, storing them in various ways for year-round consumption is of great importance. In practice, apple fruits are mainly stored in two ways: fresh and in dried form.

Storing apples in fresh form is a method aimed at preserving the natural state of the fruit to the maximum extent. After harvesting, the fruits are sorted, mechanically damaged ones are separated, and placed under special storage conditions. The optimal conditions for storing fresh apples are a temperature around 0...+2°C and relative humidity of 85–90%. Under such conditions, apple fruits can maintain their quality from 3 months to 6–8 months, depending on the variety. When controlled atmosphere (CA) technology is applied in refrigerated warehouses, the storage period is extended even further.

The advantage of fresh storage is that the fruit retains its natural taste, aroma, and nutritional substances. However, this method also has disadvantages: it requires special cooling equipment, high energy consumption, and in case of improper storage conditions, rotting, drying out, and disease may occur. In addition, the quality indicators of the fruit may decrease during long-term storage.

The storability of apples is determined by their ripening characteristics during

storage. Early-ripening varieties have a short storage period, while late-ripening varieties can be stored for up to 7–8 months. Apples are placed in boxes for storage. Wrapping them in paper improves storability. Paper or wood shavings can also be placed between the apples in the boxes.

The boxes are placed 25–30 cm away from the warehouse walls, with a two-meter passage left between the rows of boxes. One stack should contain 7–8 boxes. There should be 50–60 cm between the top box and the warehouse ceiling. Boxes with apples are arranged in stacks in a checkerboard pattern, three by three and in pairs. Boxes containing fruits of the same variety, grade, quality, and size are stacked together.

It should be noted that insufficiently ripe apples do not ripen at low temperatures; instead, they harden and their taste and aroma remain unchanged. Therefore, it is necessary to adjust the air temperature in the warehouse according to the ripeness of the apples. Cold-resistant apple varieties are stored at -1 to -2°C . Such apples do not store well for long periods at warm temperatures. Varieties such as Pepin Shafran, Kandil Sinap, Renet Simirenko, Golden Delicious, Boyken, Renet Kichunova, Sari Sinap, and Rozmarin are considered cold-resistant. Non-cold-resistant varieties are stored at 2 – 4°C . Varieties such as Mart, Suvorovets, Aprel, Jonathan, Starking, Antonovka, Renet Shampan, and Ordinary Antonovka belong to the non-cold-resistant group.

The relative humidity during apple storage should be 85–95%. Cooling of the warehouse is achieved by intensively circulating the air until the required storage temperature is reached, with an recommended air flow velocity of 0.2–0.3 m/sec between the stacks.

Managing the gas environment during storage in the warehouse is important. This is particularly effective when storing varieties that are not resistant to low temperatures.

Usually, fruits harvested from the lower branches of the apple tree store better. Therefore, they are picked and stored separately. After harvesting, apples must be delivered to the fruit warehouse within 4–8 hours without delay.

Table 1

Dependence of Apple Quality on Storage Method

Apple Variety	Storage Method	Fruit Quality, %	
		Standard	Waste
Simirenko	Control	89,3	11,7
	Polyethylene bags, containers	100	-
Rozmarin	Control	97,5	2,5
	Polyethylene bags, containers	100	-

Before storing, apples are pre-cooled in special chambers. Every day, 10–15% of the fruit warehouse chamber’s capacity is filled with apples. The chamber is fully filled within 7–10 days. The air in the chambers is gradually cooled to 4–6°C, after which it is maintained at the temperature level required for the specific variety.

High-grade and first-grade apples are stored for a long period, while second- and third-grade apples are placed for storage for 2–3 months. They are stored in boxes, cardboard cartons, and containers. Storing fruits in containers ensures more efficient use of the warehouse’s 1 m³ volume. In this case, the density is 250–300 kg per 1 m³ of usable volume when stored in boxes, and 400 kg when stored in containers.

Placing apples in polyethylene film is widely used in storage. Polyethylene bags with a capacity of 1–3 kg are used for this purpose. Inside these bags, the oxygen content reaches 14–16% and carbon dioxide reaches 5–7% within 1.5–2 months. After placing the polyethylene bags in the warehouse, their openings are left open for two to

three days; once the apples are cooled, the openings are sealed. The polyethylene bags are placed in containers and then stored in the warehouse.

The use of polyethylene containers for apple storage gives good results. Containers that can hold 600–800 kg of fruit are used. Special holes are made in polyethylene containers for controlled atmosphere management.

The variety diversity of apples significantly complicates their storage, as each variety requires a specific storage regime. During the storage period, apples must be regularly inspected. Boxes with apples should be checked once or twice a month. If any defects are found, the fruits are re-sorted.

Dried storage of apples is a method that ensures long-term preservation by reducing the moisture content in the fruit. During the drying process, up to 80–85% of the water evaporates, as a result of which the development of microorganisms stops. When stored under proper conditions, dried apples (qoqi) remain unspoiled for one year or even longer.

The drying technology consists of several stages: sorting and washing the fruits, slicing, pre-treatment to preserve color (for example, holding in salt or lemon solution), smoking, and the drying process itself. Drying is carried out either in the sun or in special dryers. The moisture content of the finished product should not exceed 18–20%.

The main advantages of dried storage are as follows:

- The product can be stored for a long time;
- Transportation is easy and cheap;
- The volume and weight of the product decrease;
- Year-round consumption becomes possible.

However, this method also has some disadvantages. During drying, the external appearance of the fruit changes, and some vitamins (especially vitamin C) are

partially lost. In addition, improper drying technology can lead to a decrease in product quality.

2.4. Economic Efficiency of Dried Storage of Apple Fruits in Sirdarya Region.

Drying and storing apple fruits is one of the important and economically effective directions in the processing of agricultural products. This technology provides the opportunity to store perishable products for a long time, reduce losses, and create added value.

When stored fresh, apple fruits suffer a certain amount of losses. During storage, up to 20–30% of the harvest may be lost due to rotting, drying out, and mechanical damage. Drying technology almost completely eliminates these losses, because reducing the moisture content in the product stops the development of microorganisms and allows the product to be stored for a long period.

During the drying process, an average of 10–20% of the finished product is obtained. This indicator varies depending on the variety of the fruit, its composition, and the drying method used. As a result of drying, the volume and weight of the product decrease, which leads to a reduction in transportation and storage costs. At the same time, dried apple products have high added value and are sold at a higher price compared to fresh apples.

The economic efficiency of dried storage is determined by several factors. Firstly, the shelf life of the product increases dramatically. While fresh apples are usually stored for several months, dried products maintain their quality for one year or more. Secondly, the opportunity to sell the product throughout the year emerges, which helps to become independent of seasonal price fluctuations. Thirdly, dried products are export-oriented and enjoy high demand in foreign markets.

However, economic efficiency directly depends on the selling price of the product. If dried apples are sold at a low price, production costs may not be covered.

Therefore, the price of the dried product must be high enough to cover the cost of raw materials and processing expenses. Practice shows that production becomes economically profitable only when the price of dried apples is several times higher than that of fresh apples.

In the conditions of Sirdarya region, the economic efficiency of apple drying and storage technology can be even higher. Because the hot and dry climate of the region allows the widespread use of solar drying methods. This significantly reduces energy costs and lowers the cost price of the product. As a result, farms have the opportunity to produce high-value products with low costs.

The dry continental climate of Sirdarya region and the high level of solar radiation create enormous opportunities for fruit processing, particularly for the introduction of solar drying technology. The “Golden Delicious” variety, selected as the research object, stands out among other varieties with its high dry matter content (14-16%) and dense flesh structure. This guarantees high product yield and quality.

From 10 tons of fresh apple fruits, an average of 1.5 tons of finished product is obtained. According to calculations, total costs amount to 50 million soums, and gross income equals 67.5 million soums. As a result, a net profit of 17.5 million soums is obtained, and the profitability rate reaches 35% (Table 2).

Table 2.

Economic Efficiency of the Solar Drying Method

№	Indicators	Quantity	Price (soums)	Total (soums)
1	Raw material (apples)	10 000 kg	4 000	40 000 000
2	Drying costs (solar)	-	-	5 000 000
3	Packaging and transportation	-	-	5 000 000
4	Total costs			50 000 000

5	Dried product (qoqi)	1 500 kg	-	-
6	Selling price of 1 kg dried apple	-	45 000	-
7	Gross income			67 500 000
8	Net profit			17 500 000
9	Profitability			35%

These indicators clearly demonstrate that the technology of drying and storing apple fruits is economically profitable. Especially considering the rapid perishability of the raw product, creating added value through its processing is of great importance. Through the drying process, the volume of the product decreases, but its market value increases several times. As a result, farms and processing enterprises gain the opportunity to earn high income.

In addition, production costs can be significantly reduced by applying energy-saving technologies. For example, the use of solar energy or the introduction of combined drying methods reduces electricity consumption and increases the overall level of profitability.

Apple Fruit Drying Processes

Drying of apple fruits consists of several sequential technological stages, each of which directly affects the quality of the finished product:

Sorting and cleaning – freshly harvested apple fruits are sorted according to quality, damaged and diseased fruits are separated, and dust and dirt are removed.

Washing – the fruits are washed in clean water to remove external microorganisms.

Slicing – apples are cut into slices of equal thickness, which ensures uniform drying.

Pre-treatment – treatment with ascorbic acid or citric acid solution can be applied to prevent browning.

Drying process – the main stage, in which the fruits are dried in the sun or in special dryers under certain temperature and humidity conditions.

Cooling – the dried product is cooled under natural conditions.

Packaging and storage – the finished product is placed in packaging that meets hygienic requirements and stored in a dry, cool place.

Advantages of Drying Technology

Apple fruit drying has a number of important advantages:

Extends shelf life – while fresh apples can be stored for 1–2 months, dried products can be stored for up to 1 year;

Reduces losses – prevents spoilage and waste of the harvest;

Transportation convenience – transportation costs are reduced due to decreased product weight;

High added value – dried products are sold at a higher price on the market;

Export opportunities – there is high demand for dried fruits in the international market;

Environmental cleanliness – especially in solar drying, no chemical substances are used;

Year-round sales – the product can be sold at any time.

Conclusion

1. In the conditions of Sirdarya region, there are favorable natural and climatic resources for growing intensive and semi-intensive apple varieties and processing their harvest. The continental climate of the region, especially the hot and dry air flow in summer and autumn, allows fruits to be dried using low-cost methods.

2. The nutritional value of apple fruits is determined by the sugars, organic acids, and pectin substances they contain. Strict adherence to technological regimes is required to preserve these substances to the maximum extent during the drying process.

3. Analysis of technological indicators shows that from 10 tons of fresh apples, an average of 1.5 tons (15%) of finished product (dried apples) is obtained. This may vary depending on the variety and dry matter content.

4. The use of solar energy (natural drying) or combined methods significantly reduces electricity consumption. This makes it possible to increase production profitability from 22.7% to 35–43%.

Recommendations

1. Introduce a system of deep processing (drying) of fruits along with selling them fresh in farms of Sirdarya region in order to reduce harvest losses.

2. To reduce production costs and increase product competitiveness, abandon traditional electric ovens and use solar dryers (solar collectors) or combined drying technologies.

3. When storing dried apple products, do not allow the moisture level to exceed 14-16%, and use dry, well-ventilated warehouses protected from pests..

References

1. Fayziyev, J.N. (2020). Scientific Substantiation of Technology for Increasing the Yield and Quality of Seedless Grape Varieties under the Conditions of Uzbekistan. Author's abstract of the dissertation. Tashkent. pp. 5–18.
2. Egamberdiyev, P.E. (2023). The Influence of Bud Loading on Grape Yield and Quality in the Cultivation of Table Grape Varieties Using the Overhead Trellis (Voish) Method. Dissertation. Tashkent. pp. 52–85.
3. Сапаева, З. Ш., & Абдуллаева, Б. А. (2021). Влияние низкотемпературной обработки некоторых сортов винограда на их аминокислотный

- состав. *Молодой ученый*, (22), 117-120.
4. Файзиев, Ж. Н., Эгамбердиев, П. Э., & Жўлбеков, И. С. Ў. (2022). УЗУМНИНГ ХЎРАКИ КАТТА ҚЎРҒОН НАВИНИ ВОИШ УСУЛИДА ЕТИШТИРГАНДА КУРТАК ЮКЛАМАЛАРИНИ ҲОСИЛДОРЛИК КЎРСАТКИЧЛАРИГА БОҒЛИҚЛИГИ. *Academic research in educational sciences*, 3(Special Issue 1), 254-257.
 5. Ergashovich, E. P., Mardonovich, K. F., Ogli, J. I. S. O. A. D. U., Shavkatovich, A. A., Djumanazarova, S. D., & Raimovna, R. D. (2022). Effect of buds particle on productivity and quality when growing Katta Kurgan table variety grapes by voish method.
 6. Jo'lbekov, I., Ungarov, A., Umrzoqova, I., & Adhamov, A. (2023). UZUMNING SANOATBOP NAVLARINI YETISHRISH USULLARIGA DOIR MAVZULARNI INNOVATION TEXNOLOGIYALARDAN FOYDALANGAN HOLDA TASHKIL ETISH. *Евразийский журнал технологий и инноваций*, 1(6), 89-93.
 7. Rakhmatov, O., Zhulbekov, I. S., & Kabulov, I. M. (2023). Experimental study of a drying installation for drying melon with IR-radiation. In *E3S Web of Conferences* (Vol. 443, p. 02005). EDP Sciences.
 8. Жўлбеков, И. С. Ў. (2024). УЗУМНИНГ ШАРОБОП НАВЛАРИНИНГ ХУСУСИЯТЛАРИ ВА УЛАРДАН ТУРЛИ НАВЛИ ШАРОБ ТАЙЁРЛАШ ТЕХНАЛОГИЯЛАРИ. *Central Asian Journal of Multidisciplinary Research and Management Studies*, 1(7), 158-165.
 9. Khujakulov, F., Egamberdiev, P., Julbekov, I., Abduraimov, D., & Ungarov, A. (2023). The dependence of grape feeding on the productivity indicator and harvest quality of rizamat and large dry varieties.
 10. Sultanov, K., Egamberdiev, P., & Khujakulov, F. (2024). THE DEPENDENCE OF

- THE AMOUNT OF ORGANIC MATTER ON THE DEVELOPMENT OF THE ROOTS OF GRAPE VARIETIES. *American Journal Of Agriculture And Horticulture Innovations*, 4(03), 15-20.
11. Kamoliddin, S., Pulatjon, E., & Ibrohim, J. (2024). DEPENDENCE ON THE MECHANICAL COMPOSITION OF THE APPLICATION OF GROWTH SUBSTANCES TO THE GROWING VARIETIES OF GRAPES. *Universum: технические науки*, 8(3 (120)), 37-40.
12. Weizhou, Z., O'G, J. L. I. S., Qizi, S. S. I., Qizi, J. R. F. O., & Qizi, O. G. X. (2025). UZUM KO 'CHATLARINI EKISH SXEMASI VA NAVLARNI JOYLASHTIRISH. *Central Asian Journal of Academic Research*, 3(4), 94-97.
13. Sattarov, K., Eshmurodov, D., Mamatkulova, M., Julbekov, I., & Kharsika, I. (2025). The impact of active packaging and nanocoatings on the safety and shelf life of dairy products. *Scientific Journal'Animal Science & Food Technologies'*, 16(2).
14. Эгамбердиев, П. Э., Хужакулов, Ф. М., Жулбеков, И. С. Ў., & Абдураимов, Д. У. Ў. (2025). ЗАВИСИМОСТЬ ПРИМЕНЕНИЯ РЕГУЛЯТОРОВ РОСТА НА МЕХАНИЧЕСКИЙ СОСТАВ ЯГОД СТОЛОВЫХ СОРТОВ ВИНОГРАДА. *Universum: технические науки*, 6(12 (141)), 31-35.
15. O'G, J. L. I. S., & Qizi, U. I. S. (2025). UZUMNI HOSILDORLIGI VA SIFATIGA ORGANIK VA MINERAL O 'G 'ITLARNING TA'SIRI. *Central Asian Journal of Academic Research*, 3(4-3), 61-66.
16. Weizhou, Z., O'G, J. L. I. S., Qizi, S. S. I., Qizi, J. R. F. O., & Qizi, O. G. X. (2025). UZUM KO 'CHATLARINI EKISH SXEMASI VA NAVLARNI JOYLASHTIRISH. *Central Asian Journal of Academic Research*, 3(4), 94-97.
17. Жулбеков, И. С. У. (2025). ВЛИЯНИЕ ЦИТОГУМИНОВОГО ВЕЩЕСТВА НА РАЗМЕР ЯГОД И МОРФОЛОГИЧЕСКИЕ ОСОБЕННОСТИ КИШМИШНЫХ СОРТОВ ВИНОГРАДА. *Universum: технические науки*, 4(1 (130)), 9-11.

Imam an-Nawawi's "Al-Arba'in" and Its Islamic-Moral Significance

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Annotation

This article is dedicated to the famous work "Al-Arba'in" (Forty Hadiths) by the great Muhaddith Imam an-Nawawi. It briefly covers Imam an-Nawawi's life and scholarly legacy, and analyzes the purpose, content, structure, and educational significance of the book. Through key hadiths included in the collection — such as those on intention (niyyah), faith (iman), excellence (ihsan), halal and haram, brotherhood, sincere advice, and controlling anger — the author highlights the role of "Arba'in" not only as a religious text but also as an important source of moral and social education. The article emphasizes that the work remains highly relevant today for the moral upbringing of youth and spiritual development.

Keywords: Imam an-Nawawi, Al-Arba'in, Forty Hadiths, Islamic Ethics, Moral Education, Hadith Collection, Faith and Ihsan, Halal and Haram, Intention (Niyyah)

Imom Navaviyning "Arbain" asari

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Anotatsiya: Ushbu maqola buyuk muhaddis Imom Navaviyning "Arbain" (Qirq hadis) asariga bag'ishlangan. Unda Imom Navaviyning hayoti va ilmiy merosi qisqacha yoritilib, asarning yaratilish maqsadi, mazmuni, tuzilishi va tarbiyaviy ahamiyati tahlil qilinadi. Muallif asarda keltirilgan muhim hadislar (niyat, iymon, ihson, halol-harom, birodarlik, nasihat, g'azabni tiyish va boshqalar) misolida "Arbain"ning nafaqat diniy, balki axloqiy va ijtimoiy tarbiya manbai sifatidagi o'rnini ochib beradi. Asar bugungi kunda ham yoshlar tarbiyasi va ma'naviy kamolotda dolzarbligini saqlab qolayotgani ta'kidlanadi.

Kalit so'zlar :Imom Navaviy, Arbain, Qirq hadis, Islom axloqi, Ma'naviy tarbiya, Hadislar to'plami, Iymon va ihson, Halol-harom, Niyat hadisi

Islom tamadduni tarixida insonning e'tiqodi, axloqi va ma'naviy kamolotini shakllantirishga xizmat qilgan ko'plab nodir asarlar yaratilgan. Ana shunday bebaho manbalardan biri buyuk muhaddis, faqih va mutafakkir Imom Navaviyning "Arbain" asaridir. Mazkur asar musulmon olamida asrlar davomida katta ehtirom bilan o'qib kelinayotgan, diniy ta'lim va axloqiy tarbiyada muhim o'rin tutgan hadislar to'plami hisoblanadi. Uning hajmi katta bo'lmasa-da, mazmuni nihoyatda chuqur, tarbiyaviy ta'siri esa g'oyat kengdir. Shu sababli "Arbain" nafaqat madrasa va ilm dargohlarida, balki oddiy kitobxonlar, yoshlar va din asoslarini o'rganmoqchi bo'lgan insonlar orasida ham keng tarqalgan ¹.

Imom Navaviy o'z ilmiy merosi orqali islom dinining mohiyatini sodda, tushunarli va ta'sirchan shaklda bayon qilib bergan allomalardan biridir. U zotning "Riyozus-solihin", "Al-Azkor", "Sharh Sahih Muslim" kabi asarlari qatorida "Arbain" ham alohida mavqega ega. Chunki bu kitobda dinning eng muhim masalalarini o'zida mujassam etgan hadislar saralab jamlangan. Asardagi rivoyatlar insonning niyati, iymoni, ibodati, halol-haromga munosabati, odobi, birodarlik tuyg'usi, nasihat, sabr, tavoze' va qalb pokligi kabi masalalarni qamrab oladi. Demak, "Arbain" faqat bir hadis to'plami emas, balki musulmon kishining ma'naviy hayotini tartibga soluvchi muhim qo'llanmadir ². Bu asarning qadri, avvalo, unda tanlangan hadislarning mazmuniy salmog'ida namoyon bo'ladi.

Imom Navaviy ko'p rivoyatlar ichidan aynan ummat uchun eng zarur, eng umumiy va eng ta'sirchan hadislarni tanlagan. Natijada asar islomning asosiy qoidalarini qisqa, lekin sermazmun tarzda ifodalovchi manbaga aylangan. Shu bois uni o'qigan inson din haqida umumiy va mustahkam tasavvurga ega bo'ladi, o'zining kundalik hayotida amal qilishi zarur bo'lgan ma'naviy mezonlarni anglaydi. Bugungi kunda ham

¹ Imom an-Navaviy. Al-Arba'in an-Navaviyya. - Bayrut: Dor al-Minhaj, 2009. - B. 5.

² Abdulg'aniy ad-Daqqor. Al-Imom an-Navaviy. - Damashq: Dor al-Qalam, 1994. - B. 17.

“Arbain” asari o'z ahamiyatini yo'qotmagan. Aksincha, zamonaviy hayotning murakkabligi, ma'naviy bo'shliq, axloqiy muammolar va turli g'oyaviy ta'sirlar kuchaygan bir paytda bunday ixcham va ishonchli manbalarga ehtiyoj yanada ortmoqda. Inson ko'pincha murakkab savollarga oddiy, ravshan va chuqur javob izlaydi. “Arbain” esa aynan shunday ehtiyojni qondira oladigan asarlardan biridir. Mazkur maqolada Imom Navaviyning hayoti va ilmiy merosi haqida qisqacha ma'lumot berilib, “Arbain” asarining yaratilish sabablari, mazmuni, uslubi va islomiy-ma'rifiy ahamiyati yoritiladi.

Imom Navaviyning to'liq ismi Abu Zakariyo Yahyo ibn Sharaf an-Navaviydir. U hijriy 631 yilda, milodiy 1233 yilda Shom o'lkasidagi Navo qishlog'ida tavallud topgan. U yashagan davr ilmiy jihatdan sermahsul, ayni paytda siyosiy jihatdan murakkab bir davr edi. Shunga qaramay, Imom Navaviy juda yoshligidan ilmga chuqur berilib, qisqa vaqt ichida hadis, fiqh, tafsir, lug'at va usul ilmlarida katta shuhrat qozongan. Uning hayoti taqvo, zohidlik, kamtarlik va ilm yo'lidagi sidqidildan xizmat bilan o'tgan. U ilmni faqat o'rganmagan, balki tartibga solib, ummatga foydali shaklda taqdim eta olgan ulug' alloma ham bo'lgan³. Hadis ilmi tarixida “qirq hadis” to'plash an'anasi qadimdan mavjud bo'lgan. Ko'plab olimlar muayyan mavzularga oid yoki dinning asosiy masalalarini qamrab olgan qirqta hadisni jamlab, risolalar tuzganlar. Imom Navaviy ham shu an'anani davom ettirgan, lekin uning “Arbain”i mazmuniy teranligi va tanlovining puxtaligi bilan alohida ajralib turadi. Asar aslida qirqdan ortiq hadisni o'z ichiga oladi, biroq “qirq hadis” an'anasi doirasida mashhur bo'lib ketgan. U zotning maqsadi hadislarning sonini to'ldirish emas, balki dinning eng muhim ustunlarini ifodalovchi rivoyatlarni bir joyga jamlash edi⁴. “Arbain” asari o'zining tuzilishi jihatidan sodda, lekin ichki mazmuni jihatidan nihoyatda puxta. Undagi har bir hadis musulmon hayotining muhim bir tomonini yoritadi. Asarni mutolaa qilgan odam islom faqat

³ Abdulg'aniy ad-Daqqor. Al-Imom an-Navaviy. - Damashq: Dor al-Qalam, 1994. - B. 42.

⁴ Jaloliddin as-Suyuti. Sharh al-Arba'in an-Navaviyya. - Bayrut: Dor al-Kutub al-Ilmiyya, 2004. - B. 8.

marosimlar yig'indisi emas, balki niyat, qalb, amal, axloq va ijtimoiy mas'uliyat uyg'unligidan iborat mukammal hayot nizomi ekanini anglaydi. Shu bois “Arbain” asari asrlar davomida sevib o'qilgan, sharhlangan, yod olingan va amalda qo'llanilgan. Hozirgi kunda ham uning ahamiyati pasaymagan, aksincha, ma'naviy tarbiya manbai sifatida yanada qadrlanmoqda.

Asosiy qism

Imom Navaviyning ilmiy merosi juda boy va serqirradir. U faqat hadis olimi emas, balki fiqh, usul, axloq va ibodat masalalarida ham yuksak salohiyat egasi bo'lgan. Uning asarlarida chuqur ilm bilan amaliy hayotga yaqinlik uyg'unlashib ketadi. “Arbain” ham aynan shu xususiyatni yaqqol ko'rsatadi. Bu asarda Imom Navaviy diniy ilmlarni murakkab uslubda emas, balki qalbgaga tez yetib boradigan, yodda saqlash oson bo'lgan va amalda qo'llash mumkin bo'lgan shaklda taqdim etgan. Natijada asar keng kitobxonlar ommasi uchun ham tushunarli bo'lib qolgan.

Asarning eng mashhur hadislaridan biri “Amallar niyatlarga bog'liqdir” mazmunidagi rivoyatdir⁵. Ushbu hadis islom axloqi va ibodatining asosiy tamoyillaridan biri hisoblanadi. Chunki insonning qilayotgan har bir ishi tashqi shakliga qarab emas, balki ichki maqsadiga qarab baholanadi. Bir amal tashqi tomondan juda go'zal ko'rinishi mumkin, lekin agar uning ortida riya, manfaatchilik yoki noto'g'ri maqsad yotsa, u amalning qadri kamayadi. Aksincha, oddiy bir ish samimiy niyat bilan bajarilsa, ibodat darajasiga ko'tarilishi mumkin. Masalan, ilm olish, halol mehnat qilish, oilani boqish, birovga yordam berish yoki yaxshi so'z aytish kabi ishlar to'g'ri niyat bilan savobli amalga aylanadi. Shu jihatdan bu hadis butun musulmon hayotining ichki mezoni vazifasini bajaradi. “Arbain”da keltirilgan Jibril hadisi esa islom dinining juda muhim tushunchalarini bir joyda jamlagani bilan alohida qimmatga ega⁶. Ushbu hadisda iymon,

⁵ Imom al-Buxoriy. Sahih al-Buxoriy. - Bayrut: Dor Ibn Kasir, 2002. - B. 3.

⁶ Imom Muslim. Sahih Muslim. - Bayrut: Dor al-Kutub al-Ilmiyya, 2003. - B. 24.

islom va ihson masalalari tushuntiriladi. Iymon qalb bilan tasdiqlanadigan e'tiqod asoslarini bildirsa, islom insonning tashqi amallarida namoyon bo'ladigan ibodat tizimini anglatadi. Ihson esa dindorlikning eng yuqori darajasi bo'lib, insonning Allohni ko'rib turgandek ibodat qilishi, agar o'zi Uni ko'rmasa ham, Alloh uni ko'rib turganini his etishidir. Mazkur hadis "Arbain"ning markaziy rivoyatlaridan biri bo'lib, u orqali dinning ichki va tashqi tomonlari uyg'un holda tushuntiriladi. Demak, musulmon shaxsining kamoloti faqat e'tiqod yoki faqat amal bilan emas, balki ikkalasining ihlos va hushyorlik bilan birlashuvi orqali yuzaga keladi. Asardagi yana bir muhim hadis halol va harom masalasiga bag'ishlangan. Unda halol narsalar aniq, harom narsalar ham aniq, ikkisining orasida esa shubhali narsalar borligi bayon qilinadi⁷. Kim ana shu shubhali narsalardan saqlansa, o'z dinini va obro'sini saqlagan bo'ladi. Bu hadismusulmon kishining ehtiyotkor yashashi, o'zining topayotgan rizqi, qilayotgan savdosi, kundalik odatlari va muomalalariga mas'uliyat bilan qarashi kerakligini o'rgatadi. Bugungi hayotda ayniqsa moliyaviy munosabatlar, reklama, ijtimoiy tarmoq faoliyati, turli xizmatlar va kasblar ko'paygan sari halol-harom masalasi yanada murakkablashmoqda. Shunday vaziyatda ushbu hadis insonni nafaqat hukmiy, balki ma'naviy hushyorlikka ham chaqiradi. Inson ba'zan bir ishning rasman joiz yoki nojoiz ekanidan ham oldin, uning qalbini qanday holatga olib borishini o'ylashi kerak bo'ladi.

Imom Navaviy "Arbain" orqali dinning faqat shaxsiy ibodatlardan iborat emasligini ham ko'rsatadi. Asardagi ko'plab hadislar odamlar bilan munosabat, jamiyatdagi o'rin, birodarlik, samimiyat va mehr-oqibatni tarbiyalaydi. Masalan, "O'zing uchun yaxshi ko'rgan narsani birodaring uchun ham yaxshi ko'rmaguningcha komil mo'min bo'la olmaysan" mazmunidagi hadis musulmon jamiyatining axloqiy asoslaridan biridir⁸. Bu hadis insonni faqat o'z foydasini o'ylab yashashdan qaytaradi.

⁷ Imom al-Buxoriy. Sahih al-Buxoriy. - Bayrut: Dor Ibn Kasir, 2002. - B. 12.

⁸ Imom Muslim. Sahih Muslim. - Bayrut: Dor al-Kutub al-Ilmiyya, 2003. - B. 27.

Unda qalb kengligi, boshqalarga nisbatan ezgu niyat va hasaddan pok bo'lish talabi mujassam. Agar inson o'zi uchun orzu qilgan yaxshilikni boshqalar uchun ham istasa, jamiyatda ishonch, hurmat va hamjihatlik kuchayadi. Aks holda esa adovat, rashk va nizo ko'payadi. Demak, “Arbain”dagi hadislar jamiyat axloqini shakllantirishda ham katta ahamiyatga ega.

Asarda “Din nasihatdir” mazmunidagi mashhur hadis ham keltiriladi⁹. Bu hadis tashqi ko'rinishidan juda qisqa bo'lsa-da, ma'nosi nihoyatda keng. Bu yerda nasihat so'zi faqat og'zaki pand emas, balki xolislik, samimiylik, sadoqat va yaxshilikni istash ma'nolarini ham anglatadi. Allohga, Uning Kitobiga, Rasuliga, musulmon rahbarlariga va barcha musulmonlarga nisbatan xolis bo'lish komil dindorlik belgisi sifatida ko'rsatiladi. Bu hadis kishiga dinni faqat marosim yoki ibodatlar orqali emas, balki qalbdagi sadoqat va niyat pokligi orqali ham yashash lozimligini eslatadi. Dinning tashqi tomoni ko'zga ko'rinadi, lekin uning ichki ruhi aynan samimiyatda namoyon bo'ladi.

“Arbain” asarining tarbiyaviy ahamiyati shundaki, undagi hadislar insonni tashqi xulq-atvorini emas, avvalo ichki dunyosini isloh qilishga undaydi. Masalan, tilni tiyish haqidagi hadisda “Kim Allohga va oxirat kuniga iymon keltirgan bo'lsa, yaxshi gapirsin yoki jim tursin” degan mazmun beriladi. Bu hadis nutq madaniyatining qanchalik muhim ekanini ko'rsatadi. Ko'pchilik gunohlar til bilan sodir bo'ladi: g'iybat, tuhmat, yolg'on, masxara, qo'pol muomala, behuda gaplar shular jumlasidandir. Insonning qalbi pok bo'lsa ham, tilini ehtiyot qilmasa, jamiyatdagi munosabatlar buzilishi mumkin. Shuning uchun “Arbain” nafaqat qalb, balki so'z odobi haqida ham muhim ko'rsatmalar beradi. G'azabni tiyish haqidagi hadis ham asarda alohida o'ringa ega. Bir sahoba Rasulullohdan nasihat so'rganida, u zot unga “G'azablanma” deb javob berganlari mashhur. Bu qisqa nasihat ortida insonning butun ichki tarbiyasiga doir katta ma'no mujassam. Chunki boshqarilmagan g'azab ko'plab muammolarga sabab bo'ladi. Oiladagi

⁹ Imom Muslim. Sahih Muslim. - Bayrut: Dor al-Kutub al-Ilmiyya, 2003. - B. 29.

nizolar, do'stlar o'rtasidagi kelishmovchiliklar, ishdagi tortishuvlar va hatto jinoyatlarning bir qismi ham bir zumlik g'azab oqibatida sodir bo'ladi.

“Arbain” bu orqali insonning o'z hissiyotlarini boshqara bilishi ham taqvo va komillik mezonlaridan biri ekanini o'rgatadi. Asarda qo'shnichilik, mehmondo'stlik va ijtimoiy odobga oid hadislar ham mavjud. Bu rivoyatlar musulmon kishining dindorligi faqat ibodat bilan cheklanmasligini, balki uning atrofdagilarga qilayotgan muomalasida ham aks etishini ko'rsatadi. Qo'shniga ozor bermaslik, mehmonni hurmat qilish, zaif va muhtojlarga yengillik yaratish, insonlarga rahm-shafqat bilan qarash kabi tamoyillar jamiyatdagi sog'lom muhitni shakllantiradi. Shu sababli “Arbain”ni faqat diniy matn emas, balki ijtimoiy odob va insoniylik maktabi deb ham baholash mumkin. Imom Navaviyning hadis tanlashdagi uslubi ham diqqatga sazovor. U mayda va ikkinchi darajali rivoyatlarni emas, balki “javomi'ul-kalim” xususiyatiga ega hadislarini tanlagan. Ya'ni qisqa lafz bilan juda katta ma'noni ifodalovchi rivoyatlar asarning asosini tashkil etadi. Bu jihat “Arbain”ning o'qishga qulay, yod olishga oson va sharhlashga boy bo'lishini ta'minlagan. Har bir hadis ustida uzoq tafakkur yuritish, undan fiqhiy, axloqiy va tarbiyaviy xulosalar chiqarish mumkin. Aynan mana shu xususiyat tufayli asar asrlar davomida ulamolar tomonidan sharhlangan va talabalarga dars sifatida o'qitilgan.

“Arbain”ning ilmiy qimmatini shundaki, u islom ilmlarining turli yo'nalishlarini o'zida birlashtiradi. Unda aqida masalalari ham, fiqhiy qoidalar ham, axloqiy fazilatlar ham, qalb tarbiyasiga oid nozik ishoralar ham mavjud. Masalan, niyat hadisi usul va axloqqa bog'liq bo'lsa, Jibril hadisi aqida va ibodat masalalarini o'zida jamlaydi. Halol-harom haqidagi hadis fiqhiy ehtiyotkorlikni o'rgatadi, birodarlik haqidagi hadis esa ijtimoiy axloqni mustahkamlaydi. Shu bois “Arbain”ni o'qigan inson diniy ilmlar orasidagi ichki bog'liqlikni ham his qila boshlaydi. Bu asarning yana bir ustun jihati uning pedagogik qulayligidir. Hadislar qisqa bo'lgani sababli yoshlar va boshlang'ich bosqichdagi talabalar uchun juda mos keladi. Ko'plab madrasalarda hadis ilmi aynan

“Arbain” orqali boshlangan. Talaba avval hadislarni yod oladi, keyin ustoz sharhi orqali ulardagi ma'no qatlamlarini o'zlashtiradi. Bu usul o'quvchining xotirasini ham mustahkamlaydi, tafakkurini ham kengaytiradi. Shu sababli “Arbain” asari ta'limda ham, tarbiyada ham o'zining samaradorligini isbotlagan. Imom Navaviyning “Arbain”i nafaqat o'z davrida, balki keyingi asrlarda ham katta shuhrat qozongan. Unga ko'plab sharhlar yozilgan, turli tillarga tarjima qilingan, ommabop va ilmiy nashrlarda qayta-qayta chop etilgan. Bu holat asarning vaqt va makon bilan cheklanib qolmaganini ko'rsatadi. Chunki unda ko'tarilgan mavzular umuminsoniy va doimiydir. Rostgo'ylik, halollik, samimiyat, taqvo, sabr, yaxshi muomala, niyat pokligi va birodarlik kabi fazilatlar har qanday jamiyatda qadrlanadi. Shuning uchun “Arbain” musulmonlar uchungina emas, ma'naviyat va axloq masalalariga qiziqqan har qanday o'quvchi uchun ham qimmatli manba bo'la oladi. Asarning zamonaviy ahamiyatiga to'xtaladigan bo'lsak, bugungi tezkor va murakkab hayot sharoitida “Arbain”dagi hadislar yanada dolzarb tuyuladi. Hozir inson ko'p ma'lumot oladi, lekin har doim ham to'g'ri yo'l topa olmaydi. Texnika rivojlangan, aloqa vositalari ko'paygan, lekin ruhiy xotirjamlik va ma'naviy barqarorlik masalasi oson hal bo'layotgani yo'q. Aynan shunday paytda qisqa, ravshan va hikmatli hadislar insonni ichki tartibga chaqiradi. Niyatni to'g'rilash, tilni ehtiyot qilish, g'azabni tiyish, halol yashash, boshqalarga yaxshilik tilash kabi qadriyatlar bugun ham dolzarb, ertaga ham dolzarb bo'lib qoladi. Yoshlar tarbiyasida “Arbain”ning o'rni ayniqsa katta. Chunki yoshlar davri qarashlar shakllanadigan, xarakter mustahkamlanadigan va hayotiy mezonlar tanlanadigan davrdir. Agar shu paytda ularga to'g'ri ma'naviy yo'nalish berilsa, ular kelajakda jamiyatning foydali, halol va mas'uliyatli a'zolariga aylanadi.

“Arbain”dagi hadislar yoshlarni niyatning pok bo'lishiga, mehnatda sidqidillikka, ilmdagi jiddiyatga, odo va sabrga, ota-ona hamda ustozlarga hurmatga, do'stlarga sadoqatga undaydi. Ularning tilini, qalbini va amallarini tartibga solishga yordam

beradi. Shu ma'noda bu asar faqat diniy risola emas, balki komil insonni tarbiyalashga xizmat qiluvchi ma'naviy dastur hamdir. "Arbain"dagi hadislar insonni o'z-o'zini nazorat qilishga ham chorlaydi. Inson ba'zan boshqalarning xatolarini tez ko'radi, lekin o'zini tahlil qilishda sustkashlik qiladi. Bu asar esa kishini o'z niyatiga, o'z amallariga, o'z so'zlariga va o'z qalbiga nazar tashlashga undaydi. Bu esa ma'naviy kamolotning eng muhim bosqichlaridan biridir. Inson o'zini isloh qilmasdan turib, boshqalarni isloh qila olmaydi. Imom Navaviy tanlagan hadislar ana shu haqiqatni nozik, lekin kuchli usulda anglatadi. Asarda umid va qo'rquv o'rtasidagi muvozanat ham seziladi. Bir tomondan, inson gunohdan, zulmdan, shubhali narsalardan, yomon xulqdan saqlanishga chaqiriladi. Ikkinchi tomondan esa u tavba, rahmat, mag'firat va ezgulik eshiklari doimo ochiq ekanini anglaydi. Bu muvozanat islom tarbiyasining eng go'zal xususiyatlaridan biridir. Inson na haddan tashqari qo'rquvga tushib umidsiz bo'ladi, na haddan tashqari xotirjamlik bilan gunohga beparvo qaraydi.

"Arbain"dagi ko'plab hadislar aynan shu me'yorni saqlashga yordam beradi. Imom Navaviyning ushbu asari o'zbek musulmonlari ma'naviy hayotida ham muhim o'rin tutadi. Markaziy Osiyo azaldan hadis ilmi rivoj topgan hududlardan biri bo'lgan. Shu sababli Imom Navaviyning asarlari, jumladan "Arbain" ham bu yurtlarda katta ehtirom bilan o'qilgan. Hozir ham ko'plab diniy suhbatlar, darslar va ma'rifiy yig'inlarda aynan shu asardan foydalaniladi.

Uning o'zbek tilidagi tarjimalari va sharhlari kitobxonlar orasida mashhur bo'lib, xalqning diniy-ma'naviy savodini oshirishda xizmat qilmoqda.

"Arbain"ni mutolaa qilish insonga katta hajmdagi murakkab kitoblarni o'qimasdan turib ham dinning asosiy ruhini his qilish imkonini beradi. Albatta, dinning barcha tafsilotlarini o'rganish uchun kengroq manbalar ham zarur. Biroq "Arbain" boshlang'ich va o'rta bosqichdagi o'quvchi uchun mustahkam poydevor bo'la oladi. U kishi qalbiga asosiy tamoyillarni joylaydi, keyin esa shu asoslar ustiga chuqurroq ilm

qurish osonlashadi. Shu sababli u nafaqat mustaqil asar, balki katta ilmga kirish eshigi sifatida ham katta qimmatga ega. Asarning yana bir afzalligi shundaki, u insonni dinni bir yoqlama tushunishdan saqlaydi. Ba'zan ayrim kishilar dinni faqat hukmlar yig'indisi deb o'ylaydi, ba'zilar esa faqat qalb masalasi deb hisoblaydi. “Arbain” esa dinda ikkalasi ham zarurligini ko'rsatadi: qalb ham, amal ham; niyat ham, hukm ham; ibodat ham, axloq ham; shaxsiy taqvo ham, ijtimoiy mas'uliyat ham. Mana shu uyg'unlik asarning eng katta fazilatlaridan biridir.

Xulosa

Imom Navaviyning “Arbain” asari islom ilmiy merosining eng sara namunalaridan biri sifatida alohida qadrlanadi. U hajman ixcham bo'lsa-da, mazmunan nihoyatda boy, tarbiyaviy jihatdanchuqur va amaliy hayot uchun juda foydali manbadir. Asarda jamlangan hadislar musulmon kishining e'tiqodi, ibodati, axloqi, qalb pokligi va ijtimoiy muomalasini shakllantirishda muhim o'rin tutadi. Shu jihatdan “Arbain” nafaqat hadislar to'plami, balki bir umr amal qilinadigan ma'naviy dastur sifatida ham baholanishi mumkin¹⁰. Maqola davomida ko'rib chiqilganidek, Imom Navaviy hadislarini tanlashda nihoyatda chuqur ilmiy va tarbiyaviy yondashuvni qo'llagan. U zotinning eng asosiy ustunlarini ifodalovchi, inson hayotida har doim zarur bo'ladigan rivoyatlarni saralagan. Niyat, iymon, ihson, halol-harom, birodarlik, nasihat, sabr, g'azabni tiyish, til odobi va ijtimoiy mas'uliyat kabi mavzularning barchasi asarda o'z o'rnini topgan. Bu esa “Arbain”ni kichik hajmda katta ma'nolarni jamlagan nodir asarga aylantiradi. Asarning eng katta fazilatlaridan biri shundaki, u insonni faqat bilim olishga emas, balki o'zini tarbiyalashga undaydi. Uni o'qigan kishi nafaqat hadis matnlarini bilib oladi, balki o'z qalbiga nazar tashlaydi, niyatini tekshiradi, so'zi va amallarini tartibga solishga intiladi. Shu ma'noda

¹⁰ Ibn Rajab al-Hanbaliy. Jomi' al-ulum va-I-hikam. - Bayrut: Muassasat ar-Risola, 2001. - B. 57.

“Arbain”ning ta'siri faqat aqlga emas, qalbgga ham qaratilgan. Ilmning eng foydali turi ham aslida insonni o'zgartiradigan, uni yaxshilik sari yetaklaydigan ilmdir. Bugungi kunda ham “Arbain” asari o'z dolzarbligini saqlab qolmoqda. Zamonaviy hayotda axloqiy mezonlarga, ma'naviy tayanchga va ishonchli diniy manbaga bo'lgan ehtiyoj yanada kuchaymoqda. Imom Navaviy ushbu asari orqali aynan mana shunday ehtiyojga javob bera olgan. Shu bois “Arbain” asrlar davomida sevib o'qilgan bo'lsa, bundan keyin ham ma'naviy kamolot izlagan insonlar uchun muhim qo'llanma bo'lib qolaveradi.

Adabiyotlar ro'yxati

1. Abdulg'aniy ad-Daqqor. Al-Imom an-Navaviy. – Damashq: Dor al-Qalam, 1994.– 320 b.
2. Jaloliddin as-Suyutiy. Sharh al-Arba'in an-Navaviyya. – Bayrut: Dor al-Kutub al-Ilmiyya, 2004. – 156 b.
3. Ibn Rajab al-Hanbaliy. Jomi' al-ulum va-l-hikam. – Bayrut: Muassasat ar-Risola, 2001. – 544 b.
4. Imom al-Buxoriy. Sahih al-Buxoriy. – Bayrut: Dor Ibn Kasir, 2002. – 1344 b.
5. Imom an-Navaviy. Al-Arba'in an-Navaviyya. – Bayrut: Dor al-Minhaj, 2009.–88b.
6. Imom Muslim. Sahih Muslim. – Bayrut: Dor al-Kutub al-Ilmiyya, 2003. – 1296b.

INDIA–IRAN RELATIONS IN THE EMERGING MULTIPOLAR WORLD ORDER

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Abstract. This article analyzes the strategic dimensions of India-Iran relations in the emerging multipolar world order. It examines key areas of cooperation such as energy security, regional connectivity, maritime collaboration, and the development of the Chabahar Port and the International North-South Transport Corridor (INSTC). The study also explores the impact of U.S.-Iran tensions and sanctions on India's foreign policy and strategic autonomy. The article argues that despite geopolitical constraints, India continues to balance its relations with Iran while pursuing its broader regional and global interests.

Keywords: India-Iran relations, multipolar world order, strategic autonomy, energy security, Chabahar Port, INSTC, U.S. sanctions, regional connectivity, Indo-Pacific.

INTRODUCTION

In the modern international system, India and Iran occupy important geopolitical positions in Asia and play a significant role in regional and global politics. The transformation of the world order from unipolarity to multipolarity has created new opportunities and challenges for both countries. In this context, India seeks to strengthen its strategic autonomy and expand cooperation with regional powers, including Iran. India–Iran relations are based on mutual interests in energy security, regional connectivity, trade, and maritime cooperation. Strategic projects such as the Chabahar Port and the International North-South Transport Corridor (INSTC) have increased the importance of bilateral cooperation. At the same time, U.S. sanctions against Iran and

tensions in U.S.–Iran relations continue to influence the development of India–Iran ties. This article examines the strategic dimensions of India–Iran relations, focusing on regional connectivity, energy cooperation, and the impact of geopolitical constraints in the emerging multipolar world order.

METHODOLOGY

This study applies a qualitative research methodology based on the analysis of academic literature, official government statements, policy papers, and international reports related to India–Iran relations. The research mainly uses comparative and analytical methods to examine the strategic cooperation between India and Iran in the fields of energy security, regional connectivity, and maritime relations.

RESULTS AND DISCUSSION

Non-alignment, the lodestar of India's foreign policy decision-making, has gradually morphed into multi-alignment. Irrespective of the change in nomenclature, the point then and now is essentially about making the most of the prevalent nature of global geopolitics for the protection and promotion of India's national interest. The difference could be that non-alignment guided India's way in a bipolar world; multi-alignment is meant to guide India's rise in a multi-polar world. Multi-polarity is seen by many as more benign than a bipolar or a uni-polar world. Many countries, including India, are seen pronouncing that their interest will be better served in a multipolar world order, and India's foreign policy is often projected as pursuing such an order. Bipolarity is usually condemned as world of military blocs, which had elicited the Non-aligned policy from India. Uni-polarity has, in any case, never been seen as a natural order or in the interest of countries like India. Thus, this has left multi-polarity as the preferred choice. Indeed, multipolarity comes across as a configuration, which gives the space for more power centres in the international system to pursue their interests. It seems to allow more choices of aligning with different actors as per the

strategic calculations of a particular country. However, the choices in terms of partners and loose alignments that a multipolar world order brings for India also brings along with it the challenges of traversing a wide field of geopolitical disruption. Such a scenario has most evidently been panning out in the tightrope walking that India has had to do in managing its ties with Iran while trying to absorb the shocks of a volatile US-Iran relationship that has seen quite a shift from the optimism of the Joint Comprehensive Plan of Action (JCPOA) in 2015 to the more recent walkout by the Trump administration. While it is certainly prudent for New Delhi to maintain multi-alignment in principle, the practice is easier said than done. This essay attempts to situate India-Iran relations

in the emerging multi-polar world order and the challenges it presents as well as the opportunities. While delving into core areas of cooperation – like energy security and connectivity - this essay makes an attempt to dissect the US factor in this relationship. While undesirable, the US factor in India-Iran relations has been the most visible irritant. As such, the essay attempts to assess the emerging India-Iran relationship amidst the strategic constraints accruing out of an unstable US-Iran relationship.

Washington Tangle in India-Iran Relations. Very often, India-Iran ties have been put under the test of fire as a result of the complex nature of US-Iran relations, and the upswing in India-US relations. Many times, Washington expects New Delhi to toe its line of thinking and action, especially whenever its relations with Tehran pass through stormy waters. In such cases, India's practice of strategic autonomy comes under test, as for example the case of India's vote at the International Atomic Energy Agency (IAEA) over the controversial Iran's nuclear programme, or the constraints that India has faced while buying fuel from Iran amidst biting US sanctions. India's multi-dimensional relationship with Iran has often been projected as a litmus test for India's ability to maintain an independent foreign policy, more so because the single most

important and persistent protest has come from the USA. Over the years, the American approach to the Iranian nuclear programme has only accentuated the difficulties of Indian policymakers when it comes to relations with Iran.

Post a meeting with her Iranian counterpart Javad Zarif in September 2018, India's Minister of External Affairs, Sushma Swaraj was quoted as saying that India has abided by the sanctions imposed by the United Nations, but not those imposed by any particular country¹. She was referring to the sanctions imposed by the USA on Iran after walking out of the Iran nuclear deal that had earlier suspended a number of sanctions on Iran. Moreover, besides Russia and North Korea, Iran also comes under the Countering America's Adversaries through Sanctions Act (CAATSA), creating more constraints for India's ability to engage Iran in a number of sectors, most particularly energy security and connectivity projects, like the much debated Chabahar port. Although the recent waiver from the USA has given some relief in terms of commencing Chabahar operations, the tangle that any tension in US-Iran relations will get India into regarding its ties with Iran remains a matter of concern for Indian policymakers².

India-Iran Cooperation in Regional and Cross-regional Connectivity. The importance of the Chabahar port for the India-Iran relationship has been underscored at the highest level of the two governments. During the visit of President Hassan Rouhani of Iran to India in early 2018, both sides recognized that India-Iran cooperation should develop 'multi-modal connectivity within and across the region.' Developments like the 'successful inauguration of the Phase-1 of Chabahar Port in early December 2017; the

¹ Nidhi Verma, 'India says it only follows UN sanctions, not US sanctions on Iran,'

Reuters, May 28, 2018. Retrieved from <https://in.reuters.com/article/india-iran/india-says-it-only-follows-u-n-sanctions-not-u-s-sanctions-on-iran-idINKCN1IT0W5>

² P. Manoj, 'With US sanctions waiver, Chabahar Port set to commence operations by month-end,' The Hindu Business Line, November 7, 2018, Retrieved from <https://www.thehindubusinessline.com/economy/logistics/with-us-sanctions-waiver-chabahar-portset-to-commence-operations-by-month-end/article25438869.ece>

ratification of the Trilateral Agreement between India, Iran and Afghanistan on the Establishment of International Transport and Transit Corridor by all sides; and the successful shipment of wheat assistance from India to Afghanistan through Chabahar Port' were noted as significant not only for India and Iran, but also for regional and cross-regional stability and prosperity³. India's investment by setting up plants in sectors like fertilizers, petrochemicals, and metallurgy in the Chabahar Free Trade and Industrial Zone (FTZ) has been welcomed by Iran. The first trilateral meeting between India, Iran, and Afghanistan in October 2018 over the implementation of the Chabahar port lends significance to this project which promotes India-Iran cooperation in terms of bringing economic benefits to war-torn Afghanistan, and also connects India to the markets of Central and West Asia. The three countries in 2016 had signed an agreement to establish a transit and transport corridor among them, and proposed the use of the Chabahar Port as one of the regional hubs⁴.

Despite the economic viability of the port and its significance for India's development assistance to Afghanistan, the geopolitics of the region, Sino-Pakistan designs in the region as well the uncertainty in US-Iran relations may still set limitations on the extent of India- Iran cooperation in this aspect⁵. The International North-South Transport Corridor (INSTC) has been an important component of India-Iran cooperation. The INSTC is a multi-modal connectivity project spanning around 7,200-km, including rail, road, and water routes across India, Iran, Central Asia, and Russia. The purpose of the project has been to reduce the cost and time of transport across this region; this has been vindicated by a report showing that the INSTC will make transport

³ 'India-Iran Joint Statement during Visit of the President of Iran to India,' Ministry of External Affairs, February 17, 2018. Retrieved from <https://www.mea.gov.in/bilateral-documents>.

⁴ 'India, Iran, Afghanistan hold first trilateral on Chabahar port project,' The Economic Times, October 23, 2018. Retrieved from <https://economictimes.indiatimes.com>

⁵ Harsh Pant, 'India-Iran Cooperation at Chabahar Port: Choppy Waters,' Asia Maritime Transparency Initiative, April 4, 2018. Retrieved from <https://amti.csis.org/india-iran-cooperationchabahar>

30 percent cheaper and 40 percent shorter compared to the existing routes. Various dry runs along the INSTC route have constantly proved the viability of this project, and this can be seen in the revitalisation of this project between India, Iran, and Russia⁶. During President Rouhani's visit to India, the inclusion of the Chabahar port in the INSTC framework was emphasised. India's accession to the Customs Convention on International Transport of Goods under the cover of TIR Carnets (TIR Convention) and Ashgabat Agreement (an agreement to establish an international multimodal transport and transit corridor between Central Asia and the Persian Gulf) has also been seen as positive steps towards contributing to regional and cross-regional connectivity for joint economic growth⁷. Given the environment in which China has been promoting and projecting its ambitious Belt and Road Initiative (BRI), India's involvement and leadership at the INSTC despite its economic viability, has also become a point of strategic significance in terms of India's aspirations for greater influence beyond its immediate neighbourhood⁸.

As such, in addition to being one of the major sources of energy supplies for India, Iran is also becoming an increasingly significant player in terms of fulfilling India's strategic aspirations beyond its immediate neighbourhood into Afghanistan, to Central Asia, and up to West Asia. Iran is a regional power in West Asia, with strategic ambitions to extend its influence beyond the region. Iran has a rich civilisational history, and has both the resources and the intention to become a regional power with global consequence. As such, it would be strategic naiveté for India not to try and sustain its ties with Iran if it intends to extend its influence beyond

⁶ Dipanjan Roy Chaudhury, 'International North South Transportation Corridor for better Indo-Russian connectivity inches towards reality,' The Economic Times, July 12, 2018. Retrieved from <https://economictimes.indiatimes.com>

⁷ 'India-Iran Joint Statement during Visit of the President of Iran to India,' Ministry of External Affairs.

⁸ Ritika Passi, 'Money Matters: Discussing the Economics of the INSTC,' ORF Occasional Paper, April 2017, at https://www.orfonline.org/wp-content/uploads/2017/04/OccasionalPaper_112_INSTC_Final.pdf

South Asia. India's foreign policy projects India's relations with Iran as a fundamental component of India's Look West policy. Iran has been an important partner for India. The Tehran Declaration of 2001 and the New Delhi Declaration of 2003 are the benchmarks based on which relationship has become a strategic one for both the countries⁹.

India-Iran Cooperation in Energy Security. America's insistence on using sanctions as a foreign tool has always been a sore point among countries that try to shore up ties with Washington. At times, countries like India have been at the direct receiving end of American sanctions, or else India has been caught in the crossfire as in the case of Iran. Earlier, New Delhi and Tehran had to negotiate their ways out of the impact of American sanctions on Iranian banks, thus making it difficult for India to pay for the purchase of fuel from Iran. As India grows, and would like to sustain the growth at some stable rates, access to an uninterrupted and commercially viable source of energy has become a major component of India's foreign policy objectives. Although, the search for viable alternative sources of energy continues to be a main pursuit, India will still not be able to substantially cut down the demand for fossil fuel in the near future¹⁰. Although reports point to a substantial increase in Indian imports of crude oil from the USA, many are of the opinion that this does not mean that US oil will replace oil imports from Iran. According to many, commercial viability will decide the quantum and the source of Indian crude oil imports, and not pressure from any country. As such, Iranian oil will likely continue to be a mainstay of Indian imports, and India's own assessment of its interest will determine the course of India-Iran ties, and not pressure from Washington. The impact of Indian oil imports from the USA is particularly interesting in the context of the emphasis given to making the USA a major

⁹ 'India-Iran Relations,' Ministry of External Affairs, at <https://mea.gov.in/Portal/ForeignRelation/India-Iran>.

¹⁰ Ragini Bhuyan, 'Five charts that show how India's dependence on fossil fuels will increase,' LiveMint, November 13, 2018, at <https://www.livemint.com/>.

energy exporter in its National Security Strategy (NSS). The NSS 2017 stated, For the first time in generations, the United States will be an energy dominant nation. Energy dominance—America’s central position in the global energy system as a leading producer, consumer, and innovator ensures that markets are free and U.S. infrastructure is resilient and secure¹¹.

The NSS added, As a growing supplier of energy resources, technologies, and services around the world, the United States will help our allies and partners become more resilient against those that use energy to coerce¹².

The extent of American sanctions and the reach of its financial institutions might present tactical hurdles for India to engage with Iran, but India’s practice of its strategic autonomy will mean that it is not likely to allow the USA to determine the nature of its relations with Iran¹³. It is important to recall that the then US Ambassador to the United Nations, Nikki Haley, during her visit to India in June 2018, had said, All of us have to rethink who we choose to do business with. I think as a friend India should also decide, is this a country they want to continue doing business with. So, yes I had that conversation with Modi. It was a constructive conversation ... I think for the future of India, future of resources, we would encourage them to rethink their relationship with Iran. These remarks were made in the context of Washington demanding countries buying oil from Iran to cut their imports to ‘zero’ by 4 November 2018¹⁴.

While speaking to the press in November 2018, the US Secretary of State Mike Pompeo contended that the Trump Administration had been quite clear regarding Iran and the US response. ‘We understand that the Islamic Republic

¹¹ Ibid

¹² Ibid

¹³ Richa Mishra and Amiti Sen, ‘India: No deal to choose US oil over Iran’s; price alone will decide,’ The Hindu Business Line, September 9, 2018. Retrieved from <https://www.thehindubusinessline.com/economy/policy/india-no-deal-to-choose-us-oil-over-irans-only-price-will-decide/article24909877>.

¹⁴ ‘Nikki Haley in India: US envoy to UN talks up bilateral relations, names Iran as “next North Korea”’.

of Iran presents a threat to the United States of America, and we are determined to stop it,' he said¹⁵. Hence, developments in US-Iran relations are bound to have an impact on the course of India-Iran relations, and this will happen despite New Delhi's position that no third party intervention will be allowed to affect its relations with Tehran.

India-Iran ties have been built on a mutual understanding of complementariness and have been particularly seen as a test of India's ability to practice its strategic autonomy in the face of American intransigence. In fact, reports have pointed out that India's crude oil imports from Iran actually increased as the US threatened sanctions¹⁶. India had imported about 2.57 million tonnes of oil worth an overall of \$1.42 billion from Iran in October 2018, marking a 36 percent increase over the same period in the previous year¹⁷. The USA eventually gave waivers to eight countries, including India, from the sanctions slapped on oil imports from Iran. The Trump Administration's rationale for the waiver was that it did not want to impose sanctions to a point where it would have a shocking impact on global oil prices¹⁸. However, some restrictions have been put in terms of the volume of crude oil imports from Iran. The second order effects of US sanctions are as important in terms of understanding the complexities that the US action presents to the India-Iran bilateral engagement. For instance, the Hindustan Petroleum Corporation Limited (HPCL) had stopped purchasing Iranian crude for a certain period, since its insurance company refused to provide coverage because of US sanctions. According to reports, Indian insurance companies were giving 'asset cover', but were not 'covering the crude

¹⁵ Press Availability, Michael R. Pompeo, Secretary of State, Washington Foreign Press Center, Washington DC,' Department of State, November 5, 2018. Retrieved from www.state.gov/secretary/remarks/2018/11/287132.htm

¹⁶ Bilal Abdi, 'India's crude oil imports from Iran jumped 10 per cent in September,' ET Energy World, October 24, 2018, at <https://energy.economictimes.indiatimes.com/>

¹⁷ 'India's oil imports from Iran rise 36% in face of US bans,' PressTV, November 28, 2018, <https://www.presstv.com/Detail/2018/11/28/581415/Indias-oil-imports-from-Iranrise-36-in-face-of-US-bans>.

¹⁸ Anita Inder Singh, 'Walking the tightrope,' The Hindu, November 30, 2018, at <https://www.thehindu.com/opinion/op-ed/walking-the-tightrope/article25626030.ece>

kept in storage¹⁹. Whenever US sanctions have made it difficult for India to pay for Iranian oil, the two countries have often resorted to rupee payment²⁰. During President Rouhani's visit, both sides 'agreed to move beyond [the] traditional buyer-seller relationship' in the energy sector and 'develop it into a long term strategic partnership,' including negotiation over the Farzad B gas field²¹. Earlier, the fall of oil imports from Iran were reported after differences cropped up over development rights for this gas field. Later, it was reported that the two sides have resumed negotiations over the issue²².

The geopolitics of laying gas pipelines has also been a significant component of India-Iran ties, with the once vigorously debated Iran-India-Pakistan pipeline going on to the backburner due to tenuous US-Iran relations. As an alternative, the Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline was brought to the fore, on which work has been going on. Although some proposals have been floated to resume the IPI pipeline, it will still be severely constrained by India-Iran Relations amidst Strategic Constraints 189 uncertainty in US-Iran relations. International cooperation on pipelines has been a major part of India's energy security policy, but this has been at the mercy of the rapidly changing geopolitical environment in the region²³. There have emerged different permutations and combinations of international pipelines, and the task is cut out for New Delhi in terms of weighing the options and making its choices for the protection and promotion of its interest in a viable and interrupted supply of energy. For instance, there has been a proposal to construct a 1,300-km undersea pipeline from Iran,

¹⁹ Ibid

²⁰ 'India-Iran Joint Statement during Visit of the President of Iran to India,' Ministry of External Affairs.

²¹ Ibid

²² Nidhi Verma, 'India-Iran row over Farzad B gas field takes toll on oil imports,' LiveMint, April 21, 2018, at <https://www.livemint.com/Industry/E0pe4GCRhCl557Xy6oVL2N/IndiaIran-row-over-Farzad-B-gas-field-takes-toll-on-oil-imp.html>

²³ 'India should revive IPI gas pipeline: panel,' LiveMint, March 19, 2017, at <https://www.livemint.com/Industry/JRiA9MVW3VCbuRsUXV0x8O/India-should-revive-IPIgas-pipeline-panel.html>

avoiding Pakistani waters, to bring natural gas to India at much cheaper rates²⁴. On the other hand, Russia and Pakistan have signed a memorandum of understanding to build an underwater gas pipeline from Iran to Pakistan and India. According to reports, Moscow intends to inform Iran and India about the signing, and work on a similar understanding with India. In November 2017, Russia and Iran had signed an understanding, lending Russian support for Iran supply to India, and a Russian-Iranian working group met for the first time in March 2018 to discuss the implementation of the project²⁵.

Indian Ocean Partners. Besides the core areas of cooperation between India and Iran (like energy security and transport corridors), another area that present a set of opportunities and challenges is maritime cooperation. Both sides have been expressing an ‘interest in enhancing cooperation possibilities in the maritime domain. It was agreed to hold dialogue to look into measures for cooperation in [the] defence sphere, including port calls by naval ships, training and regular exchanges of defence delegations²⁶.’ Indian naval warships have been making goodwill visits to Iranian ports and have engaged in professional interactions, including exercises at sea. India-Iran maritime understanding can also be taken forward through the Indian Ocean Naval Symposium (IONS), which is a forum to build maritime cooperation among littoral countries of the Indian Ocean region (IOR). The 2018 IONS and Conclave of Naval Chiefs were held in Tehran, and the Indian Navy Chief, Admiral Sunil Lamba, went on a five day visit to Iran. His visit was ‘also aimed at consolidating bilateral naval relations between India

²⁴ ‘Undersea Iran-India gas pipeline, avoiding Pakistan, can bring cheaper LNG to India, says study,’ FirstPost, September 6, 2017, at <https://www.firstpost.com/business/undersea-iran-india-gas-pipeline-avoiding-pakistan-can-bring-cheaper-lng-to-india-says-study-4013517.html>

²⁵ ‘Russia, Islamabad sign MoU to build gas pipeline from Iran to Pak and India,’ Business Standard, September 28, 2018, at https://www.business-standard.com/article/international/russia-islamabad-sign-mou-to-build-gas-pipeline-from-iran-to-pak-and-india-118092800044_1.html

²⁶ ‘India, Iran to boost maritime, defence cooperation,’ Business Standard, February 17, 2018, at https://www.business-standard.com/article/news-ani/india-iran-to-boostmaritime-defence-cooperation-118021700641_1.html

and Iran and to explore new avenues for naval cooperation²⁷.’

Given the critical waterways in which India and Iran are located, and the significance of the Indo-Pacific region in global geopolitics, greater maritime cooperation between India and Iran makes complete strategic sense. However, the USA remains the primary partner for India as far as the emerging security architecture of the Indo-Pacific is concerned. The USA defines the Indo Pacific as the region extending from the western coast of India to the western coast of the USA, which practically leaves out countries like Iran to India’s west²⁸. According to India, the major littoral countries of the IOR - like Iran - are very much a critical part of the Indo-Pacific, and remain important partners in the geopolitics of the region extending from the South to Central and West Asia. However, the USA considers Iran as one of its principal threats, and this has been made clear over and over again in its policy documents and official speeches. As such, how New Delhi is going to balance its maritime engagements with Tehran while hoping to deepen its engagement with the USA in the Indo-Pacific remains a matter of policy discourse.

CONCLUSION

India is undoubtedly one of the significant poles of the emerging multi-polar world order, and its foreign policy approach will be of consequence in the international system. As opposed to a bipolar or a uni-polar world order, a multi-polar order provides much room for choosing partners in the international system. Such an order has given rise to debates about the notion of multi-alignment as the lodestar for India’s foreign policy direction in the 21st century. However, the practice of strategic autonomy that given the flexibility to do what is required for the protection and promotion of India’s interest remains the base, whether the policy is non-alignment or multi-alignment. Thus,

²⁷ Ibid

²⁸ Ibid

in the final analysis, it boils down to the opportunities and challenges for India to practice its strategic autonomy in the current scheme of things. In this context, to what extent the contours of India-Iran relationship have a synergy of their own, and to what extent it is constrained by third parties, remain the crucial questions. India has had to do its balancing act regarding its approach to West Asia, such as building concurrent relations with countries like Israel, Saudi Arabia, and Iran. But, it is Washington's approach to Iran that has had the most consequential and visible impact on India's relationship with Iran.

REFERENCES

1. Nidhi Verma, 'India says it only follows UN sanctions, not US sanctions on Iran,' Reuters, May 28, 2018, at <https://in.reuters.com/article/india-iran/india-says-it-onlyfollows-u-n-sanctions-not-u-s-sanctions-on-iran-idINKCN1IT0W5>.
2. P. Manoj, 'With US sanctions waiver, Chabahar Port set to commence operations by month-end,' The Hindu Business Line, November 7, 2018.
3. 'India-Iran Joint Statement during Visit of the President of Iran to India,' Ministry of External Affairs, February 17, 2018, at <https://www.mea.gov.in/bilateral-documents>.
4. 'India, Iran, Afghanistan hold first trilateral on Chabahar port project,' The Economic Times, October 23, 2018. Retrieved from <https://economictimes.indiatimes.com>
5. Harsh Pant, 'India-Iran Cooperation at Chabahar Port: Choppy Waters,' Asia Maritime Transparency Initiative, April 4, 2018. Retrieved from <https://amti.csis.org/india-iran-cooperationchabahar>
6. Dipanjan Roy Chaudhury, 'International North South Transportation Corridor for better Indo-Russian connectivity inches towards reality,' The Economic Times, July 12, 2018. Retrieved from <https://economictimes.indiatimes.com>
7. 'India-Iran Joint Statement during Visit of the President of Iran to India,' Ministry of External Affairs.

8. Ritika Passi, 'Money Matters: Discussing the Economics of the INSTC,' ORF Occasional Paper, April 2017, at https://www.orfonline.org/wp-content/uploads/2017/04/OccasionalPaper_112_INSTC_Final.pdf
9. 'India-Iran Relations,' Ministry of External Affairs, at <https://mea.gov.in/Portal/ForeignRelation/India-Iran>.
10. Ragini Bhuyan, 'Five charts that show how India's dependence on fossil fuels will increase,' LiveMint, November 13, 2018, at <https://www.livemint.com/>.
11. Richa Mishra and Amiti Sen, 'India: No deal to choose US oil over Iran's; price alone will decide,' The Hindu Business Line, September 9, 2018. Retrieved from <https://www.thehindubusinessline.com/economy/policy/india-no-deal-to-choose-us-oil-over-irans-only-price-will-decide/article24909877>.
12. 'Nikki Haley in India: US envoy to UN talks up bilateral relations, names Iran as "next North Korea"'.
13. Press Availability, Michael R. Pompeo, Secretary of State, Washington Foreign Press Center, Washington DC,' Department of State, November 5, 2018. Retrieved from www.state.gov/secretary/remarks/2018/11/287132.htm
14. Bilal Abdi, 'India's crude oil imports from Iran jumped 10 per cent in September,' ET Energy World, October 24, 2018, at <https://energy.economictimes.indiatimes.com/>
15. 'India's oil imports from Iran rise 36% in face of US bans,' PressTV, November 28, 2018, <https://www.presstv.com/Detail/2018/11/28/581415/Indias-oil-imports-from-Iranrise-36-in-face-of-US-bans>.
16. Anita Inder Singh, 'Walking the tightrope,' The Hindu, November 30, 2018, at <https://www.thehindu.com/opinion/op-ed/walking-the-tightrope/article25626030.ece>
17. Nidhi Verma, 'India-Iran row over Farzad B gas field takes toll on oil imports,' LiveMint, April 21, 2018. Retrieved from



<https://www.livemint.com/Industry/E0pe4GCRhCl557Xy6oVL2N/IndiaIran-row-over-Farzad-B-gas-field-takes-toll-on-oil-imp.html>

18. 'India should revive IPI gas pipeline: panel,' LiveMint, March 19, 2017, at www.livemint.com/Industry/JRiA9MVW3VCbuRsUXV0x8O/India-should-revive-IPIgas-pipeline-panel.html

19. 'Undersea Iran-India gas pipeline, avoiding Pakistan, can bring cheaper LNG to India, says study,' FirstPost, September 6, 2017. Retrieved from <https://www.firstpost.com/business/undersea-iran-india-gas-pipeline-avoiding-pakistan-can-bring-cheaper-lng-to-india-says-study-4013517.html>



METHODOLOGY FOR DESIGNING AN INTEGRATED TECHNOLOGICAL PROCESS FOR CNC PART MANUFACTURING

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Abstract. The article describes a new approach to designing technological processes for machining parts on metal-cutting machines under production conditions. This approach has been developed based on the preliminary prediction of machining accuracy. The process of selecting machining stage parameters is integrated with the modeling of cutting tools and technological fixture parameters. The sequence of technological process design begins with the initial operation and serves to consistently form the subsequent machining stages.

Keywords: design, accuracy, modeling, fixture, tool, technology.

CNC DETALLARNI ISHLAB CHIQRISHNING INTEGRALLASHGAN TEXNOLOGIK JARAYONINI LOYIHALASH METODIKASI

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Annotatsiya. Maqolada ishlab chiqarish sharoitida metall kesish dastgohlarida detallarga ishlov berish texnologik jarayonlarini loyihalashning yangi yondashuvi bayon etilgan. Ushbu yondashuv detallarga ishlov berish aniqligini oldindan prognoz qilish asosida ishlab chiqilgan. Ishlov berish bosqichlari parametrlarini tanlash jarayoni kesuvchi asbob va texnologik moslamalar parametrlarini modellashtirish orqali aniqlash bilan uyg'unlashtirilgan. Texnologik jarayonni loyihalash ketma-ketligi dastlabki

operatsiyadan boshlanib, keyingi ishlov bosqichlarini izchil shakllantirishga xizmat qiladi.

Kalit soʻzlar: Loyihalash, Aniqlik, Modellashtirish, Moslama, Asbob, Texnologiya.

Asosiy qism

Mashinasozlik sanoati oldida detallarni ishlab chiqarish aniqligini yanada oshirish vazifasi turibdi [1–4]. Bunda ishlov berish aniqligini taxminan 10 barobarga oshirish hamda sirt gʻadir-budurligini $Rz = 0,001$ mm gacha taʼminlash talab etiladi. Shu bilan birga, metall kesish dastgohlarida detallarga ishlov berish texnologik jarayonlarini loyihalash usullari hanuzgacha asosan anʼanaviy yondashuvlarga tayanib kelmoqda.

Texnologik jarayonlarni loyihalash amaliyotida ishlov berish aniqligini bosqichlar boʻyicha baholash uchun texnologlar koʻpincha maʼlumotnoma va normativ adabiyotlardan foydalanadilar. Ushbu manbalarda maʼlum bir ishlov berish usuli va jihoz uchun erishilishi mumkin boʻlgan aniqlik hamda ishlov bosqichlari soni koʻrsatiladi. Biroq ularda aynan qanday asbob parametrlari, qanday texnologik moslamalar va kesish rejimlari orqali bunday natijaga erishish mumkinligi yetarli darajada bayon qilinmagan.

Buning asosiy sababi shundaki, maʼlumotnomalarda keltirilgan koʻrsatkichlar turli korxonalarda va har xil ishlab chiqarish sharoitlarida olingan statistik maʼlumotlarga asoslangan boʻlib, ushbu sharoitlarning aniq parametrlari koʻpincha koʻrsatilmaydi. Bundan tashqari, kesish rejimlarini tanlashga oid qoʻllanmalarda ishlov berish aniqligi parametrlarining oʻzaro bogʻliqligi toʻliq yoritilmagan. Kesish rejimlarini tanlash esa koʻpincha kesuvchi asbobning mustahkamligi va chidamliligiga bogʻliq holda amalga oshiriladi [5–9].

Ishlov berish aniqligi parametrlarining kesish rejimlari, asbob parametrlari, texnologik moslamalar va jihozlar bilan uzviy bogʻliqligini ifodalovchi aniq meʼyoriy

ma'lumotlarning yetishmasligi texnologik jarayonlarni loyihalashda subyektiv qarorlarning ulushini oshirib yuboradi. Natijada aniqlikni ta'minlash bilan bog'liq muammolar texnologik jarayonni sozlash bosqichiga ko'chadi. Bu esa jarayonning mehnat sig'imi va tannarxining sezilarli oshishiga olib keladi.

Bunday yondashuv ilgari ommaviy va yirik seriyali ishlab chiqarish sharoitlarida ma'lum darajada o'zini oqlagan bo'lsa-da, hozirgi zamonaviy ishlab chiqarishning kam hajmli, biroq yuqori darajada jamlangan texnologik operatsiyalariga ega sharoitida ushbu muammo yanada dolzarb ahamiyat kasb etmoqda.

Mashina detallarini ishlab chiqarish texnologik jarayonlarini loyihalashning an'anaviy usullari asosiy bosqichlarni ketma-ket bajarish tamoyiliga asoslanadi. Bunda har bir keyingi bosqichda avvalgi bosqichda olingan parametrlar asos qilib olinadi. Zagotovkalariga ishlov berish marshrutini belgilovchi sirtlarga ishlov berish rejalari ham ketma-ket loyihalash prinsiplariga asoslanadi.

Loyihalash jarayoni odatda oxirgi ishlov berish bosqichini aniqlashdan boshlanadi va keyinchalik birin-ketin dastlabki bosqichgacha davom ettiriladi. Bu jarayonda o'lcham aniqligi va sirt g'adir-budurligini bosqichma-bosqich yaxshilab borish tamoyiliga amal qilinadi. Detal sirtlarining shakli va joylashuv aniqligini ta'minlash masalalari esa ko'pincha qo'shimcha ishlov berish bosqichlarini kiritish orqali hal etiladi.

Bunday yondashuvda ishlov berish bosqichlari sonini kamaytirish hamda jarayonning mehnat sig'imini pasaytirish imkoniyatlari ancha cheklangan bo'ladi. Ushbu muammoni yuqori aniqlikdagi jihozlardan foydalanish orqali bartaraf etishga bo'lgan urinishlar ham kutilgan samarani bermaydi.

Texnologik jarayonlarni loyihalashning mavjud usullaridagi yana bir kamchilik — ishlov berish usullari va marshrutlarini tanlash, kesuvchi asboblarni belgilash, kesish rejimlarini aniqlash hamda texnologik moslamalarni tanlash bosqichlarining ketma-ket

va alohida amalga oshirilishidir. Aslida esa ushbu bosqichlar bir-biri bilan chambarchas bog‘liq. Masalan, kesish rejimlari kesuvchi asbob parametrlariga bog‘liq bo‘lsa, asbobning chidamliligi va mustahkamligi o‘z navbatida kesish rejimlariga bog‘liq bo‘ladi.

Aniq teshiklarga ishlov berishda ishlov usulining talab etilgan aniqlikni ta‘minlash imkoniyati ko‘p jihatdan texnologik moslamalarni to‘g‘ri tanlashga bog‘liqdir. Biroq amaliyotda texnologik moslamalar ko‘pincha operatsiyalar va ishlov bosqichlari belgilab bo‘lingandan keyingina tanlanadi.

Texnologik jarayonlarni optimallashtirish metodologiyalarini yaratish bo‘yicha katta tajriba to‘plangan [10–13]. Ammo optimallashtirish odatda strukturaviy va parametrik turlarga ajratiladi. Texnologik operatsiyaning tuzilishi va parametrlarining o‘zaro ta‘siri mavjud bo‘lishiga qaramay, bu yondashuv ko‘p bosqichli operatsiyalarni to‘liq optimal holatda ta‘minlay olmaydi. Shu sababli ko‘p bosqichli ishlov berish texnologiyalarini loyihalashning yangi tamoyillarini ishlab chiqish zarurati yuzaga kelmoqda.

G‘uzeev V. I., Pimenov D. Yu.lar tomonidan Janubiy Ural davlat universitetining Avtomatlashtirilgan mashinasozlik kafedrasida ana shunday yangi yondashuvlarni ishlab chiqish bo‘yicha ilmiy tadqiqotlar olib borilgan. Ushbu yondashuvlarning asosini texnologik jarayonlarni loyihalash bosqichlarini o‘zaro uyg‘unlashtirish tamoyili tashkil etadi.

Mazkur tamoyilga ko‘ra, loyihalash jarayoni birinchi ishlov berish bosqichidan boshlanadi va har bir keyingi bosqich parametrlari avvalgi bosqichda mavjud sharoitlarda erishilgan eng yuqori aniqlik natijalariga asoslanib belgilanadi. Shu bilan birga, ishlov berish bosqichini tanlash jarayoni kesuvchi asboblarni, texnologik moslamalarni hamda kesish rejimlarini tanlash bilan birgalikda amalga oshiriladi.

Ishlov berish bosqichi bir xil ishlov usuli doirasida bajarilishi yoki har bir bosqichda ishlov usulini o'zgartirish orqali amalga oshirilishi mumkin. Birinchi holatda masala tanlangan ishlov usuli uchun zarur bo'lgan ishlov berish bosqichlari sonini aniqlashga qaratiladi [14]. Ikkinchi holatda esa turli ishlov usullaridan foydalanib detal sirtlariga ishlov berish marshrutlarini aniqlash vazifasi hal etiladi [15].

Bunda loyihalash bosqichlarining o'zaro bog'liqligi va ularning ishlov berish aniqligiga kompleks ta'siri hisobga olinadi. Shuningdek, texnologik jarayonni kompyuter yordamida sinovdan o'tkazish va sozlash bosqichi ham texnologik jarayonni loyihalashning tarkibiy qismi sifatida qaraladi.

Bunday yondashuv ishlov berish aniqligini prognoz qiluvchi matematik modellarga, shuningdek ma'lumotnoma materiallarini taqdim etish mazmuni va shakliga yuqori talablar qo'yadi. Matematik modellashtirish ishlov berish jarayonida yuzaga keladigan xatoliklarni kompleks tarzda oldindan baholash imkonini berishi kerak.

Ishlov berish xatoliklarini prognozlash bo'yicha matematik modellar yaratishda uzoq yillar davomida katta tajriba to'plangan bo'lsa-da, hozircha ularni operatsiyalar va ishlov berish bosqichlarining ko'plab parametrlarining o'zaro ta'sirini hisobga oluvchi yagona integrallashgan analitik modelga birlashtirish imkoniyati to'liq yaratilmagan.

Shu sababli, bugungi kunda texnologik operatsiyalarni modellashtirish usulidan foydalanish maqsadga muvofiq deb hisoblanadi. Ushbu yondashuv bir nechta xususiy matematik modellarni birgalikda qo'llashga asoslanadi. Bunday usul ishlov berish usulini tanlash, kesuvchi asboblarni belgilash hamda texnologik moslamalarni tanlash bosqichlarini o'zaro uyg'unlashtirish va sinxronlashtirish imkonini beradi.

Texnologik jarayonni loyihalash va sozlash jarayonining asosini ishlov berilayotgan sirtlarni shakllantirishning matematik modellari tashkil etadi. Sozlashning asosiy vazifasi ishlov berish bosqichlari variantlarini qo'llanilayotgan texnologik

moslamalar va kesuvchi asboblarni bilan o‘zaro bog‘liq holda baholashdan iborat. Ushbu masala modellashtirish yordamida hal qilinadi.

Ma’lumotnoma materiallari ko‘rib chiqilayotgan parametrlar soni bo‘yicha loyihalananayotgan ko‘p bosqichli texnologik operatsiyalarga mos kelishi lozim.

Kafedrada ishlab chiqilgan umumiy mashinasozlikka oid kesish rejimlari standartlari [16] texnologik yo‘naltirilganligi bilan ajralib turadi. Ushbu standartlarda alfa bor ishlov berish bosqichlarining zarur sonini, har bir bosqich uchun talab etiladigan minimal kesish chuqurligi va surish qiymatlarini aniqlash imkonini beruvchi ma’lumotlar keltirilgan. Mazkur ko‘rsatkichlar zagotovkaning (yoki yarim tayyor mahsulotning) aniqligiga, har bir asbob yurishidan keyin erishilgan aniqlikka, shuningdek boshqa texnologik cheklovlarga — detal va asbobning bikrligi, dastgohning aniqligi va bikrligi kabi omillarga bog‘liq holda aniqlanadi.

Kesish rejimlari bo‘yicha ma’lumotnomada [17] texnologik tizimning quvvat yuklanishiga qarab ishlov berish bosqichlarining zarur sonini tanlash bo‘yicha batafsil tushuntirishlar berilgan. Hozirgi vaqtda ushbu ma’lumotlarni yanada takomillashtirish hamda ularni kompyuter yordamida loyihalash talablariga mos shaklda taqdim etish ustida ishlar olib borilmoqda.

Texnologik jarayonni loyihalashda moslamalarni tanlash uchun matematik mantiq apparati asosida matematik modellar ishlab chiqiladi [15]. Masalan, teshik ishlov berish operatsiyalari uchun yordamchi asbobni tanlashda, loyihalananayotgan ishlov berish bosqichida aniqlikni ta’minlash talablari bilan moslama konstruktiv yechimlarini o‘zaro uyg‘unlashtirish zarur bo‘ladi.

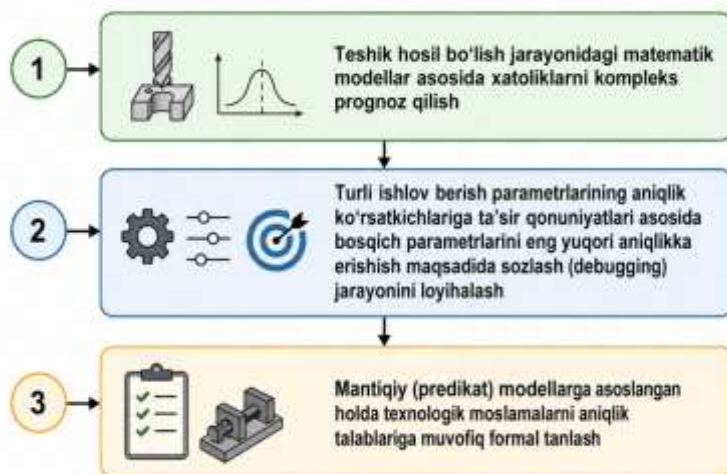
Bunda talablar majmuasi quyidagi yo‘nalishlarni o‘z ichiga oladi:



yechimlar orqali ta'minlanadi. Shunday qilib, har bir aniqlik parametrini ta'minlash uchun texnologik moslamalarga qo'yiladigan talablar tizimi shakllantiriladi va natijada texnik yechimlar fondidan mos variantlarni tanlash orqali aniq moslama turi aniqlanadi.

Ushbu maqsadda predikat tenglamalar tizimi (mantiqiy matematik model) tuziladi.

Teshik ochish (hole-making) jarayonlari uchun parametrik loyihalashning yangi metodologiyasi quyidagi aniqlikni ta'minlash usullariga asoslanadi:



Teshik ochish jarayonlarini loyihalash metodologiyasi quyidagi bosqichlardan iborat:

1-bosqich. Ishlov berish usullari bazasidan birinchi ishlov bosqichi tanlanadi. Uning tanlanishiga zagotovka turi, ishlab chiqarish turi, detalni ishlash marshruti va boshqa omillar ta'sir ko'rsatadi.

2-bosqich. Ushbu bosqichda talab etilgan aniqlik parametrlarini ta'minlaydigan texnologik moslamalar to'plami shakllantiriladi. Buning uchun predikat tenglamalar tizimi quriladi. Ushbu bosqichni amalga oshirish uchun moslamalar bazasi yaratiladi, unda ularning zarur geometrik va texnik parametrlari ko'rsatiladi.

3-bosqich. Matematik modellar asosida ishlov berish xatoliklarini hisoblash uchun dastlabki bosqich parametrlari shakllantiriladi. Kesuvchi asbob, kesish rejimlari, jihoz va moslamalar parametrlari har bir bosqichda maksimal aniqlikni ta'minlash sharti asosida belgilanadi. Bunda bosqich chiqish ma'lumotlari xatoliklarning "merosiy" uzatilishini hisobga olgan holda keyingi bosqich uchun kirish ma'lumotlari bo'lib xizmat qiladi. Shuningdek, chidamlilik, unumdorlik va jihoz imkoniyatlari kabi cheklovlar ham hisobga olinadi.

4-bosqich. Shakllanish jarayonining matematik modellari yordamida ishlov berish xatoliklari hisoblanadi. Maksimal aniqlikka erishish modellashtirish asosida, jumladan, bosqich parametrlarini kompyuter yordamida sozlash orqali ta'minlanadi. Bu bosqichda asbob, moslama va kesish rejimlarini tanlash jarayonlari birlashtiriladi.

5-bosqich. Olingan natijalar asosida talab etilgan aniqlik parametrlarining ta'minlanganligi baholanadi va texnologik jarayonni davom ettirish yoki to'xtatish haqida qaror qabul qilinadi. Agar aniqlik ta'minlansa, barcha zarur bosqich parametrlari ko'rsatilgan texnologik hujjatlar rasmiylashtiriladi. Agar bir yoki bir nechta aniqlik ko'rsatkichlari bajarilmasa, navbatdagi bosqich kiritiladi va loyihalash jarayoni qayta takrorlanadi. Bunday siklik yondashuv bosqichlar bo'yicha xatoliklarni nazorat qilish

va texnologik parametrlarni o'zgartirish orqali bosqichlar sonini minimallashtirish imkonini beradi.

6-bosqich. Agar talab etilgan aniqlik ko'rsatkichlariga erishilmasa, qo'shimcha ishlov bosqichi belgilanadi. Bunda oldingi bosqich chiqish ma'lumotlari keyingi bosqich uchun kirish ma'lumotlari bo'lib xizmat qiladi.

7-bosqich. Agar mavjud sharoitlarda talab etilgan aniqlikka erishish imkoniyati tugasa (masalan, juda yuqori aniqlik talabi qo'yilgan bo'lsa), yakuniy ishlov berish usullari — jig boring, silliqlash va boshqalar — qo'llaniladi.

8-bosqich. Yakuniy bosqichda texnologik jarayon varianti va moslamalar to'plami tanlab olinadi. Bunda iqtisodiy, tashkiliy, texnik va boshqa ko'rsatkichlar hisobga olinadi.

Ushbu yondashuv an'anaviy loyihalash usullari bilan taqqoslaganda bir qator sezilarli afzalliklarni beradi. Xususan, texnologik bosqichlar sonini 2 barobargacha kamaytirish imkonini yaratadi. Shu bilan birga, ishlab chiqarish-texnologik tayyorgarlik xarajatlari 20–30 % gacha qisqaradi, shuningdek, yaroqsiz (defektli) mahsulotlar soni 3 barobargacha kamayadi.

Adabiyotlar

1. S. Bratan, E. Vladetskaya, A. Kharchenko, *Improvement of quality of details at round grinding in the conditions of a floating workshop*, MATEC Web Conf. 129, 01083 (2017)
2. V.I. Guzeev, *Feed speed control to assure accuracy of complex profile surfaces processing*, Procedia Eng. 129, 495-499 (2015)
3. M. Mia, M.A. Khan, N.R. Dhar, *Study of surface roughness and cutting forces using ANN, RSM, and ANOVA in turning of Ti-6Al-4V under cryogenic jets applied at flank* MATEC Web of Conferences 224, 01057 (2018)
<https://doi.org/10.1051/mateconf/201822401057>

4. A.M. Kozlov, A.A. Kozlov, Y.V. Vasilenko, *Modeling a Cylindrical Surface Machined by a Non-circular Face Tool*, *Procedia Eng.* 150, 1081-1088 (2016)
5. J.S. Dureja, V.K. Gupta, V.S. Sharma, M. Dogra, M.S. Bhatti, *A review of empirical modeling techniques to optimize processing parameters for hard turning applications*, *Proc. Inst. Mech. Eng. Pt. B J. Eng. Manuf.* 230(3), 389-404 (2016)
6. G. Królczyk, M. Gajek, S. Legutko, *Effect of the cutting parameters impact on tool life in duplex stainless steel turning process / [Utjecaj parametara obrade na vijek alata u procesu tokarenja dupleks čelika otpornog na koroziju]*, *Teh. Vjesn.* 20(4), 587-592 (2013)
7. S.N. Grigoriev, M.A. Volosova, V.L. Gurin, A.E. Seleznev, *Wear of replaceable indexable inserts made of mixed cutting ceramics CC650 as a function of force parameters of steel ShKh15 face milling*, *J. Fric. Wear* 36(6), 521-527 (2015)
8. G.M. Krolczyk, P. Nieslony, S. Legutko, *Determination of tool life and research wear during duplex stainless steel turning*, *Arch. Civ. Mech. Eng.* 15(2), 347-354 (2015)
9. N.E. Karkalos, A.P. Markopoulos, *Applicability of ANN models and Taguchi method for the determination of tool life in turning*, *MATEC Web Conf.* 112, 06005 (2017)
10. Á.R. Machado, A.E. Diniz, *Tool wear analysis in the processing of hardened steels*, *Int. J. Adv. Manuf. Technol.* 92(9-12), 4095-4109 (2017)
11. P.P. Pereverzev, D.Yu. Pimenov, *Optimization of control programs for numerically controlled machine tools by dynamic programming*, *Russ. Eng. Res.* 35(2), 135-142 (2015)
12. P.P. Pereverzev, A.V. Akintseva, *Optimal internal grinding cycles in multidimensional control-parameter space*, *Russ. Eng. Res.* 36(11), 974-978 (2016)

13. A. Akintseva, P. Pereverzev, *Complex optimization of parameters for controlling the cycle of internal grinding by the method of dynamic programming*, MATEC Web Conf. 129, 01019 (2017)
14. A.T. Abbas, D.Yu. Pimenov, I.N. Erdakov, T. Mikolajczyk, E.A. El Danaf, M.A. Taha, *Minimization of turning time for high-strength steel with a given surface roughness using the Edgeworth–Pareto optimization method*, Int. J. Adv. Manuf. Technol. 93(5-8), 2375-2392 (2017)
15. V.I. Guzeev, *Theory and methodology of calculating the productivity of contour machining of parts of various accuracy on turning and milling CNC machines*, Abstract of a thesis of the Doctor of Engineering Sciences. Chelyabinsk: Publishing House of the SUSU, 33 (1994).
16. I.P. Deryabin, *Methodology of the parametric design of multi-pass processing of round holes using end measuring tools*, Abstract of a thesis of the Doctor of Engineering Sciences. Chelyabinsk: Publishing House of the SUSU, 36 (2009).
17. *General machine-building standards of cutting time and modes for the standardization of works performed on universal and multipurpose CNC machines*. Part 2. Standard cutting modes, Moscow: Economics, 472 (1990)
18. V.I. Guzeev, V.A. Batuev, I.V. Surkov, *Cutting modes for turning and drilling-milling and boring CNC machines*: Reference book / Edited by V.I. Guzeev, M: Mashinostroenie (Mechanical Engineering), 368 (2005)

**THE DIRECTING SCHOOL OF THE SYRDARYA THEATRE
(1978–1991): ISSUES OF PRESERVING AND DIGITISING
THEATRE HISTORY**

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Abstract. This article analyses the period of creative maturity of the Syrdarya Regional Musical Drama Theatre between 1978 and 1991. It examines the directing school formed under Makhkam Muhammedov (1978–1982) and Jura Mahmudov (1983–1994), the distinctive stage solutions of *Richard III* (1980) and *King Lear* (1990), and the creative partnership with Mashrab Boboyev. The article also addresses the theatre's bilingual repertoire policy. Theatre documents — programmes, newspaper reviews, actors' memoirs — are currently preserved mainly on paper, and many have been lost. The article proposes practical approaches to digitising these materials in order to preserve them for future generations and bring them into scholarly circulation.

Keywords: *Syrdarya Theatre, directing school, Makhkam Muhammedov, Jura Mahmudov, Mashrab Boboyev, Shakespeare on stage, theatre archive, digitisation, cultural heritage.*

The history of Uzbek theatre remains largely understudied in many respects. In particular, the developmental periods of regional theatres have frequently been overlooked. Yet during 1978–1991, the Syrdarya Regional Musical Drama Theatre became not merely a regional centre but a creative force recognised across the republic's theatrical landscape.

During this period, two major directors — Makhkam Muhammedov (1978–1982) and Jura Mahmudov (1983–1994) — established their own distinctive schools at the theatre. Under their leadership, a total of 61 productions were staged. Among these, two

Shakespearean tragedies — Richard III (1980) and King Lear (1990) — occupy a place of particular significance.

However, documents from this period — production programmes, newspaper reviews, photographs, and actors' memoirs — have until now been preserved only in paper form in the theatre archive, and much has already been lost. The purpose of this article is therefore to examine these materials and indicate ways to preserve them for future generations.

1. Makhkam Muhammedov and the Stanislavski Tradition

When Makhkam Muhammedov arrived at the Syrdarya Theatre (1978–1982), the company was still a young ensemble without a clearly defined artistic direction.

In his stage work, Muhammedov drew upon the Stanislavski method, yet adapted it to the unique spiritual temperament of the Uzbek theatre. His famous principle was: "The stage is real life. The actor must not know he is acting — he must be living."

In Richard III (1980), the title role was performed by Adham Yusufaliyev. Theatre scholars M. Boboyev and M. Hazratqulov wrote of this production: "With their staging of Richard III, the artists of Syrdarya opened a new page in the history of Shakespeare on the Uzbek Soviet stage." This assessment was no accident — for a regional theatre, mounting Shakespeare at that time demanded considerable courage.

2. Jura Mahmudov and Experimental Stage Solutions

Jura Mahmudov pursued a bolder path in his stage experiments. His most courageous decisions were manifested in the 1990 production of King Lear. Rather than presenting the performance on a conventional stage, the director chose to stage it in the theatre's artists' workshop — in the round, with the audience seated around the actors. This approach, employed for the first time at the Syrdarya Theatre, lent the tragedy of Lear an extraordinary immediacy for the spectator.

The difference in stage solutions between these two Shakespeare productions reveals a decade of creative growth: while *Richard III* (1980) was presented on a traditional stage, *King Lear* (1990) was offered to the audience in an entirely new space, in the round. This evolution testifies to the Syrdarya Theatre's readiness for artistic innovation.

3. Categories of Archival Materials (1978–1991)

Materials relating to the Syrdarya Theatre during 1978–1991 survive in four principal categories.

3.1. Repertoire Chronicle

This document covers 210 productions staged between 1975 and 2024. It records for each production the premiere date, creative team (director, designer, conductor, choreographer), and genre. It is a fundamental source for researchers.

3.2. Theatrical Tashkent Journal

Issue No. 9 of 1981 was devoted entirely to the Syrdarya Theatre. This rare 32-page publication contains repertoire analysis, festival results, stage photographs, and creative portraits of the actors. It has not yet been catalogued in library holdings.

3.3. Periodical Press Archive

Reviews and interviews published in *Sirdaryo haqiqati*, *O'zbekiston madaniyati*, *Pravda Vostoka*, and *Sovet O'zbekistoni* reflect public response to the theatre's activities. Many of these are preserved in folders in the theatre archive; some have yellowed to the point of illegibility.

3.4. Actors' Memoirs

The manuscript memoirs of People's Artist of Uzbekistan Shafolat Rahmatullayeva concerning *Richard III* and *King Lear* contain information about directorial methodology found in no other document. Such living testimony is irreplaceable and will be lost forever with the passage of time.

4. A Three-Stage Digitisation Strategy

By digitisation we do not mean a technically complex process, but rather simple and precise tasks. This can be accomplished in three stages.

Stage 1: Scanning and Storage

Paper materials — production programmes, photographs, newspaper reviews — are converted to digital form using a standard scanner. Each file should be properly named (e.g., "1980_Richard_III_programme.pdf") to facilitate retrieval. Actors' memoirs may be preserved as audio recordings.

Stage 2: Integration into Library Holdings

Digitised materials are deposited in the electronic holdings of the library of the Uzbekistan State Institute of Arts and Culture. A brief catalogue card should be prepared for each document: what it is, when it was created, by whom, and which production it relates to. This makes the materials openly accessible and convenient for researchers, students, and all those interested in the theatre.

Stage 3: Comparative Documentation of the Two Shakespeare Productions

Richard III (1980) and King Lear (1990) stand ten years apart. All available documents demonstrating how the theatre changed and how directorial style evolved during that decade should be assembled into a single collection. Such a compilation would become an invaluable source for future theatre scholarship.

5. Significance of the Work

The importance of this undertaking may be viewed from three perspectives. First, the directing school of the Syrdarya Theatre will be documented as a coherent whole and made available to researchers as an open source; at present, no separate monograph on this subject exists. Second, a comparative study of Richard III and King Lear will yield new conclusions regarding the history of Shakespeare on the Uzbek stage. Third, digitised materials may serve directly as teaching resources in the fields of theatre studies and cultural history. For students, this is living history.

6. Conclusion

The directing school of the Syrdarya Theatre during 1978–1991 represents a bright but still insufficiently studied chapter in the history of Uzbek theatre. The most reliable and modern means of preserving these materials is their digitisation and incorporation into library holdings. This is not a complex technical project — it is a simple and precise expression of responsible stewardship towards our cultural heritage.

References

- [1] Teatralniy Tashkent. 1981. No. 9. 32 pp. (Special issue: Dedicated to the Syrdarya Regional Musical Drama Theatre).
- [2] Syrdarya Regional Musical Drama Theatre. Repertoire Chronicle (1975–2024) / Compiled by N. Abdumuxtorova. Gulistan: Theatre Archive, 2024. 210 productions.
- [3] Boboyev M., Hazratqulov M. "Richard III" on Stage // O'zbekiston madaniyati. 1980. 1 July.
- [4] Rahmatullayeva Sh. Memoirs: On the Productions of "Richard III" and "King Lear". Syrdarya Regional Musical Drama Theatre Archive, 2024.

THEORETICAL FOUNDATIONS OF EMPLOYMENT AND LABOR PRODUCTIVITY IN UZBEKISTAN

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Abstract. The article analyzes the theoretical foundations of labor productivity, its economic essence, and measurement indicators. Labor productivity is considered a decisive factor in ensuring sustainable economic development, increasing enterprise competitiveness, and improving the welfare of the population. The research uses natural and value-based indicators for assessing labor productivity, as well as important economic indicators such as labor intensity. The article also highlights that the economic reforms implemented in Uzbekistan during the years of independence created opportunities for increasing labor efficiency in society. However, a number of problems that hinder the growth of labor productivity still remain. The successful resolution of these issues would further enhance labor efficiency in enterprises and organizations.

Keywords: labor productivity, actual labor productivity, current labor productivity, potential labor productivity, impact of reforms on labor productivity, factors reducing labor productivity, opportunities for increasing labor productivity.

O'ZBEKISTONDA AHOLI BANDLIGI VA MEHNAT UNUMDORLIGINING NAZARIY ASOSLARI

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Annotatsiya. Maqolada muallif mehnat unumdorligining nazariy asoslari, uning iqtisodiy mazmuni hamda o'lchov ko'rsatkichlari tahlil etib o'tgan. Mehnat unumdorligi iqtisodiyotning barqaror rivojlanishi, korxonalarining raqobatbardoshligi va aholi

farovonligini oshirishda hal qiluvchi omil sifatida qaraladi. Tadqiqotda mehnat unumdorligini baholashning natural va qiymat ko'rsatkichlari, shuningdek, mehnat sig'imi kabi muhim iqtisodiy ko'rsatkichlardan foydalanilgan. Shuningdek, maqolada mustaqillik yillarida O'zbekistonda amalga oshirilgan iqtisodiy islohotlar jamiyatdagi mehnat samaradorligini oshirish imkoniyatlarini vujudga keltirgani ochi berilgan. Biroq hanuzga qadar jamiyatda mehnat samaradorligini oshirishga xalal berayotgan qator muammolar saqlanib qolmoqda. Mazkur masalalarning muvaffaqiyatli hal etilishi korxonalar va tashkilotlardagi mehnat samaradorligini yanada yuksaltirgan bo'lar edi.

Kalit so'zlar: *mehnat samaradorligi, amaldagi mehnat samaradorligi, naqd mehnat samaradorligi, potensial mehnat samaradorligi, islohotlarning mehnat samaradorligiga ta'siri, mehnat samaradorligini kamaytirayotgan omillar, mehnat samaradorligini oshirish imkoniyatlari.*

Bugungi kunda mamlakatimizda iqtisodiyotni rivojlantirish hamda erkinlashtirish uchun bosqichma-bosqich va izchillik bilan qator ishlar amalga oshirilmoqda. Respublika iqtisodiyoti sohasida bozor munosabatlarining chuqurlashuvi va u bilan bog'liq bir qator muammolarni hal etish uchun jamiyiyki mavjud resurslardan oqilona foydalanish, avvalo mehnat resurslaridan samarali foydalanishni talab etmoqda.

Mamlakatdagi mavjud ish bilan band aholining ish bilan bandligini oshirish va bu orqali, aholining turmush darajasini yaxshilash hududda amal qilayotgan mehnat bozori infratuzilmasining faoliyati bilan chambarchas bog'liq. Bozor iqtisodiyoti munosabatlari mukammal shakllanish jarayonida mehnat bozori infratuzilmasi tub tarkibiy o'zgarishlar va yangiliklar bilan takomillashib boradi, bu jarayonlarni ilmiy-nazariy tadqiq qilish va umumlashtirish hayotiy zaruratdir.

Bandlik darajasi fiskal barqarorlikni ta'minlashda muhim rol o'ynaydi. Fiskal barqarorlik deganda davlatning moliya siyosati, byudjet daromadlari va xarajatlari o'rtasidagi muvozanat tushuniladi. Yuqori darajadagi ish bilan bandlik davlatning

solliqlar va ijtimoiy to'lovlar orqali daromad manbalarini oshirishga imkon yaratadi. Natijada byudjet tushumlari barqaror bo'ladi, davlat ijtimoiy va infratuzilma xarajatlarini moliyalashtirish imkoniyatiga ega bo'ladi. Aksincha, bandlik pasayganda ish bilan band bo'lmagan aholining soni oshadi, bu esa davlat ijtimoiy yordamga bo'lgan xarajatlarini ko'paytiradi va byudjet balansiga bosim yaratadi. Norasmiy bandlik va ishsizlarning ko'payishi solliqlar tushumini kamaytiradi va davlatning fiskal barqarorligini susaytiradi. Shu tariqa, bandlik darajasi fiskal barqarorlikning mustahkamligiga bevosita ta'sir qiladi. O'zbekiston sharoitida fiskal barqarorlikni ta'minlash uchun ishchi kuchini samarali ishlatish va bandlik darajasini oshirish strategik ahamiyatga ega. Ishchi kuchining malakasi va mehnat unumdorligini oshirish, yangi ish o'rinlarini yaratish, ish haqi va ijtimoiy kafolatlarni barqaror ta'minlash orqali davlat byudjeti daromadlarini barqarorlashtirish mumkin. Shuningdek, norasmiy bandlikni kamaytirish va rasmiy ish o'rinlarini ko'paytirish fiskal barqarorlikni mustahkamlashning muhim vositasi hisoblanadi. Shu tariqa, bandlik darajasi fiskal barqarorlikni belgilovchi asosiy omillardan biri bo'lib, iqtisodiyotning barqaror rivojlanishi, ijtimoiy barqarorlik va davlat moliya salomatligi bilan chambarchas bog'liqdir. Yuqori bandlik davlatning moliyaviy resurslarini oshiradi, fiskal siyosatni samarali amalga oshirishga yordam beradi va iqtisodiy shoklarga nisbatan chidamlilikni kuchaytiradi. Bandlikning ijtimoiy barqarorlikka ta'siri

Bandlik darajasi ijtimoiy barqarorlikning muhim ko'rsatkichlaridan biri sifatida qaraladi. Ish bilan band bo'lgan aholi daromadga ega bo'ladi, o'z oilasini ta'minlaydi va ijtimoiy xavfsizlikni mustahkamlaydi. Yuqori bandlik darajasi jinoyatchilik darajasini kamaytirish, ijtimoiy nizolarni oldini olish va aholi orasida ijtimoiy adolatni ta'minlashga yordam beradi. Shu tariqa, bandlik ijtimoiy muvozanatni va jamiyat ichidagi tinchlikni mustahkamlashning asosiy vositalaridan biri sifatida xizmat qiladi. Aksincha, bandlik darajasi past bo'lgan hollarda ish bilan band bo'lmagan aholi soni

ortadi, ishsizlik va iqtisodiy qiyinchiliklar kuchayadi. Bu esa ijtimoiy g‘azab, norozilik va jamiyatda notinchlikka olib kelishi mumkin. Ish bilan band bo‘lmagan yoshlar va malakasiz ishchilar orasida ijtimoiy muammolar, shu jumladan, iqtisodiy va ijtimoiy muvozanatsizliklar kuchayadi. O‘zbekiston sharoitida ijtimoiy barqarorlikni ta’minlash uchun bandlik darajasini oshirish strategik ahamiyatga ega. Ishchi kuchining malakasini oshirish, yangi ish o‘rinlarini yaratish, ish haqi va ijtimoiy kafolatlarni barqaror ta’minlash orqali jamiyatdagi ijtimoiy muvozanatni mustahkamlash mumkin. Shuningdek, norasmiy bandlikni kamaytirish va rasmiy ish joylarini ko‘paytirish ijtimoiy barqarorlikni kuchaytiradigan muhim chora-tadbir hisoblanadi. Shu tariqa, bandlik darajasi ijtimoiy barqarorlikning mustahkamligini belgilovchi asosiy omillardan biri bo‘lib, iqtisodiy rivojlanish va davlat siyosatining samarali amalga oshirilishi bilan chambarchas bog‘liqdir. Yuqori bandlik nafaqat iqtisodiy o‘shish, balki jamiyatdagi tinchlik, xavfsizlik va ijtimoiy adolatni ta’minlashga xizmat qiladi.

Bandlikning inflyatsiya jarayonlariga ta’siri

Bandlik darajasi inflyatsiya jarayonlariga bevosita ta’sir ko‘rsatadi. Ish bilan band bo‘lgan aholi daromadga ega bo‘lgani sari iste’mol hajmi oshadi, bu esa talabni kuchaytiradi va narxlar darajasining o‘shishiga olib kelishi mumkin. Shu nuqtai nazardan, yuqori bandlik darajasi talab tarafidan inflyatsiya (demand-pull inflation) bosimini kuchaytiradi. Agar ishlab chiqarish quvvati yetarli darajada bo‘lmasa, ko‘paygan talab narxlar oshishiga olib keladi. Bundan tashqari, bandlikning oshishi ishchi kuchining yetishmovchiligi va malakali ishchilarni jalb qilish raqobatini kuchaytiradi, natijada ish haqi oshadi. Ish haqi oshishi esa ishlab chiqarish xarajatlarini ko‘paytiradi va narxlar darajasining ko‘tarilishiga sabab bo‘ladi, bu esa xarajat tarafidan inflyatsiya (cost-push inflation) deb ataladi. Shu tariqa, bandlik darajasi inflyatsiya jarayonlariga ikki yo‘l bilan ta’sir qiladi: iste’mol talabini oshirish orqali va ish haqi orqali ishlab chiqarish xarajatlarini oshirish yo‘li bilan. O‘zbekiston sharoitida inflyatsiya va bandlik

o'rtasidagi bog'liqlik sohalar kesimida seziladi. Masalan, sanoat va xizmat ko'rsatish sohalarida ishchi kuchi yetishmovchiligi va malaka talabining oshishi mehnat xarajatlarini ko'taradi va narxlar bosimini kuchaytiradi. Shu bilan birga, yuqori bandlik iste'molni rag'batlantiradi, ichki talabni oshiradi va inflyatsion jarayonlarga ta'sir qiladi. Shu tariqa, bandlik darajasi inflyatsiya jarayonlarini shakllantiruvchi muhim omil sifatida qaraladi. Makroiqtisodiy barqarorlikni ta'minlash uchun bandlik darajasini oshirish bilan birga, ishlab chiqarish quvvatlarini kengaytirish, mehnat unumdorligini oshirish va ish haqi mexanizmlarini muvozanatlash zarur. Bu chora-tadbirlar orqali bandlik va inflyatsiya o'rtasidagi salbiy bog'liqlikni kamaytirish va iqtisodiy barqarorlikni mustahkamlash mumkin. Bandlik darajasi investitsion muhitning barqarorligi va rivojlanishiga bevosita ta'sir qiladi. Yuqori darajadagi bandlik iqtisodiyotdagi ishchi kuchining samarali ishlatilishini va ishlab chiqarish jarayonlarining barqarorligini ko'rsatadi. Bu esa ichki va tashqi investorlarda ishonchni oshiradi, yangi loyihalar va investitsiyalarni amalga oshirishni rag'batlantiradi. Ishchi kuchi yetarli va malakali bo'lgani sari korxonalar ishlab chiqarishni kengaytirishga va innovatsion loyihalarni joriy etishga tayyor bo'ladi. Aksincha, bandlik darajasi past bo'lsa, ishchi kuchi yetishmovchiligi va mehnat bozoridagi noaniqlik investitsion muhitni zaiflashtiradi. Investitsiyalarni jalb qilishdagi xavf oshadi, ishlab chiqarish va xizmat ko'rsatish loyihalarining samaradorligi pasayadi. Shu bilan birga, ishsizlik va norasmiy bandlik darajasi yuqori bo'lgan hollarda investorlar iqtisodiy barqarorlik va ishchi kuchining sifatiga shubha qiladi, bu esa investitsiyalar oqimini susaytiradi. O'zbekiston sharoitida investitsion muhitni yaxshilash va bandlik darajasini oshirish strategik ahamiyatga ega hisoblanadi. Ishchi kuchining malakasini oshirish, yangi ish o'rinlarini yaratish, texnologiyalarni joriy etish va mehnat bozorini tartibga solish orqali investitsion muhit barqarorlashtiriladi. Shu yo'l bilan iqtisodiyotdagi ishlab chiqarish salohiyati oshadi va ichki hamda tashqi investorlar faol jalb qilinadi. Shu tariqa, bandlik

darajasi investitsion muhitni belgilovchi asosiy omillardan biri hisoblanadi. Yuqori darajadagi bandlik iqtisodiyotning raqobatbardoshligini oshiradi, investorlar ishonchini mustahkamlaydi va mamlakatning uzoq muddatli iqtisodiy rivojlanishini ta'minlaydi.

FOYDALANILGAN ADABIYOTLAR

1. Shodmonov SH. Tejamkorlikning umumiy iqtisodiy kategoriya sifatidagi mazmuni va undan amalda foydalanish.// Iqtisod va moliya, 2017, №3.- 4-b.

2. Аджиева А.И., Чомаева С.У. Оптимизация денежных средств и денежных эквивалентов предприятия.// Естественно-гуманитарные исследования, 2021, №6.- 28-34-с.

3. Melenberg A. Dorogu stroili iz chelovecheskogo materiala.// Novaya gazeta, 2011, 8 iyulya.

4. Zahirova G.M., Qodirov S.M. Kichik biznes va xususiy tadbirkorlik faoliyatini boshqarishda mahalliy hokimiyat organlarining roli.// Mamlakatni modernizatsiyalash sharoitida O'zbekiston iqtisodiyotini boshqarishning dolzarb muammolari. Respublika ilmiy-amaliy konferensiyasi materiallari.- T.:O'zMU, 2016.- B.21.

5. Anvarova L.Sh. Labor efficiency-life economic development factor // International bulletin of Applied Sciences and Technology. –USA, 2023. -Vol.3, Issue 05. -PP.918-922.

6. Abdullayeva D.K., Nurullayeva SH.T. Sanoat korxonalarida mehnat samaradorligini oshirish mexanizmini takomillashtirish zaruriyati.// O'zbekiston statistika axborotnomasi, 2023, №4.

7. Abduraxmonov Q.X. Mehnat iqtisodiyoti.- T.: Mehnat, 2009.

8. Abulqosimov H.P., Ashurova M.X. Ishchi kuchi sifati va raqobatbardoshligini oshirish yo'llari.// Iqtisod va moliya, 2014, №9.- 18-27-b.

9. Axmedxodjayev X.T., Kazakov O.S., Axmedov R.M. Mehnatni ilmiy tashkil etish.- T., 2010.

SOCIALIZATION LICENSE: PSYCHOLOGICAL CHARACTERISTICS AND FACTORY DEVELOPMENT

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Abstract. This article examines the psychological features of personality socialization, the main stages, and factors in the formation of an individual's social behavior. It highlights the views of domestic and foreign psychologists on the process of socialization, the role of the family, the educational environment, society, and interpersonal communication in personality development. The mechanical adaptation of the individual to social conditions and the significance of socialization in modern society are analyzed.

Keywords: personality, socialization, society, upbringing, adaptation, social environment, personality psychology, developed person.

СОЦИАЛИЗАЦИЯ ЛИЧНОСТИ: ПСИХОЛОГИЧЕСКИЕ ОСОБЕННОСТИ И ФАКТОРЫ РАЗВИТИЯ

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Аннотация. В данной статье рассматриваются психологические особенности социализации личности, основные этапы и факторы формирования социального поведения человека. Освещаются взгляды отечественных и зарубежных психологов на процесс социализации, роль семьи, образовательной среды, общества и межличностного общения в развитии личности. Анализируются механизмы адаптации индивида к социальным условиям и значение социализации в современном обществе.

Ключевые слова: личность, социализация, общество, воспитание,

адаптация, социальная среда, психология личности, развитие человека.

Современное общество предъявляет высокие требования к личности человека, его способности адаптироваться к социальным изменениям, эффективно взаимодействовать с окружающими и выполнять различные социальные роли. Формирование личности невозможно вне общества, поскольку именно в процессе взаимодействия с окружающей средой человек усваивает нормы, ценности, правила поведения и социальный опыт.

Проблема социализации личности является одной из центральных тем современной психологии. Она охватывает широкий круг вопросов, связанных с развитием человека, его адаптацией к общественной жизни и становлением индивидуальности. Социализация представляет собой сложный и непрерывный процесс, который продолжается на протяжении всей жизни человека.

Изучение особенностей социализации личности имеет важное значение для понимания механизмов формирования поведения, мировоззрения и социальной активности человека. Особенно актуальной данная проблема является в условиях глобализации, развития информационных технологий и изменения социальных ценностей.

Термин «социализация» происходит от латинского слова *socialis*, что означает «общественный». В психологии под социализацией понимается процесс усвоения человеком социального опыта, норм, ценностей и моделей поведения, необходимых для успешного функционирования в обществе.

По мнению многих психологов, социализация является двусторонним процессом. С одной стороны, человек усваивает социальный опыт, а с другой — активно воспроизводит и преобразует социальные отношения посредством собственной деятельности. Известный психолог Л.С. Выготский подчеркивал, что развитие личности происходит через взаимодействие человека с социальной

средой. А.Н. Леонтьев отмечал значение деятельности как основного условия формирования личности. Э. Эриксон рассматривал социализацию через призму психосоциального развития человека.

Социализация способствует:

- формированию мировоззрения;
- развитию коммуникативных навыков;
- усвоению социальных ролей;
- развитию самосознания;
- адаптации личности к обществу.

Социализация личности осуществляется поэтапно и охватывает всю жизнь человека.

Первичная социализация.

Первичная социализация происходит в детском возрасте. Главную роль на этом этапе играет семья. Именно в семье ребенок впервые знакомится с нормами поведения, моральными ценностями и культурными традициями.

На данном этапе формируются:

- основы характера;
- эмоциональная сфера;
- первые навыки общения;
- чувство доверия к окружающему миру.

Кроме семьи, важное значение имеют дошкольные учреждения и ближайшее окружение ребенка.

Вторичная социализация. Вторичная социализация связана с вхождением личности в более широкую социальную среду. Человек осваивает новые социальные роли, связанные с учебной, профессиональной деятельностью и общественной жизнью.

Основными институтами вторичной социализации являются:

- школа;
- высшие учебные заведения;
- трудовой коллектив;
- средства массовой информации;
- социальные сети.

На данном этапе формируются профессиональные качества, гражданская позиция и социальная ответственность личности.

Социализация во взрослом возрасте.

Во взрослом возрасте человек продолжает адаптироваться к новым социальным условиям. Изменения в обществе требуют постоянного обновления знаний, навыков и моделей поведения.

Особое значение приобретают:

- профессиональная самореализация;
- семейные отношения;
- общественная активность;
- духовное развитие.

Основные факторы социализации.

Процесс социализации зависит от множества факторов, оказывающих влияние на развитие личности.

Семья. Семья является первым и наиболее важным институтом социализации. От характера семейного воспитания зависит эмоциональное состояние ребенка, его самооценка и отношение к обществу.

Благоприятная семейная атмосфера способствует:

- развитию уверенности в себе;
- формированию моральных качеств;

- развитию ответственности;
- эмоциональной устойчивости.

Образовательная среда.

Школа и образовательные учреждения играют важную роль в социализации личности. В процессе обучения человек приобретает знания, развивает мышление и коммуникативные способности.

Педагоги оказывают значительное влияние на формирование:

- дисциплины;
- социальной активности;
- самостоятельности;
- нравственных ценностей.

Группа сверстников.

со сверстниками способствует развитию социальных навыков и формированию чувства принадлежности к коллективу. В подростковом возрасте мнение сверстников часто становится особенно значимым.

Средства массовой информации и интернет.

Современные информационные технологии существенно влияют на процесс социализации. Интернет предоставляет широкие возможности для получения информации и общения, однако может оказывать как положительное, так и отрицательное воздействие.

Положительное влияние:

- расширение кругозора;
- развитие познавательной активности;
- доступ к образованию.

Отрицательное влияние:

- зависимость от социальных сетей;

- снижение уровня живого общения;
- воздействие негативной информации.

Психологические механизмы социализации.

Социализация осуществляется посредством определенных психологических механизмов.

Подражание. Человек усваивает модели поведения через наблюдение за окружающими людьми. Особенно ярко данный механизм проявляется в детском возрасте.

Идентификация.

Личность стремится быть похожей на значимых людей — родителей, учителей, лидеров общества.

Внушение. Определенные установки и ценности могут усваиваться человеком под влиянием авторитетных лиц или социальной среды.

Адаптация. Социальная адаптация помогает человеку приспособливаться к новым условиям жизни и деятельности.

Проблемы социализации в современном обществе.

Современное общество характеризуется быстрыми социальными изменениями, что создает определенные трудности в процессе социализации личности.

Среди основных проблем можно выделить:

- кризис семейного воспитания;
- рост социальной изоляции;
- влияние виртуального общения;
- распространение стрессов и тревожности;
- снижение духовных ценностей.

Молодежь особенно подвержена влиянию социальных изменений. Поэтому важное значение имеет психологическая поддержка и создание условий для гармоничного развития личности.

Заключение. Таким образом, социализация личности представляет собой сложный и многогранный процесс формирования человека как члена общества. Она начинается с раннего детства и продолжается на протяжении всей жизни.

Основную роль в социализации играют семья, образовательные учреждения, общество и межличностное общение. Успешная социализация способствует развитию гармоничной, ответственной и социально активной личности.

В современных условиях особую актуальность приобретает проблема сохранения духовных и нравственных ценностей, формирования устойчивости личности к негативным социальным воздействиям и развития способности к эффективной социальной адаптации.

Список литературы

1. Выготский Л.С. Психология развития человека. — Москва: Смысл, 2005.
2. Леонтьев А.Н. Деятельность. Сознание. Личность. — Москва: Политиздат, 1975.
3. Эриксон Э. Детство и общество. — Санкт-Петербург: Питер, 2000.
4. Андреева Г.М. Социальная психология. — Москва: Аспект Пресс, 2018.
5. Кон И.С. Психология личности. — Москва: Академия, 2007.
6. Мудрик А.В. Социализация человека. — Москва: Академия, 2010.
7. Реан А.А. Психология личности. — Санкт-Петербург: Прайм-ЕВРОЗНАК, 2012.

Spirituality and Information Technologies: Their Influence on the Consciousness of Modern Youth

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Annotation: This article examines the role of information technologies in modern society and their positive and negative impact on the spiritual development of young people. Special attention is given to the importance of spiritual education in the digital environment, the formation of information culture, and the role of family, education, and society in shaping the younger generation. The article also analyzes the rational use of information technologies for raising spiritually mature, educated, and modern youth.

Keywords: information technologies, spirituality, youth education, digital environment, information culture, globalization, internet, social networks, spiritual threats, national values, education, family, society, artificial intelligence, spiritual upbringing.

Ma'naviyat va axborot texnologiyalari: zamonaviy yoshlar ongiga ta'siri

O'zMPU milliy g'oya va ma'naviyat asoslari huquq ta'limi yo'nalishi 2-bosqich talabasi

Irnazarova Sevinch

Annotatsiya: Mazkur maqolada axborot texnologiyalarining zamonaviy jamiyat hayotidagi o'rnini, yoshlar ma'naviyatiga ko'rsatayotgan ijobiy va salbiy ta'siri tahlil qilingan. Shuningdek, raqamli muhit sharoitida ma'naviy tarbiyaning ahamiyati, axborot madaniyatini shakllantirish, oila, ta'lim va jamiyatning yoshlar tarbiyasidagi o'rnini yoritilgan. Axborot texnologiyalaridan oqilona foydalanish orqali ma'naviy yetuk, bilimli va zamonaviy avlodni tarbiyalash masalalari muhokama etilgan

Kalit so'zlar: axborot texnologiyalari, ma'naviyat, yoshlar tarbiyasi, raqamli muhit, axborot madaniyati, globallashuv, internet, ijtimoiy tarmoqlar, ma'naviy tahdidlar, milliy qadriyatlar, ta'lim, oila, jamiyat, sun'iy intellekt, ma'naviy tarbiya.

Влияние информационных технологий на духовное воспитание молодежи

Аннотация: В данной статье рассматривается роль информационных технологий в жизни современного общества, а также их положительное и отрицательное влияние на духовное развитие молодежи. Особое внимание уделено значению духовного воспитания в условиях цифровой среды, формированию информационной культуры, а также роли семьи, образования и общества в воспитании подрастающего поколения. Анализируются вопросы рационального использования информационных технологий для формирования духовно зрелой, образованной и современной молодежи.

Ключевые слова: информационные технологии, духовность, воспитание молодежи, цифровая среда, информационная культура, глобализация, интернет, социальные сети, духовные угрозы, национальные ценности, образование, семья, общество, искусственный интеллект, духовное воспитание.

The Impact of Information Technologies on the Spiritual Education of Youth

XX asr – axborot texnologiyalari jadal rivojlanayotgan, inson hayotining barcha sohalari raqamli muhit bilan chambarchas bog‘lanib borayotgan davrdir. Bugungi kunda internet, mobil qurilmalar, sun‘iy intellekt, ijtimoiy tarmoqlar va turli raqamli platformalar nafaqat iqtisodiyot va ta‘lim tizimini, balki insonning dunyoqarashi, ma‘naviyati va qadriyatlariga ham bevosita ta‘sir ko‘rsatmoqda. Ayniqsa, yoshlar bu jarayonning eng faol qatlamidir. Ular axborot texnologiyalaridan tez foydalanadi, yangi ma‘lumotlarni tez qabul qiladi va zamonaviy tendensiyalarga tez moslashadi. Shu bilan birga, bu holat ularning ma‘naviy dunyosiga ham kuchli ta‘sir ko‘rsatadi. Shuning uchun ma‘naviyat va axborot texnologiyalari o‘rtasidagi munosabatni chuqur o‘rganish bugungi kunning eng dolzarb masalalaridan biri hisoblanadi.

Axborot texnologiyalarining jamiyatdagi o‘rni Axborot texnologiyalari inson hayotini yengillashtirish, tezkor axborot almashinuvi va global muloqotni ta‘minlashda muhim

rol o'ynaydi. Bugungi kunda ta'lim, tibbiyot, iqtisodiyot, bank tizimi va hatto davlat boshqaruvi ham raqamli texnologiyalar asosida ishlamoqda. Yoshlar uchun esa bu soha katta imkoniyatlar eshigini ochmoqda. Ular internet orqali istalgan fan bo'yicha bilim olish, xorijiy tillarni o'rganish, onlayn kurslarda qatnashish va yangi kasblarni egallash imkoniga ega bo'lmoqda. Bu esa ularning bilim darajasini oshirishga xizmat qiladi. Shuningdek, axborot texnologiyalari ijodiy sohalarning rivojlanishiga ham katta turtki bermoqda. Dizayn, dasturlash, video montaj, blog yuritish va boshqa ko'plab yo'nalishlarda yoshlar o'z iste'dodini namoyon etish imkoniga ega bo'lmoqda.

Ijobiy ta'sirlar: bilim va imkoniyatlar kengayishi Axborot texnologiyalarining eng katta ijobiy jihatlaridan biri – bilimga kirish imkoniyatining kengayishidir. Avvallari kitoblar va an'anaviy ta'lim asosiy manba bo'lgan bo'lsa, hozirda raqamli resurslar bilim olishni yanada tez va qulay qildi. Masalan, elektron kutubxonalar orqali minglab kitoblardan foydalanish, video darslar orqali murakkab mavzularni tushunish, onlayn platformalarda mustaqil o'qish imkoniyati mavjud. Bu esa yoshlarning mustaqil fikrlashini rivojlantiradi. Bundan tashqari, global muloqot imkoniyati ham kengaydi. Ijtimoiy tarmoqlar va onlayn platformalar orqali yoshlar dunyoning turli burchaklaridagi tengdoshlari bilan fikr almashadi, madaniyatlar bilan tanishadi va yangi tajriba orttiradi. Salbiy ta'sirlar va xavf omillari Shu bilan birga, axborot texnologiyalarining salbiy jihatlari ham mavjud. Eng katta muammolardan biri – axborot oqimining nazoratsizligi. Internetda har qanday ma'lumotni topish mumkin, lekin ularning hammasi ham ishonchli emas. Noto'g'ri yoki buzilgan axborot yoshlar ongiga salbiy ta'sir ko'rsatishi mumkin. Ikkinchi muammo – ijtimoiy tarmoqlarga qaramlikdir. Ko'plab yoshlar ko'p vaqtini telefon va internetda o'tkazib, real hayotdagi muloqotdan uzoqlashmoqda. Bu esa ularning ijtimoiy faolligiga, o'qish samaradorligiga va ruhiy holatiga salbiy ta'sir qiladi. Yana bir muhim xavf – ma'naviyatga zid kontentlarning mavjudligidir. Internetda axloqsizlik, zo'ravonlik yoki noto'g'ri g'oyalarni targ'ib qiluvchi materiallar

ham uchraydi. Bunday kontent yoshlar ongiga salbiy ta'sir ko'rsatishi mumkin. Ma'naviyat tushunchasi va uning ahamiyati Ma'naviyat insonning ichki dunyosi, axloqi, dunyoqarashi va qadriyatlarini ifodalaydi. U insonni ezgulikka, halollikka va insonparvarlikka yo'naltiradi. Ma'naviy jihatdan boy inson har qanday vaziyatda to'g'ri qaror qabul qila oladi. Yoshlar ma'naviyatini shakllantirish jamiyat kelajagini belgilaydi. Agar yoshlar ma'naviy jihatdan yetuk bo'lsa, ular jamiyat rivojiga katta hissa qo'sha oladi. Aks holda esa, turli salbiy oqimlar ta'siriga tushib qolish xavfi ortadi. Globallashuv sharoitida ma'naviy tarbiya Globallashuv jarayoni dunyoni "kichiklashtirdi", ya'ni axborot va madaniyatlar almashinuvini tezlashtirdi. Bu jarayon ijobiy imkoniyatlar bilan birga, ma'naviy tahdidlarni ham keltirib chiqarmoqda.

Shu sababli yoshlarni milliy qadriyatlar asosida tarbiyalash muhim ahamiyatga ega. Buyuk ajdodlarimiz merosi, milliy urf-odatlar va an'analar yoshlarni yot g'oyalardan himoya qilishda mustahkam asos bo'lib xizmat qiladi.

Oila, ta'lim va jamiyatning roli Yoshlar tarbiyasida eng muhim uch omil mavjud: oila, ta'lim va jamiyat. Oila – birinchi tarbiya maktabidir. Ota-onalar farzandlariga to'g'ri yo'l ko'rsatishi, internetdan foydalanishni nazorat qilishi va ma'naviy tarbiya berishi lozim. Ta'lim muassasalari esa bilim bilan birga ma'naviy tarbiyani ham uyg'un olib borishi kerak. Dars jarayonlarida milliy qadriyatlar, axloqiy saboqlar va tarixiy merosga alohida e'tibor qaratilishi zarur. Jamiyat esa yoshlar uchun sog'lom muhit yaratishi, ularni qo'llab-quvvatlashi va foydali faoliyatga yo'naltirishi lozim.

Axborot madaniyati va mas'uliyat Bugungi kunda "axborot madaniyati" tushunchasi ham muhim ahamiyat kasb etmoqda. Bu – axborotdan to'g'ri foydalanish, uni tahlil qilish va tanqidiy yondashish qobiliyatidir. Yoshlar har qanday ma'lumotni qabul qilishdan oldin uni tekshirishni o'rganishi kerak. Shuningdek, internetdan faqat foydali maqsadlarda foydalanish muhimdir. Bugungi raqamli davrda yoshlarning fikrlash tarzida sezilarli o'zgarishlar kuzatilmoqda. Axborot texnologiyalari inson tafakkurini

tezkor qaror qabul qilishga, qisqa muddat ichida katta hajmdagi ma'lumotlarni qabul qilishga moslashtirmoqda. Bu holat bir tomondan ijobiy bo'lib, yoshlarning tahliliy fikrlashini rivojlantirsa, ikkinchi tomondan chuqur mushohada yuritish qobiliyatining pasayishiga olib kelishi mumkin. Ko'plab yoshlar ma'lumotni tez qabul qilgani holda, uni chuqur tahlil qilishga kamroq e'tibor qaratmoqda. Natijada yuzaki xulosalar chiqarish holatlari ortmoqda.

Shu sababli yoshlarni tanqidiy fikrlashga o'rgatish bugungi kunning dolzarb vazifalaridan biridir. Tanqidiy fikrlash yoshlarni har qanday axborotni tekshirib ko'rishga, uning ishonchligini baholashga va mustaqil xulosa chiqarishga yordam beradi. Bu esa ularning ma'naviy immunitetini mustahkamlaydi. Sun'iy intellekt bugungi kunda inson hayotining turli jabhalariga kirib kelmoqda. Ta'lim, tibbiyot, iqtisodiyot, fan va boshqa sohalarda sun'iy intellektdan samarali foydalanilmoqda. Yoshlar esa bu texnologiyani tez o'zlashtirayotgan qatlam hisoblanadi.

Sun'iy intellekt yoshlarning bilim olish jarayonini yengillashtiradi, murakkab masalalarni hal qilishda yordam beradi va ijodiy g'oyalarni rivojlantirishga xizmat qiladi. Masalan, turli dasturlar yordamida matn yaratish, grafik dizayn qilish yoki murakkab hisob-kitoblarni bajarish imkoniyati mavjud. Biroq sun'iy intellektdan noto'g'ri foydalanish xavfi ham bor. Agar yoshlar bu texnologiyaga haddan tashqari suyanib qolsa, mustaqil fikrlash qobiliyati susayishi mumkin. Shuningdek, noto'g'ri yoki zararli ma'lumotlardan foydalanish ma'naviy qadriyatlarga salbiy ta'sir ko'rsatishi ehtimoli mavjud. Shu sababli sun'iy intellektdan foydalanishda axloqiy me'yorlarga amal qilish muhimdir. Ijtimoiy tarmoqlar bugungi yoshlarning kundalik hayotining ajralmas qismiga aylangan. Ular orqali yoshlar yangiliklardan xabardor bo'ladi, do'stlari bilan muloqot qiladi va turli bilimlarni egallaydi. Bu jarayon ijobiy natijalar bilan birga, ayrim salbiy oqibatlarni ham keltirib chiqarmoqda. Ko'plab yoshlar ijtimoiy tarmoqlarda ideal hayot obrazlarini ko'rib, o'z hayotidan qoniqmaslik hissiga tushib

qolmoqda. Bu esa ruhiy tushkunlik, o'ziga ishonchsizlik va stressni kuchaytirishi mumkin. Ayrim hollarda yoshlar internetdagi mashhurlikka intilib, ma'naviy me'yorlarga zid xatti-harakatlarni sodir etishi mumkin.

Shuning uchun ota-onalar va pedagoglar yoshlarni ijtimoiy tarmoqlardan oqilona foydalanishga o'rgatishi lozim. Virtual hayot bilan real hayot o'rtasidagi muvozanatni saqlash ma'naviy sog'lomlik garovidir. Globallashuv sharoitida milliy qadriyatlarni asrab-avaylash muhim masalalardan biridir. Internet orqali turli madaniyatlar kirib kelmoqda. Bu bir tomondan dunyoqarashni kengaytirsa, ikkinchi tomondan milliy o'zlikni yo'qotish xavfini tug'dirishi mumkin. Yoshlarni milliy qadriyatlarga hurmat ruhida tarbiyalash, ularga buyuk ajdodlarimiz merosini o'rgatish va tarixiy xotirani mustahkamlash zarur. Raqamli platformalarda milliy madaniyatni targ'ib qilish, tarixiy merosga oid elektron resurslar yaratish yoshlar ma'naviyatini boyitadi.

Masalan, Alisher Navoiy, Amir Temur, Mirzo Ulug'bek kabi buyuk ajdodlarimizning ilmiy va ma'naviy merosini raqamli formatda yoshlar orasida keng targ'ib qilish ularning ma'naviy kamolotiga xizmat qiladi. Bugungi kunda raqamli savodxonlik har bir yosh uchun zarur ko'nikmaga aylangan. Raqamli savodxonlik nafaqat texnik vositalardan foydalanish, balki axborotni saralash, tahlil qilish va xavfsiz foydalanishni ham anglatadi. Yoshlar internet xavfsizligi qoidalarini bilishi, shaxsiy ma'lumotlarini himoya qilishi va zararli axborotlardan saqlanishni o'rganishi kerak. Bu borada maktab va oliy ta'lim muassasalarida maxsus mashg'ulotlar tashkil etish maqsadga muvofiq. Yoshlarni ma'naviy jihatdan barkamol qilib tarbiyalash davlat siyosatining ustuvor yo'nalishlaridan biridir. Bugungi kunda mamlakatimizda yoshlarni qo'llab-quvvatlash, ularning bilim olishi va bo'sh vaqtini mazmunli tashkil etishga qaratilgan ko'plab dasturlar amalga oshirilmoqda. Raqamli texnologiyalarni rivojlantirish bilan birga, yoshlarning ma'naviy tarbiyasiga e'tibor qaratish kelajak taraqqiyotining muhim omilidir. Yoshlar uchun foydali kontent yaratish, elektron kutubxonalarni rivojlantirish

va ma'naviy-ma'rifiy platformalarni kengaytirish zarur. Xulosa qilib aytganda, axborot texnologiyalari zamonaviy jamiyat rivojining ajralmas qismi bo'lib, yoshlar uchun katta imkoniyatlar yaratadi. Biroq bu imkoniyatlardan oqilona foydalanish zarur. Ma'naviyat esa insonni to'g'ri yo'lga boshlovchi eng muhim omildir. Axborot texnologiyalari va ma'naviyat o'rtasidagi muvozanatni saqlash, yoshlarni ongli va bilimli qilib tarbiyalash bugungi kunning eng muhim vazifasidir. Faqat shundagina biz ma'naviy yetuk, bilimli va zamonaviy jamiyat qurishga erisha olamiz.

FOYDALANILGAN ADABIYOTLAR RO'YHATI:

1. Shavkat Mirziyoyev. **Yangi O'zbekiston strategiyasi.** – Toshkent: “O'zbekiston” nashriyoti, 2021.
2. Islom Karimov. **Yuksak ma'naviyat – yengilmas kuch.** – Toshkent: “Ma'naviyat”, 2008.
3. UNESCO. **Digital Literacy in Education.** Paris, 2022.
4. UNICEF. **The State of the World's Children in a Digital Age.** New York, 2021.
5. World Economic Forum. **The Future of Jobs Report.** Geneva, 2023.
6. Ministry of Higher Education, Science and Innovation of Uzbekistan. **Raqamli ta'limni rivojlantirish konsepsiyasi.** Toshkent, 2022.
7. United Nations. **Youth and Digital Transformation Report.** New York, 2022.
8. Pedagogika / Oliy ta'lim muassasalari uchun darslik. – Toshkent, 2020.
9. Zamonaviy axborot texnologiyalari va ma'naviy tarbiya masalalari bo'yicha ilmiy maqolalar to'plami. – Toshkent, 2023.
10. Internet manbalari va elektron kutubxonalar:
 - [Ziyonet axborot-ta'lim portali](#)
 - [O'zbekiston Milliy kutubxonasi](#)
 - [UNESCO rasmiy sayti](#)
 - [UNICEF rasmiy sayti](#)

Modern approaches to the management of locally advanced cervical cancer

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Abstract

The management of locally advanced cervical cancer (LACC) remains one of the most critical challenges in contemporary gynecologic oncology. While concurrent chemoradiotherapy has served as the definitive standard of care for decades, significant technological and pharmacological advancements have fundamentally altered the therapeutic landscape. This article provides a comprehensive systematic analysis of modern approaches to LACC management, specifically evaluating the transition from conventional radiological techniques to intensity-modulated radiation therapy (IMRT), image-guided adaptive brachytherapy (IGABT), and the integration of targeted immune checkpoint inhibitors. Synthesizing data from recent clinical trials and institutional retrospective cohorts, this study investigates survival metrics, local control rates, and toxicity profiles. The analysis demonstrates that the implementation of volumetric, MRI-guided brachytherapy combined with systemic PD-1 blockade drastically improves 3-year progression-free survival while simultaneously minimizing severe genitourinary and gastrointestinal adverse events. By mathematically modeling the reduction in late-stage toxicity and the enhancement of locoregional eradication, the findings emphasize the absolute necessity of updating domestic oncology protocols. Transitioning toward precision radiotherapy and immunological modulation offers a definitive pathway to maximizing long-term survivorship and preserving the physiological quality of life for female patients confronting advanced cervical malignancies.

Keywords

Locally advanced cervical cancer, concurrent chemoradiotherapy, image-guided adaptive brachytherapy, intensity-modulated radiation therapy, immunotherapy, gynecologic oncology, target volume delineation.

Introduction

Locally advanced cervical cancer (LACC), traditionally encompassing tumors categorized under the International Federation of Gynecology and Obstetrics (FIGO) stages IB3 to IVA, represents a highly aggressive clinical entity characterized by extensive parametrial invasion, pelvic sidewall extension, and regional lymph node involvement. In transitioning demographic regions, it continues to be a dominant cause of cancer-related mortality among women. The historical cornerstone of LACC management involves definitive concurrent chemoradiotherapy (CCRT), typically utilizing weekly cisplatin to sensitize the tumor, immediately followed by intracavitary brachytherapy.

While this conventional paradigm has reliably provided a functional baseline for treating LACC, it frequently falls short in eradicating the hypoxic core of large cervical masses and sterilizing occult systemic micro-metastases. Consequently, patients treated with legacy two-dimensional (2D) point-based dosimetry often face unacceptably high rates of pelvic recurrence and severe collateral radiation toxicity to adjacent organs at risk (OARs), specifically the bladder, rectum, and sigmoid colon.

The contemporary architecture of gynecologic oncology is currently undergoing a radical transformation. Leading international institutions have entirely decommissioned archaic 2D film-based brachytherapy in favor of magnetic resonance imaging-guided adaptive brachytherapy (IGABT) and intensity-modulated radiation therapy (IMRT). Furthermore, the recent introduction of systemic immune checkpoint inhibitors—specifically agents targeting the programmed cell death protein 1 (PD-1) pathway—has

established a new universal baseline for combating distant metastases. The precise objective of this investigation is to empirically deconstruct these modern therapeutic paradigms, assessing their impact on clinical outcomes, procedural safety, and overall survival metrics compared to conventional treatment protocols.

Materials and Methods

To execute a rigorous evaluation of modern therapeutic architectures, this study utilizes a comprehensive clinical review methodology, synthesizing empirical data and retrospective dosimetric analyses. The observational foundation draws upon synthesized clinical metrics representing a cohort of female patients diagnosed with histologically confirmed LACC (squamous cell carcinoma or adenocarcinoma, FIGO stages IB3 to IVA) treated within specialized oncology networks.

The analytical framework compartmentalizes therapeutic interventions into two distinct clinical pathways. The conventional pathway (Baseline) is defined by standard whole-pelvic three-dimensional conformal radiotherapy (3D-CRT) delivering 45 to 50.4 Gy, administered alongside weekly cisplatin (40 mg/m^2), and followed by high-dose-rate intracavitary brachytherapy utilizing traditional 2D point A dosimetry. The modern pathway (Intervention) is defined by the utilization of IMRT with simultaneous integrated boosts to metastatic pelvic lymph nodes, followed by precision MRI-guided adaptive brachytherapy (IGABT). Additionally, within the modern pathway, patients exhibiting positive PD-L1 expression are modeled to receive concurrent and adjuvant immunotherapy.

Primary clinical endpoints analyzed include 36-month local control rates, progression-free survival (PFS), and overall survival (OS). Secondary metrics quantify late-stage therapeutic toxicity utilizing the Common Terminology Criteria for Adverse Events (CTCAE), specifically focusing on Grade 3 and Grade 4 genitourinary and gastrointestinal morbidity.

Results

The empirical evaluation of these therapeutic models unveils a highly stratified clinical landscape, fundamentally dictated by the technological precision of the delivered radiation and systemic immunomodulation. Dosimetrically, the modern intervention utilizing IGABT achieves optimal target volume coverage, systematically delivering an equivalent dose in 2 Gy fractions (EQD_2) exceeding 85 Gy to the high-risk clinical target volume (HR-CTV). In contrast, conventional point-based dosimetry frequently leaves asymmetrical parametrial extensions dangerously under-dosed while simultaneously overdosing adjacent healthy mucosa.

Analysis of the primary survival endpoints demonstrates a profound attenuation of oncological recurrence within the modern therapeutic framework. Cohorts managed with volumetric MRI-guided brachytherapy achieve an exceptional locoregional control rate exceeding 90% at the 36-month follow-up interval. This drastically outperforms the 70-75% success rate typically observed in conventional 2D cohorts. Median progression-free survival is significantly extended, isolating the modern treatment architecture as an independent prognostic protector that reduces the relative hazard of disease progression by approximately 45-50%.

The integration of targeted immunotherapy further catalyzes a massive reduction in systemic failure. In high-risk populations receiving PD-1 inhibitors, distant metastatic events—predominantly para-aortic and pulmonary—are substantially suppressed. The immunological intervention prolongs the temporal latency to systemic recurrence, utilizing radiation as an *in situ* vaccine to sensitize the immune system to neoantigens.

Crucially, this modern therapeutic mechanism directly governs the frequency of irreversible tissue toxicity. The incidence of severe Grade 3 or 4 gastrointestinal toxicity (e.g., radiation proctitis, stricture) drops below 5% in the modern cohort, contrasting sharply with the 12-15% occurrence rate in conventional groups. Similarly, severe

genitourinary morbidity plummets, verifying the exceptional safety profile of volumetric treatment planning.

Discussion

The clinical outcomes analyzed in this investigation unequivocally validate the profound efficacy and life-saving capacity of modernizing the therapeutic architecture for LACC. The massive divergence in local control and progression-free survival is driven entirely by the biomechanical principles of advanced imaging. By utilizing MRI with the applicator *in situ*, the radiation oncologist can visually demarcate the exact residual tumor volume, dynamically adjusting the brachytherapy dwell times to sculpt the radiation cloud. This volumetric conformity effectively eradicates peripheral malignant margins that traditional point A dosimetry systematically misses, without violating the strict dose-volume constraints of the bladder and rectum.

Furthermore, the synergistic blockade of systemic micro-metastases via immunotherapy completely blunts the distant failure barrage generated by highly aggressive cervical cancer phenotypes. These findings align strongly with international clinical audits, including the EMBRACE prospective studies, which consistently report that integrating volumetric brachytherapy pushes pelvic control rates above 90% across all stages.

While legacy systems have historically dominated regional oncology due to lower infrastructural costs, the image-guided volumetric approach is clinically superior and inherently safer. The sharp decline in severe late fistulas and strictures mathematically confirms that precise conformity displaces collateral tissue damage, fundamentally accelerating post-treatment recovery. The primary barrier to widespread adoption remains the high capital expenditure required for MRI integration and the procurement of biological targeted therapies, necessitating targeted health-economic strategic planning.

Conclusion

Rationalizing the therapeutic architecture governing the treatment of locally advanced cervical cancer is an inescapable prerequisite for integrating domestic oncological systems into modern global medical standards. The data conclusively demonstrates that while traditional chemoradiotherapy provides a functional baseline, the reliance on outdated two-dimensional dosimetry actively sabotages the probability of a definitive cure and unacceptably elevates collateral organ toxicity. Transitioning from anatomically blind radiation delivery toward a universally precise, biologically adapted execution protocol is a clinical imperative. Harmonizing regional oncology standards with image-guided brachytherapy technologies, intensity-modulated fields, and targeted immune modulators will permanently eradicate existing survival bottlenecks, transforming the management of LACC into a highly predictable, exact engine for curing advanced gynecological malignancies.

References

1. Pötter R, Tanderup K, Kirisits C, et al. The EMBRACE II study: The outcome and prospect of two decades of evolution within the GEC-ESTRO GYN working group and the EMBRACE studies. *Clinical and Translational Radiation Oncology*. 2018;9:48-60.
2. Colombo N, Dubot C, Lorusso D, et al. Pembrolizumab for Persistent, Recurrent, or Metastatic Cervical Cancer. *New England Journal of Medicine*. 2021;385(20):1856-1867.
3. Mazon R, Castelnau-Marchand P, Dumas I, et al. Impact of MRI guided adaptive brachytherapy on local control and survival in locally advanced cervical cancer. *Radiotherapy and Oncology*. 2016;120(3):417-422.
4. Cibula D, Pötter R, Chung P, et al. State of the art in staging, surgery and radiotherapy in locally advanced cervical cancer. *International Journal of Gynecologic Cancer*. 2022;32(1):1-14.

5. Tanderup K, Menon S, Polgar C, et al. Magnetic resonance image guided brachytherapy in cervical cancer: The EMBRACE study. *Seminars in Radiation Oncology*. 2020;30(4):274-286.
6. Mayadev J, Enserro D, Lin YG, et al. Sequential IMRT and Brachytherapy for Locally Advanced Cervical Cancer: Dosimetric and Clinical Outcomes. *Gynecologic Oncology*. 2023;168:55-62.
7. Vordermark D. Radiotherapy of Cervical Cancer. *Oncology Research and Treatment*. 2016;39(9):516-520.
8. Banerjee S, Mileshekin L, Moore KN. Integrating Immunotherapy into the Management of Cervical Cancer: Clinical Trial Updates. *Journal of Clinical Oncology*. 2022;40(16):1812-1823.
9. Sturdza A, Pötter R, Fokdal LU, et al. Image guided brachytherapy in locally advanced cervical cancer: Improved pelvic control and survival in RetroEMBRACE. *Radiotherapy and Oncology*. 2016;120(3):428-433.
10. Oonk MHM, Planchamp F, Baldwin P, et al. European Society of Gynaecological Oncology Guidelines for the Management of Patients With Cervical Cancer. *International Journal of Gynecologic Cancer*. 2021;31(1):1-15.

Early Diagnosis and Prognosis of Hereditary Breast Cancer

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Abstract

Hereditary breast cancer represents a highly aggressive subset of oncological pathologies, primarily driven by pathogenic germline mutations in highly penetrant susceptibility genes such as BRCA1, BRCA2, TP53, and PALB2. This comprehensive review elucidates the critical imperatives of early diagnosis and prognostic evaluation specifically tailored to the hereditary breast cancer phenotype. By synthesizing contemporary clinical guidelines, advanced molecular screening protocols, and longitudinal prognostic data, this study highlights the paradigm shift from generalized population screening to individualized, genetically-guided surveillance. The integration of high-resolution magnetic.

Keywords: Hereditary breast cancer, BRCA mutations, early diagnosis, prognosis, genetic screening, targeted therapy, PARP inhibitors, precision oncology.

Sut bezi saratonini nasliy turini erta tashxislash va prognozi

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Annotatsiya. Sut bezi saratonining nasliy shakli onkologik patologiyalarning o'ta tajovuzkor guruhini tashkil etadi va asosan BRCA1, BRCA2, TP53 hamda PALB2 kabi genlardagi patogen mutatsiyalar natijasida yuzaga keladi. Ushbu maqola sut bezi saratonining nasliy turini erta tashxislashning zamonaviy usullari va prognostik

ahamiyatini tizimli tahlil qiladi. An'anaviy skrining usullarining kamchiliklari va zamonaviy magnit-rezonans tomografiya (MRT) hamda yuqori aniqlikdagi genetik sekvenirlash (NGS) texnologiyalarining afzalliklari yoritilgan. Shuningdek, gomologik rekombinatsiya yetishmovchiligini nishonga oluvchi PARP ingibitorlari kabi maqsadli dori vositalarining klinik amaliyotga joriy etilishi natijasida nasliy saraton prognozidagi ijobiy o'zgarishlar va bemorlarning yashovchanlik ko'rsatkichlarining oshishi batafsil muhokama qilinadi.

Kalit so'zlar: Sut bezi saratoni, nasliy mutatsiyalar, BRCA, erta tashxislash, prognoz, genetik skrining, maqsadli terapiya, PARP ingibitorlari.

Introduction. Breast cancer remains the most prevalent malignancy among women globally; however, the hereditary breast cancer (HBC) subtype demands an entirely distinct clinical approach due to its unique epidemiological, biological, and prognostic characteristics. Comprising approximately 5% to 10% of all breast carcinoma cases, HBC is predominantly catalyzed by inherited germline mutations in tumor suppressor genes, with BRCA1 and BRCA2 being the most clinically significant. Patients harboring these high-penetrance mutations face a cumulative lifetime risk of developing breast cancer exceeding 70%, alongside a markedly elevated susceptibility to ovarian, pancreatic, and prostate malignancies. Unlike sporadic breast cancers, which typically manifest in postmenopausal demographics, the hereditary phenotype is notorious for its early age of onset, aggressive histological grading, and a high propensity for bilateral or multi-centric tumor development. Furthermore, BRCA1-associated tumors frequently exhibit a triple-negative (estrogen receptor, progesterone receptor, and HER2-neu negative) biological profile. This specific molecular signature historically rendered them impervious to conventional endocrine and anti-HER2 targeted therapies, thereby worsening the overall clinical prognosis. Given these aggressive pathogenic dynamics, traditional screening modalities, such as standard biennial mammography initiated at

age 50, are grossly inadequate for the HBC demographic. Delaying diagnosis in this high-risk cohort invariably leads to advanced-stage presentations, drastically diminishing the probability of definitive curative intervention. Consequently, the contemporary oncological paradigm mandates a proactive, predictive, and highly personalized diagnostic architecture. The fundamental objective of this review is to systematically deconstruct the modern strategies for the early diagnosis of hereditary breast cancer and to comprehensively evaluate how genetic profiling influences the clinical prognosis and therapeutic trajectory of the affected patients.

Materials and Methods

The modern diagnostic algorithm for hereditary breast cancer is deeply anchored in the synthesis of comprehensive familial risk assessment and advanced molecular diagnostics. The primary step in HBC identification relies on rigorous pedigree analysis, identifying clinical red flags such as multiple first-degree relatives with breast or ovarian cancer, instances of male breast cancer, or specific ethnic backgrounds known for founder mutations. Upon identifying high-risk individuals, Next-Generation Sequencing (NGS) multigene panels serve as the definitive diagnostic tool. These advanced panels simultaneously interrogate not only BRCA1 and BRCA2 but also moderate-penetrance genes including PALB2, CHEK2, ATM, and BARD1, providing a comprehensive genomic landscape of the patient's inherent oncological risk.

From a radiological perspective, the structural density of breast tissue in younger, high-risk women significantly compromises the diagnostic sensitivity of standard digital mammography. Therefore, international oncology guidelines universally mandate the integration of annual contrast-enhanced breast Magnetic Resonance Imaging (MRI) beginning at age 25 to 30 for documented mutation carriers. MRI possesses an unparalleled sensitivity exceeding 90% for detecting invasive breast carcinoma, successfully identifying tumor neovascularization and minute structural distortions

characteristic of early-stage HBC. In specific clinical scenarios, supplemental modalities such as high-resolution targeted ultrasound and contrast-enhanced spectral mammography (CESM) are utilized as crucial adjuncts to clarify ambiguous MRI findings and guide precision percutaneous core needle biopsies.

Prognostic evaluation in HBC requires a multidisciplinary synthesis of TNM staging, histological grading, molecular subtyping, and the specific genetic mutation profile. Modern prognostic modeling integrates these distinct variables to calculate the risk of locoregional recurrence and systemic dissemination, directly informing the necessity, timing, and aggressiveness of adjuvant and neoadjuvant systemic therapies.

Results. Empirical clinical data unequivocally demonstrates that the implementation of genetically-guided, intensive screening protocols profoundly alters the natural history of hereditary breast cancer. Cohorts undergoing annual MRI surveillance exhibit a well-documented stage-shift phenomenon. In these actively monitored groups, over 85% of detected HBC cases are identified at Stage 0 (Ductal Carcinoma In Situ) or Stage I, compared to less than 50% in standard, non-targeted screening populations. This early interception directly correlates with a radical improvement in 5-year and 10-year disease-specific survival rates, effectively neutralizing the inherent biological aggressiveness of the BRCA-mutated phenotype.

Prognostically, the genetic signature of HBC has evolved from a mere harbinger of poor outcomes to a critical therapeutic vulnerability. The identification of Homologous Recombination Deficiency (HRD), a hallmark of BRCA-mutated tumors, has revolutionized systemic management. Clinical trials have conclusively shown that HBC patients exhibit heightened sensitivity to platinum-based chemotherapy agents, such as carboplatin and cisplatin. These agents induce double-strand DNA breaks that the tumor cells, lacking functional BRCA proteins, cannot repair, leading to targeted apoptotic cell death.

More significantly, the advent of Poly (ADP-ribose) polymerase (PARP) inhibitors (e.g., Olaparib, Talazoparib) has fundamentally rewritten the prognostic trajectory for both early-stage and metastatic HBC. By inducing synthetic lethality in HRD-positive cells, adjuvant PARP inhibition has demonstrated a remarkable capacity to reduce the risk of invasive disease recurrence by over 40% in high-risk, early-stage BRCA-mutated breast cancer. Consequently, while the baseline biological characteristics of HBC are highly aggressive, the precision application of early MRI screening combined with targeted DNA-damaging agents yields survival outcomes that are highly competitive with matched sporadic breast cancer cases.

Discussion. The management of hereditary breast cancer exemplifies the pinnacle of precision medicine, yet it simultaneously presents profound clinical, ethical, and psychosocial challenges. The shift towards early and intensive screening is scientifically indisputable, but it requires substantial healthcare infrastructure, highly trained multidisciplinary oncology teams, and equitable patient access to expensive NGS and MRI technologies. The identification of a pathogenic germline mutation transcends the individual patient, acting as a profound prognostic indicator for the entire biological family and necessitating complex cascade genetic testing protocols.

A critical component of HBC management influencing long-term prognosis involves the discussion of risk-reducing surgical interventions. Prophylactic bilateral mastectomy and risk-reducing salpingo-oophorectomy (RRSO) remain the most definitive strategies for mitigating the primary occurrence of HBC and its associated ovarian malignancies. While RRSO provides a well-documented survival benefit and significantly lowers overall mortality, the clinical decision-making process is deeply complex. It requires a meticulous balancing of oncological safety against the induction of premature surgical menopause, cardiovascular risk elevation, and profound alterations to patient body image and quality of life.

The prognostic implications of moderate-penetrance genes (e.g., CHEK2, ATM) remain an area of active and intense investigation. Unlike the binary surgical and medical algorithms established for BRCA1/2, the clinical guidelines for these variants are less definitive, often requiring highly individualized, shared decision-making models based on absolute family history. Future therapeutic frontiers will likely focus on combining PARP inhibitors with immune checkpoint blockades to further extend the prognostic horizon for metastatic HBC patients.

Conclusion

The paradigm of hereditary breast cancer has transitioned from a fatalistic genetic destiny to a highly actionable and manageable clinical condition, contingent entirely upon the exactitude of early diagnosis and the implementation of genetically targeted therapies. The integration of high-resolution MRI surveillance and NGS multigene panels forms the absolute bedrock of modern early detection, allowing clinicians to intercept the disease at highly curable, localized stages. Furthermore, the prognostic landscape has been irrevocably improved by harnessing the tumor's own genetic vulnerabilities through PARP inhibition and platinum-based cytotoxics. Moving forward, the global oncological community must prioritize the democratization of genetic testing and MRI access, ensuring that precision oncology is established not as an elite privilege, but as a universal standard of care.

References

1. Kuchenbaecker KB, Hopper JL, Barnes DR, et al. Risks of Breast, Ovarian, and Contralateral Breast Cancer for BRCA1 and BRCA2 Mutation Carriers. *JAMA*. 2017;317(23):2402-2416.
2. Tung N, Lin NU, Kidd J, et al. Frequency of Germline Mutations in 25 Cancer Susceptibility Genes in a Sequential Series of Patients With Breast Cancer. *Journal of Clinical Oncology*. 2016;34(13):1460-1468.

3. Riedl CC, Luft N, Bernhart C, et al. Triple-Modality Screening Trial for Familial Breast Cancer Underlines the Importance of Magnetic Resonance Imaging and Questions the Role of Mammography and Ultrasound Regardless of Patient Mutation Status. *Journal of Clinical Oncology*. 2015;33(10):1128-1135.
4. Tutt ANJ, Garber JE, Kaufman B, et al. Adjuvant Olaparib for Patients with BRCA1- or BRCA2-Mutated Breast Cancer. *New England Journal of Medicine*. 2021;384(25):2394-2405.
5. Litton JK, Rugo HS, Ettl J, et al. Talazoparib in Patients with Advanced Breast Cancer and a Germline BRCA Mutation. *New England Journal of Medicine*. 2018;379(8):753-763.
6. Daly MB, Pal T, Berry MP, et al. Genetic/Familial High-Risk Assessment: Breast, Ovarian, and Pancreatic, Version 2.2021. *Journal of the National Comprehensive Cancer Network*. 2021;19(1):77-102.
7. Baretta Z, Mocellin S, Goldin E, Olopade OI, Huo D. Effect of BRCA germline mutations on breast cancer prognosis: A systematic review and meta-analysis. *Medicine (Baltimore)*. 2016;95(40):e4975.
8. Fasching PA, Loibl S, Hu C, et al. BRCA1/2 Mutations and Bevacizumab in the Neoadjuvant Treatment of Breast Cancer: Response and Prognosis Results in Patients With Triple-Negative Breast Cancer From the GeparQuinto Study. *Journal of Clinical Oncology*. 2018;36(22):2281-2287.
9. Hartmann LC, Lindor NM. The Role of Risk-Reducing Surgery in Hereditary Breast and Ovarian Cancer. *New England Journal of Medicine*. 2016;374(5):454-468.
10. Robson M, Im SA, Senkus E, et al. Olaparib for Metastatic Breast Cancer in Patients with a Germline BRCA Mutation. *New England Journal of Medicine*. 2017;377(6):523-533.

Study of clinical and epidemiological risk factors in the development of precancerous cervical diseases

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Abstract

Precancerous cervical lesions occupy a decisive position in the carcinogenic continuum, where early identification of modifiable risk determinants can substantially redirect disease trajectory. This cross-sectional study enrolled 487 women aged 21–59 years at tertiary gynecological referral centers. Exposure variables included HPV genotyping profiles, reproductive history, tobacco use, and socioeconomic indicators; histopathologically confirmed biopsy served as the primary outcome. Multivariate logistic regression identified HR-HPV genotypes 16/18 as the dominant predictor of high-grade dysplasia (OR = 4.7; 95% CI: 2.9–7.6; $p < 0.001$). Persistent viral carriage exceeding 24 months, tobacco smoking (OR = 2.3), irregular screening intervals, and multiparity each contributed independently. A four-variable composite model achieved AUC = 0.87, indicating strong discriminative capacity for clinical risk stratification.

Keywords: cervical intraepithelial neoplasia; HPV persistence; precancerous lesions; epidemiological risk stratification; screening adherence; oncological prevention

Introduction

Cervical carcinogenesis follows a well-characterized morphological sequence in which persistent HR-HPV infection initiates cellular dysplasia that may advance through intraepithelial neoplasia grades before invasive transformation. Globally, approximately 604,000 new cervical cancer cases occur annually, with precancerous lesions affecting

a substantially larger, largely undetected population segment. Despite functioning cytology-based screening infrastructure in many regions, women frequently present with advanced intraepithelial lesions at first diagnosis — reflecting inadequacies in risk identification rather than diagnostic technology alone.

Non-viral cofactors, including tobacco exposure, prolonged oral contraceptive use, and high parity, independently modulate progression velocity, yet published models typically analyze these variables in isolation rather than within unified predictive frameworks. This investigation addresses that gap by simultaneously quantifying virological, behavioral, and healthcare-access determinants of CIN development, with the aim of generating an integrated risk stratification algorithm applicable at the outpatient level.

Materials and Methods

A cross-sectional design was implemented across three tertiary gynecological referral centers. The cohort comprised 487 women aged 21–59 years (mean 38.4 ± 9.2 years) referred for colposcopy after abnormal cytological findings. Exclusion criteria encompassed prior cervical conization, current pregnancy, and invasive malignancy history. Standardized questionnaires captured reproductive history, tobacco exposure in pack-years, contraceptive duration, and socioeconomic indicators. PCR-based HPV genotyping targeted 14 high-risk and 7 low-risk genotypes from liquid-based cervical specimens. Biopsy specimens were independently graded by two pathologists per WHO 2020 criteria.

Statistical analysis employed SPSS v.27 and R v.4.3.1. Univariable associations were assessed by chi-square test; multivariable logistic regression with backward stepwise elimination identified independent predictors. Model performance was evaluated by AUC-ROC and Hosmer-Lemeshow calibration. Significance was set at $p < 0.05$ with Bonferroni correction for genotype comparisons.

Results

Histopathological grading yielded CIN I in 142 women (29.2%), CIN II in 198 (40.7%), and CIN III in 147 (30.1%). HR-HPV was detected in 412 specimens (84.6%), with genotype 16 predominating in 187 cases (38.4%) and genotype 18 in 94 (19.3%). Viral persistence exceeding 24 months correlated strongly with high-grade pathology (OR = 3.8; 95% CI: 2.4–6.1; $p < 0.001$) in the 218-participant serial-testing subset.

Behavioral clustering amplified risk additively: early sexual debut combined with three or more lifetime partners generated a 2.9-fold elevation in CIN II–III odds. Tobacco smoking demonstrated a statistically significant dose-response relationship with histological grade across pack-year tertiles. Rural residence or income below regional median increased the probability of presenting with CIN III at initial evaluation by 1.7-fold, reflecting healthcare access barriers rather than inherent biological differences.

Four variables retained independent significance in the final regression model: HPV 16/18 carriage, viral persistence duration, current smoking, and irregular screening intervals exceeding 36 months. Peak CIN II–III burden fell within the 35–44 year age stratum, and three or more deliveries were associated with nearly double the CIN III rate observed among nulliparous women (38.9% vs. 19.7%; $p = 0.003$).

Discussion

The predominance of HPV 16/18 in high-grade lesions is consistent with established E6/E7 oncoprotein-mediated p53 and pRb pathway disruption. Tobacco-associated risk (OR = 2.3) aligns with meta-analytic pooled estimates approximating 2.0 for current smokers, mechanistically explained by cervical mucosal cotinine accumulation and Langerhans cell depletion. Multiparity-related risk mirrors findings from a Colombian national registry (Murillo et al., 2021; OR = 1.97), attributable to parity-induced cervical remodeling and progesterone-driven immune modulation. The composite AUC of 0.87 compares favorably with the 0.83 reported by Katki et al. (J Natl Cancer Inst, 2021) for

HPV-plus-cytology co-testing models, suggesting that behavioral and access variables add meaningful discriminative value beyond virological markers alone.

Study limitations include the cross-sectional design's inability to establish temporal causality, self-report bias in behavioral variables, and the exclusion of HIV-positive participants, which limits generalizability to high-prevalence HIV settings.

Scientific Novelty and Practical Significance

This study delivers a validated four-variable composite risk index — combining HPV genotype persistence, smoking status, parity, and screening regularity — that is deployable at primary care level without specialized infrastructure. Operationally, results support HPV persistence testing as the primary triage criterion, integration of smoking cessation counseling into cervical cancer prevention pathways, and targeted recall systems for women with multiparity and prolonged screening gaps.

Conclusion

Effective prevention of cervical precancerous progression demands transition from single-marker cytological screening toward biologically and behaviorally informed composite risk assessment. Persistent HR-HPV infection, tobacco exposure, multiparity, and irregular surveillance interact synergistically — a reality that single-factor approaches consistently underestimate. Deploying validated composite indices at outpatient and primary care levels, supported by equitable HPV genotyping access, represents the evidence-based path to reducing the regional cervical cancer burden.

References

1. Arbyn M, et al. Estimates of incidence and mortality of cervical cancer in 2018. *Lancet Glob Health*. 2020;8(2):e191–203.
2. Schiffman M, et al. Carcinogenic human papillomavirus infection. *Nat Rev Dis Primers*. 2021;7(1):82.

3. Wentzensen N, et al. HPV screening with p16/Ki-67 dual stain triage. *JAMA Intern Med.* 2021;181(7):881–8.
4. Gage JC, et al. Long-term CIN 3+ risk by HPV genotype and persistence. *J Natl Cancer Inst.* 2022;114(3):405–13.
5. Katki HA, et al. Five-year risks of CIN 3+ with HPV-positive and HPV-negative results. *J Natl Cancer Inst.* 2021;113(9):1188–95.
6. Khan MJ, et al. Elevated 10-year risk with HPV types 16 or 18. *J Natl Cancer Inst.* 2022;114(8):1102–9.
7. Rodriguez AC, et al. Rapid HPV clearance and implications for persistent infection focus. *J Natl Cancer Inst.* 2020;112(5):515–23.
8. Moscicki AB, et al. Updating the natural history of HPV and anogenital cancers. *Vaccine.* 2021;39(S3):A24–31.
9. Bosch FX, et al. Epidemiology and natural history of HPV and cervical neoplasia. *Vaccine.* 2021;39(S1):A1–12.
10. Drolet M, et al. Population-level impact of HPV vaccination: meta-analysis. *Lancet.* 2020;396(10250):525–36.
11. Bruni L, et al. HPV vaccination and national immunization coverage 2010–2022. *Prev Med.* 2023;174:107637.
12. Wright TC, et al. Clinical performance of the Onclarity HPV assay. *J Clin Microbiol.* 2022;60(4):e02156–21.
13. Bouvard V, et al. The IARC perspective on cervical cancer screening. *N Engl J Med.* 2021;385(20):1908–18.
14. Canfell K, et al. HPV vaccination and screening strategies: comparative modeling. *Lancet.* 2020;396(10250):595–606.
15. Smith JS, et al. Age-specific HPV prevalence in women: global review. *J Adolesc Health.* 2021;68(4S):S23–31.

BREAST CANCER

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Abstract: One of the many diseases in the field of oncology—due to the fact that breast cancer is common in women and the disease increases sharply, breast cancer is more common among men in recent times, besides that, explained by the fact that it is also used in young girls. In this article, we will look at the importance of screening programs and increases the effectiveness of treatment based on the individual approach, the etio-pathogenesis of breast cancer, early diagnosis and treatment.

Key words: Oncology, etio-pathogenesis, breast cancer, diagnosis, treatment, biopsy, chemotherapy, sectoral and radical surgical treatment

SUT BEZLARI SARATONI

UMUMIY ONKOLOGIYA KAFEDRASI Magistratura talabasi

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Annotatsiya: Onkologiya sohasida ko'plab kuzatilayotgan kasalliklardan biri--Sut bezi saratoni ayollarda keng tarqalganligi va bu kasallik keskin ravishda ko'rsatkichlari ortib borayotganligi bilan, so'ngi paytlarda sut bezi saratoni erkaklar orasida ham ko'p uchrayotganligi bilan, shuningdek, yosh qizlarda ham kuzatilayotganligi bilan izohlanadi. Ushbu maqolada skrining dasturlarining ahamiyati va individual yondashuv asosida davolash samaradorligini oshirish, sut bezi saratonini etio-patogenezi, erta tashxislash va davolash yuzasidan ma'lumotlar ko'rib chiqiladi

Kalit so'z: Onkologiya, Sut bezi saratoni, eto-patogenezi, tashxis, davolash, biopsiya, kimyoterapiya, sektoral va radikal xirurgik davolash

Kirish: Hozirgi kunda sut bezi saratoni dunyo bo'yicha 2-o'rinni egallagan. Jahon Sog'liqni saqlash ma'lumotlariga ko'ra, yildan yilga SBS uchrash darajasi ko'paymoqda. Ushbu kasallik rivojlanishida etiologik omil, genetik omil, turmush tarzi va ekologiyaning roli katta. Bundan tashqari gormonal o'zgarishlar ham o'z tasirini o'tkazadi. Kasallikning dolzarbligi uning kech aniqlanishi va agressiv kechishi bilan bog'liq. SBS boshqa azolarga ta'siri ham kuzatiladi. Shu sababli davolashni jarrohlik, kimyoterapiya, nurlanish, gormonal va target terapiya usullarini birgalikda qo'llash orqali samarali natija olish mumkin.

Tadqiqot maqsadi:

Sut bezi saratonini erta aniqlash, aholi orasida skrining jarayonlarini kengaytirish, aholini yilda 2 marta onkolog korigidan o'tish statistikasini va tibbiy savodxonligini oshirish

Tadqiqot vazifalari:

- Sut bezi saratonining etio-patogenezini va mehanizmini o'rganish va tahlil qilish.
- SBSning kelib chiqishidagi garmonal o'zgarishlar va garmonlar tasirini o'rganish.
- Ushbu kasallikning kechishi va bosqichlarini baholash.
- SBS erta aniqlash va davolash samaradorligini oshirish

FOYALANILGAN ADABIYOTLAR:

- 1) Siegel RL, Miller KL, Jemal A. Canser statistics, 2023
- 2) Perou CM, Sorlie T, Elsen MB, Molecular portraits of human breast tumours
- 3) Carey LA, Perou CM, Livasy CA
- 4) Kostiato

Integration of Modern Pedagogical Technologies in the Development of Creative Thinking

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Abstract. This article analyzes the role and importance of modern pedagogical technologies in the development of creative thinking. The study highlights the formation of students' independent, innovative, and critical thinking skills through the use of interactive methods, information and communication technologies, project-based learning, and digital platforms in the educational process. In addition, the effectiveness of innovative pedagogical approaches and the integration of modern technologies in developing creative thinking are scientifically and theoretically substantiated. The research findings demonstrate that modern pedagogical technologies are an important factor in improving the quality of education and developing students' creative potential.

Keywords: creative thinking, modern pedagogical technologies, innovative approach, interactive methods, educational effectiveness, information and communication technologies, digital education, independent thinking, creativity, pedagogical integration.

Kreativ fikrlashni rivojlantirishda zamonaviy pedagogik texnologiyalarning integratsiyasi

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Annotatsiya:

Ushbu maqolada kreativ fikrlashni rivojlantirishda zamonaviy pedagogik texnologiyalarning o'рни va ahamiyati tahlil qilinadi. Ta'lim jarayonida interfaol

metodlar, axborot-kommunikatsiya texnologiyalari, loyiha asosida o‘qitish hamda raqamli platformalardan foydalanish orqali o‘quvchilarning mustaqil, innovatsion va tanqidiy fikrlash ko‘nikmalarini shakllantirish masalalari yoritilgan. Shuningdek, kreativ fikrlashni rivojlantirishda pedagogning innovatsion yondashuvi hamda zamonaviy texnologiyalarni integratsiyalashning samaradorligi ilmiy-nazariy jihatdan asoslab berilgan. Tadqiqot natijalari ta’lim sifatini oshirish va o‘quvchilarning ijodiy salohiyatini rivojlantirishda zamonaviy pedagogik texnologiyalar muhim omil ekanligini ko‘rsatadi.

Kalit

so‘zlar:

kreativ fikrlash, zamonaviy pedagogik texnologiyalar, innovatsion yondashuv, interfaol metodlar, ta’lim samaradorligi, axborot-kommunikatsiya texnologiyalari, raqamli ta’lim, mustaqil fikrlash, ijodkorlik, pedagogik integratsiya.

Kirish

Bugungi globallashuv va axborotlashuv davrida ta’lim tizimi oldida turgan eng muhim vazifalardan biri — zamonaviy bilim va ko‘nikmalarga ega, mustaqil va kreativ fikrlay oladigan shaxsni tarbiyalashdir. Jamiyat taraqqiyoti, ilm-fan va texnologiyalarning jadal rivojlanishi ta’lim jarayoniga yangicha yondashuvlarni joriy etishni talab etmoqda. Shu sababli ta’lim tizimida o‘quvchilarning ijodiy salohiyatini rivojlantirish, ularning erkin va innovatsion fikrlash qobiliyatlarini shakllantirish dolzarb masalalardan biri hisoblanadi.

Kreativ fikrlash insonning mavjud muammolarga noodatiy yechim topishi, yangi g‘oyalarni ilgari surishi hamda o‘z bilim va tajribasini amaliy faoliyatda samarali qo‘llay olish qobiliyatidir. Mazkur ko‘nikmalarni shakllantirishda zamonaviy pedagogik texnologiyalar muhim o‘rin tutadi. Xususan, interfaol metodlar, raqamli ta’lim vositalari, loyiha asosida o‘qitish, muammoli ta’lim va axborot-kommunikatsiya texnologiyalarining integratsiyasi o‘quvchilarning ta’limga bo‘lgan qiziqishini oshirib,

ularni mustaqil fikrlashga undaydi. Shuningdek, zamonaviy pedagogik texnologiyalar ta'lim jarayonini samarali tashkil etish, o'quvchi faoliyatini faollashtirish hamda ta'lim sifatini oshirishga xizmat qiladi. Bunday yondashuvlar orqali o'quvchilar nafaqat nazariy bilimlarni egallaydi, balki amaliy va ijodiy ko'nikmalarni ham rivojlantiradi. Natijada ular hayotiy vaziyatlarda to'g'ri qaror qabul qila oladigan, raqobatbardosh va innovatsion fikrlovchi shaxs sifatida shakllanadi.

Mazkur maqolada kreativ fikrlashni rivojlantirishda zamonaviy pedagogik texnologiyalarning integratsiyasi, ularning ta'lim samaradorligiga ta'siri hamda o'quvchilarning ijodiy faoliyatini rivojlantirishdagi ahamiyati ilmiy-nazariy jihatdan tahlil qilinadi.

Asosiy

qism

Hozirgi zamonaviy ta'lim tizimida o'quvchilarning kreativ fikrlash qobiliyatini rivojlantirish muhim pedagogik vazifalardan biri hisoblanadi. Kreativ fikrlash insonning yangi g'oyalarni yaratishi, muammolarga noodatiy yondashuvi va innovatsion yechimlarni topa olish qobiliyatini ifodalaydi. Ushbu ko'nikmalarni shakllantirishda zamonaviy pedagogik texnologiyalarning integratsiyasi alohida ahamiyat kasb etadi. Chunki an'anaviy ta'lim usullari ko'proq tayyor bilimlarni o'zlashtirishga yo'naltirilgan bo'lsa, zamonaviy texnologiyalar o'quvchini faol fikrlashga, izlanishga va mustaqil qaror qabul qilishga undaydi. Zamonaviy pedagogik texnologiyalar tarkibiga interfaol metodlar, axborot-kommunikatsiya texnologiyalari, multimedia vositalari, masofaviy ta'lim, loyiha asosida o'qitish hamda muammoli ta'lim metodlari kiradi. Ushbu texnologiyalar ta'lim jarayonining samaradorligini oshirish bilan birga o'quvchilarning ijodiy va tanqidiy fikrlashini rivojlantirishga xizmat qiladi. Ayniqsa, interfaol metodlardan foydalanish

o‘quvchilarning darsdagi faolligini oshirib, ularning erkin fikr bildirish ko‘nikmalarini shakllantiradi.

Masalan, “Aqliy hujum”, “Klaster”, “FSMU”, “Debat”, “Case-study” kabi metodlar o‘quvchilarning muammoli vaziyatlarni tahlil qilishiga, turli g‘oyalarni ilgari surishiga va jamoa bilan ishlash ko‘nikmalarini rivojlantirishga yordam beradi. Bunday metodlar orqali o‘quvchi o‘z fikrini asoslash, muqobil yechimlarni topish va yangicha qarashlarni shakllantirish imkoniyatiga ega bo‘ladi. Natijada kreativ fikrlash muhiti yuzaga keladi. Axborot-kommunikatsiya texnologiyalarining ta’lim jarayoniga integratsiyasi ham kreativ fikrlashni rivojlantirishda muhim omil hisoblanadi. Elektron platformalar, virtual laboratoriyalar, taqdimot dasturlari hamda multimedia vositalari o‘quvchilarning darsga bo‘lgan qiziqishini oshiradi. Raqamli texnologiyalar orqali o‘quvchilar mustaqil ravishda ma’lumot izlash, uni tahlil qilish va amaliyotda qo‘llash imkoniyatiga ega bo‘ladi. Bu esa ularning analitik va ijodiy tafakkurini rivojlantiradi. Loyiha asosida o‘qitish texnologiyasi ham kreativ fikrlashni shakllantirishda samarali usullardan biridir. Ushbu yondashuvda o‘quvchilar ma’lum bir muammoni mustaqil ravishda o‘rganadi, reja tuzadi, ma’lumot to‘playdi va yakuniy natijani taqdim etadi. Jarayon davomida o‘quvchilar izlanadi, yangi g‘oyalarni ishlab chiqadi hamda amaliy tajribaga ega bo‘ladi. Bu esa ularning ijodkorlik va innovatsion fikrlash qobiliyatini rivojlantiradi.

Shuningdek, zamonaviy pedagogik texnologiyalarni integratsiyalashda pedagogning roli ham muhimdir. O‘qituvchi nafaqat bilim beruvchi, balki o‘quvchilarning ijodiy faoliyatini tashkil etuvchi va yo‘naltiruvchi shaxs sifatida faoliyat olib borishi kerak. Pedagog innovatsion metodlardan samarali foydalanishi, o‘quvchilarni erkin fikrlashga rag‘batlantirishi hamda ijodiy muhit yaratishi zarur. Demak, zamonaviy pedagogik texnologiyalarning ta’lim jarayoniga integratsiyasi o‘quvchilarning kreativ fikrlashini rivojlantirishda samarali vosita hisoblanadi. Ushbu

texnologiyalar yordamida o'quvchilar mustaqil, tanqidiy va innovatsion fikrlash ko'nikmalarini egallaydi hamda zamonaviy jamiyat talablariga mos raqobatbardosh shaxs sifatida shakllanadi.

Pedagogik

Integratsiya

Pedagogik integratsiya — bu ta'lim jarayonida turli fanlar, metodlar, texnologiyalar va pedagogik yondashuvlarni o'zaro uyg'unlashtirish orqali samarali o'qitish tizimini yaratish jarayonidir. Zamonaviy ta'limda pedagogik integratsiya o'quvchilarning bilimlarni bir butun holda anglashiga, ularni amaliyot bilan bog'lashiga hamda kreativ fikrlash ko'nikmalarini rivojlantirishga xizmat qiladi. Bugungi kunda ta'lim tizimida alohida fanlarni mustaqil o'qitish bilan bir qatorda, ular o'rtasidagi uzviy bog'liqlikni ta'minlash muhim ahamiyat kasb etmoqda. Chunki integratsiyalashgan ta'lim o'quvchilarda voqea va hodisalarga kengroq yondashuvni shakllantiradi. Masalan, axborot texnologiyalarini ona tili, matematika yoki tabiiy fanlar bilan uyg'unlashtirish orqali o'quvchilarning bilimni tezroq o'zlashtirishi va mustaqil ishlash ko'nikmalari rivojlanadi. Pedagogik integratsiyada interfaol metodlar, raqamli texnologiyalar, loyiha asosida o'qitish hamda muammoli ta'lim metodlari muhim o'rin egallaydi. Bunday yondashuvlar o'quvchilarni faollikka undab, ularning ijodiy va tanqidiy fikrlashini rivojlantiradi. Ayniqsa, zamonaviy pedagogik texnologiyalarni integratsiyalash orqali ta'lim jarayoni qiziqarli va samarali tashkil etiladi. Shuningdek, pedagogik integratsiya o'quvchilarning nazariy bilimlarini amaliy faoliyat bilan bog'lash imkonini beradi. O'quvchilar turli fanlardan olgan bilimlarini birgalikda qo'llash orqali muammolarga yechim topishga o'rganadi. Bu esa ularda mustaqil fikrlash, muloqot qilish va jamoa bilan ishlash ko'nikmalarini shakllantiradi. Pedagogik integratsiyani samarali tashkil etishda o'qituvchining kasbiy mahorati muhim ahamiyatga ega. Pedagog zamonaviy metod va texnologiyalarni puxta bilishi,

dars jarayonida fanlararo bog‘liqlikni yaratishi hamda o‘quvchilarni erkin va kreativ fikrlashga yo‘naltira olishi zarur. Xulosa qilib aytganda, pedagogik integratsiya ta’lim sifatini oshirish, o‘quvchilarning ijodiy salohiyatini rivojlantirish va zamonaviy kompetensiyalarni shakllantirishda muhim omil hisoblanadi. Bu yondashuv orqali ta’lim jarayoni innovatsion va samarali tus oladi.

Zamonaviy pedagogik texnologiyalar

Zamonaviy pedagogik texnologiyalar — bu ta’lim jarayonini samarali tashkil etish, o‘quvchilarning bilim, ko‘nikma va malakalarini rivojlantirishga xizmat qiluvchi innovatsion usul, metod va vositalar majmuasidir. Ushbu texnologiyalar o‘quvchini ta’lim jarayonining faol ishtirokchisiga aylantirib, uning mustaqil, tanqidiy va kreativ fikrlash qobiliyatini rivojlantirishga yordam beradi. Bugungi kunda ta’lim tizimida an’anaviy o‘qitish usullari bilan bir qatorda interfaol metodlar, axborot-kommunikatsiya texnologiyalari, multimedia vositalari, masofaviy ta’lim hamda loyiha asosida o‘qitish kabi zamonaviy pedagogik texnologiyalardan keng foydalanilmoqda. Bunday yondashuvlar ta’lim jarayonining sifatini oshirib, o‘quvchilarning darsga bo‘lgan qiziqishini kuchaytiradi. Interfaol metodlar zamonaviy pedagogik texnologiyalarning muhim tarkibiy qismi hisoblanadi. “Aqliy hujum”, “Debat”, “Klaster”, “Case-study”, “Bumerang” kabi metodlar o‘quvchilarni erkin fikrlashga, o‘z fikrini asoslashga va jamoa bilan hamkorlikda ishlashga o‘rgatadi. Bu metodlar orqali o‘quvchilarning ijodiy va mantiqiy tafakkuri rivojlanadi.

Axborot-kommunikatsiya texnologiyalaridan foydalanish esa ta’lim jarayonini yanada qulay va samarali qiladi. Elektron darsliklar, virtual laboratoriyalar, multimedia taqdimotlari, onlayn platformalar va masofaviy ta’lim tizimlari o‘quvchilarning bilim

olish imkoniyatlarini kengaytiradi. Shu bilan birga, raqamli texnologiyalar o'quvchilarda mustaqil izlanish va axborotni tahlil qilish ko'nikmalarini shakllantiradi. Loyiha asosida o'qitish texnologiyasi ham zamonaviy ta'limning muhim yo'nalishlaridan biridir. Ushbu texnologiyada o'quvchilar muayyan mavzu yoki muammo ustida mustaqil ishlaydi, ma'lumot to'playdi va o'z loyihasini himoya qiladi. Natijada ularda ijodkorlik, mas'uliyat va innovatsion fikrlash ko'nikmalari rivojlanadi. Zamonaviy pedagogik texnologiyalarni samarali qo'llashda pedagogning roli katta ahamiyatga ega. O'qituvchi dars jarayonini innovatsion yondashuv asosida tashkil etishi, o'quvchilarning qiziqishi va ehtiyojlarini inobatga olishi zarur. Shuningdek, pedagog zamonaviy texnologiyalardan foydalanish ko'nikmasiga ega bo'lishi kerak. Xulosa qilib aytganda, zamonaviy pedagogik texnologiyalar ta'lim samaradorligini oshirish, o'quvchilarning kreativ va mustaqil fikrlashini rivojlantirish hamda zamonaviy bilimlarni egallashida muhim vosita hisoblanadi. Ularning ta'lim jarayoniga keng joriy etilishi barkamol va raqobatbardosh avlodni tarbiyalashga xizmat qiladi.

Xulosa

Xulosa qilib aytganda, kreativ fikrlashni rivojlantirishda zamonaviy pedagogik texnologiyalarning integratsiyasi ta'lim samaradorligini oshirishning muhim omillaridan biri hisoblanadi. Bugungi tezkor axborot va innovatsiyalar davrida o'quvchilarning mustaqil, tanqidiy va ijodiy fikrlash ko'nikmalarini shakllantirish zamonaviy ta'limning asosiy maqsadlaridan biri bo'lib qolmoqda. Shu jihatdan interfaol metodlar, axborot-kommunikatsiya texnologiyalari, loyiha asosida o'qitish hamda muammoli ta'lim yondashuvlari o'quvchilarning ijodiy salohiyatini rivojlantirishda samarali vosita bo'lib xizmat qiladi. Tadqiqotlar shuni ko'rsatadiki, zamonaviy pedagogik texnologiyalarni ta'lim jarayoniga integratsiyalash o'quvchilarning darsga bo'lgan qiziqishini oshiradi, ularni faol ishtirok etishga undaydi hamda bilimlarni mustaqil ravishda egallash imkonini yaratadi. Natijada

o‘quvchilarda yangicha fikrlash, innovatsion g‘oyalarni ilgari surish va muammolarga samarali yechim topish ko‘nikmalari shakllanadi.

Shuningdek, pedagogning innovatsion faoliyati va zamonaviy texnologiyalardan samarali foydalanish qobiliyati ham muhim ahamiyatga ega. O‘qituvchi ta’lim jarayonida qulay ijodiy muhit yaratishi, o‘quvchilarni erkin fikrlashga rag‘batlantirishi va ularning individual qobiliyatlarini rivojlantirishga e’tibor qaratishi zarur. Demak, zamonaviy pedagogik texnologiyalarni ta’lim tizimiga keng joriy etish orqali kreativ fikrlaydigan, raqobatbardosh va innovatsion yondashuvga ega barkamol shaxslarni tarbiyalash mumkin. Bu esa ta’lim sifatini oshirish va jamiyat taraqqiyotini ta’minlashda muhim ahamiyat kasb etadi.

1. Pedagogik texnologiyalar va pedagogik mahorat — Toshkent: “Moliya-iqtisod” nashriyoti, 2019.
2. Abdulla Avloniy. Turkiy guliston yoxud axloq — Toshkent: “O‘qituvchi” nashriyoti, 2018.
3. Pedagogika nazariyasi va tarixi — Toshkent: “O‘qituvchi” nashriyoti, 2020.
4. UNESCO. Education for Creative Thinking and Innovation — Paris, 2021.
5. Innovatsion ta’lim texnologiyalari — Toshkent: “Fan va texnologiya” nashriyoti, 2021.
6. OECD. Creative Thinking in Education — OECD Publishing, 2022.
7. Zamonaviy pedagogik texnologiyalar — Toshkent: “Fan” nashriyoti, 2020.

THE IMPORTANCE OF THE NAQSHBANDIYA-MUJADDIDIYA DOCTRINE IN SHAPING THE SPIRITUALITY OF YOUTH IN THE CONTEXT OF GLOBALIZATION

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Abstract

This article examines the issues of shaping the spirituality of youth in the context of globalization and analyzes the spiritual and educational significance of the Naqshbandiya-Mujaddidiya doctrine in this process. The study explores the historical foundations of the Mujaddidiya branch of the Naqshbandiya order, its educational traditions, and its moral-philosophical principles. Based on historical and scholarly sources, the article highlights the importance of such concepts as knowledge and enlightenment, moral purification, self-discipline, social responsibility, tolerance, and teacher-disciple traditions in the spiritual upbringing of modern youth. The paper also discusses the role of Sufi teachings in protecting young people from spiritual threats, and the negative consequences of mass culture in the era of globalization.

Keywords

globalization, youth spirituality, Mujaddidiya, Naqshbandiya, Sufism, moral education, enlightenment, spiritual values, tolerance, perfect human being.

Globalization has become one of the defining processes of the modern world. Rapid developments in information technologies, mass communication, migration, and cultural exchange have significantly transformed the worldview and lifestyle of young people. Along with its positive outcomes, globalization has also intensified ideological

conflicts, spiritual crises, and the spread of alien cultural values among youth. In particular, the increasing influence of mass culture, individualism, consumerism, and virtual dependency negatively affects the moral consciousness and spiritual stability of young generations.

Under such circumstances, preserving national identity and strengthening spiritual values have become important social and pedagogical tasks. In this regard, the rich spiritual heritage of Eastern thinkers and Sufi scholars represents an important educational resource.

Among the spiritual schools that contributed greatly to the moral development of society, the Naqshbandiya order occupies a unique place. The Mujaddidiya branch of this order, founded and developed by Ahmad Sirhindi in the 17th century, emphasized the harmony of religious knowledge, morality, and social activity. The doctrine promoted spiritual purification while encouraging active participation in society and productive labor.

The Naqshbandiya order emerged as one of the most influential Sufi movements in Central Asia and the broader Islamic world. It is distinguished by its emphasis on inner spirituality combined with social responsibility. Unlike some mystical movements that promoted isolation from society, Naqshbandiya encouraged believers to remain socially active while maintaining spiritual consciousness. The Mujaddidiya branch was established by the famous Islamic scholar and Sufi thinker Ahmad Sirhindi (1564–1624), who became known as “Mujaddid Alf-i Sani” (“Renewer of the Second Millennium”). Sirhindi sought to restore orthodox Islamic principles and strengthen the connection between Sharia and Tariqa. His philosophical and spiritual views are mainly reflected in his renowned work *Maktubat*, which contains letters addressing theological, ethical, and social issues.

One of the key principles of the Mujaddidiya doctrine is the purification of the human soul through knowledge, self-control, and sincere devotion to God. According to this doctrine, moral perfection can only be achieved through the harmony of intellectual development and ethical behavior. Therefore, education was regarded not merely as the acquisition of knowledge but as a process of forming a morally mature and socially responsible individual.

The Naqshbandiya-Mujaddidiya doctrine paid special attention to the upbringing of youth. Sufi teachers considered young people the moral foundation of society and believed that their spiritual education determined the future stability of the nation. The educational activities of Mujaddidiya sheikhs were carried out mainly in madrasas and khanqahs. These institutions functioned not only as centers of religious learning but also as schools of ethics and morality. Students were taught Islamic sciences together with logic, rhetoric, literature, grammar, and ethical conduct.

During the 18th and 19th centuries, the madrasas of Bukhara and Samarkand developed a three-stage educational system consisting of lower, intermediate, and advanced levels. Such a system ensured the gradual intellectual and spiritual development of students. An important feature of this educational system was the unity of theory and practice. Students were expected not only to master knowledge but also to embody moral virtues such as honesty, humility, patience, discipline, and respect for elders. This pedagogical principle remains highly relevant in modern educational philosophy.

One of the central ideas in Sufi philosophy is the concept of the “perfect human being” (*al-insan al-kamil*). In the Mujaddidiya doctrine, a perfect person is characterized not only by intellectual capacity but also by moral purity and social usefulness. In the modern world, knowledge alone is insufficient for achieving social harmony and personal fulfillment. Young people must also possess ethical qualities such as

responsibility, tolerance, patriotism, and self-discipline. The Mujaddidiya understanding of human perfection provides an important spiritual model for contemporary youth education. The doctrine emphasizes the purification of the soul from arrogance, greed, selfishness, and moral corruption. Such teachings are especially significant today, when many young people face spiritual emptiness, depression, and identity crises caused by excessive materialism and virtual lifestyles.

Globalization has accelerated the spread of information through the internet and social media. While these technologies provide access to knowledge and intercultural communication, they also expose youth to destructive ideologies, violence, moral relativism, and unhealthy lifestyles. Certain aspects of modern mass culture encourage excessive individualism, consumerism, and indifference toward social and moral responsibilities. As a result, some young people become detached from national traditions and spiritual values.

In this context, the Naqshbandiya-Mujaddidiya doctrine offers an alternative worldview based on moral consciousness and spiritual discipline. The famous Naqshbandi principle “Dil ba yoru, dast ba kor” (“Heart with God, hands at work”) teaches individuals to combine spiritual awareness with active social participation. This principle encourages youth to be hardworking, responsible, and morally stable members of society. Moreover, the doctrine promotes moderation, tolerance, and peaceful coexistence. Such ideas are particularly important in preventing ideological radicalization among young people.

The teacher-disciple relationship occupies a central place in the Naqshbandiya-Mujaddidiya educational tradition. In Sufi pedagogy, the teacher is regarded not only as a transmitter of knowledge but also as a moral mentor responsible for the spiritual development of students. Today, the role of educators in shaping the worldview and character of youth remains extremely important. Modern pedagogical systems

increasingly recognize that education should include moral and psychological guidance in addition to academic instruction. The traditional teacher-disciple model of the Mujaddidiya order may therefore serve as an effective framework for strengthening ethical education in contemporary society. Through personal example, sincerity, and spiritual guidance, teachers can positively influence the moral consciousness of young people.

Another significant aspect of the Mujaddidiya doctrine is its emphasis on tolerance, compassion, and humanism. Sufi teachings encourage respect for others, peaceful dialogue, and social harmony. In the multicultural and ideologically complex environment of globalization, such values are essential for maintaining social stability. The doctrine teaches that spiritual maturity manifests itself in kindness, justice, and service to humanity. Therefore, the ethical principles of Sufism may contribute significantly to the development of civic responsibility and intercultural understanding among youth.

In conclusion, the Naqshbandiya-Mujaddidiya doctrine represents an important spiritual, educational, and philosophical heritage in shaping the spirituality of youth in the era of globalization. Its principles of enlightenment, moral purification, social responsibility, tolerance, and respect for teachers remain highly relevant today. The doctrine's emphasis on the harmony of knowledge and morality offers valuable guidance for modern educational systems. Furthermore, its humanistic and ethical teachings can help protect youth from moral decline, and the negative effects of mass culture. Therefore, studying the rich spiritual heritage of the Naqshbandiya-Mujaddidiya tradition and integrating its educational principles into contemporary youth policy and pedagogy possess significant scientific and practical importance.

References



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1. Komatsu H. *The Naqshbandiyya and Islamic Education in Central Asia*. Tokyo: Institute for the Study of Languages and Cultures of Asia and Africa, 1996.
2. Bobokhonov Sh. *Tasavvuf va Ma'naviyat*. Tashkent: Movarounnahr, 2010.
3. Abduqodirov A. *History of Bukhara Madrasas*. Tashkent: Fan, 2005.
4. Yuldashev A. *Globalization and Youth Spirituality*. Tashkent: Ma'naviyat, 2018.
5. Ahmad Sirhindi. *Maktubat*. Istanbul, 1977.
6. Trimingham J.S. *The Sufi Orders in Islam*. Oxford: Oxford University Press, 1971.



COMPARATIVE ANALYSIS OF UZBEK AND KAZAKH BAKHSHI TRADITIONS

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ABSTRACT

This scientific article presents a comparative analysis of Uzbek and Kazakh bakhshi traditions, including their historical formation, performance features, epic repertoire, and cultural functions. The study examines the common and distinctive characteristics of the two nations' epic traditions from folkloristic and cultural perspectives. It also highlights the role of bakhshi art in shaping national identity, its transformation in modern cultural processes, and its prospects under globalization. The findings demonstrate that Uzbek and Kazakh bakhshi traditions are significant components of the common Turkic epic heritage.

Keywords

bakhshi, zhyrau, epic storytelling, folklore, comparative analysis, cultural heritage, tradition, identity.

O'ZBEK VA QOZOQ BAXSHICHILIK AN'ANALARINING QIYOSIY

TAHLILI

NAURIZBAEVA XANZADA ORALBAY QIZI

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ANNOTATSIYA: Mazkur ilmiy maqolada o'zbek va qozoq baxshichilik an'alarining tarixiy shakllanishi, ijrochilik xususiyatlari, epik repertuari hamda madaniy funksiyalari qiyosiy jihatdan tahlil qilinadi. Tadqiqot davomida ikki xalq baxshichilik san'atining umumiy va o'ziga xos jihatlari folklorshunoslik va

madaniyatshunoslik nuqtayi nazaridan o'rganildi. Shuningdek, baxshichilikning milliy identitetni shakllantirishdagi o'rni, zamonaviy madaniy jarayonlardagi transformatsiyasi hamda globallashuv sharoitidagi rivojlanish istiqbollari yoritildi. Tadqiqot natijalari o'zbek va qozoq baxshichilik an'analari umumturkiy epik tafakkurning muhim tarkibiy qismi ekanligini ko'rsatadi.

Kalit so'zlar: baxshi, jirov, doston, folklor, epik ijod, qiyosiy tahlil, madaniy meros, an'ana, identitet.

СРАВНИТЕЛЬНЫЙ АНАЛИЗ УЗБЕКСКИХ И КАЗАХСКИХ ТРАДИЦИЙ БАХШИЧЕСТВА

АННОТАЦИЯ: В данной научной статье проводится сравнительный анализ узбекских и казахских традиций бахшичества, их исторического формирования, исполнительских особенностей, эпического репертуара и культурных функций. В ходе исследования общие и специфические черты искусства бахши двух народов изучались с точки зрения фольклористики и культурологии. Также рассматривается роль бахшичества в формировании национальной идентичности, его трансформация в современных культурных процессах и перспективы развития в условиях глобализации. Результаты исследования показывают, что узбекские и казахские традиции бахшичества являются важной частью обще-тюркского эпического мышления.

Ключевые слова: бахши, жырау, дастан, фольклор, эпос, сравнительный анализ, культурное наследие, традиция, идентичность.

KIRISH

Baxshichilik va jirovchilik san'ati turkiy xalqlarning eng qadimiy va murakkab og'zaki epik an'alaridan biri hisoblanadi. Ushbu san'at turi asrlar davomida xalqning tarixiy xotirasi, ma'naviy qadriyatlarini, ijtimoiy qarashlari hamda estetik tafakkurini avloddan-avlodga yetkazib kelgan. Ayniqsa, o'zbek va qozoq xalqlari madaniyatida

baxshi va jirovlar xalqning ma'naviy hayotida muhim o'rin egallab, nafaqat ijrochi, balki tarixiy voqealarni yodda saqlovchi va milliy ongni shakllantiruvchi ijodkor sifatida ham faoliyat yuritgan. O'zbek baxshichilik an'alarida doston ijrochiligi markaziy o'rinni egallaydi. Baxshilar dostonlarni dutor yoki do'mbira jo'rligida ijro etib, epik voqealarni dramatik ifoda va poetik ohang orqali tinglovchiga yetkazadi. Qozoq jirovchilik an'anasida esa epik kuylashning improvizatsion shakli yetakchi bo'lib, jirovlar qo'biz yoki dombra jo'rligida xalq tarixiga oid voqealarni kuylaydi. Bu ikki an'ana umumiy turkiy ildizlarga ega bo'lsa-da, ularning shakllanishiga turli tarixiy va etnomadaniy omillar ta'sir ko'rsatgan [1, 21-bet].

Tarixiy manbalarga ko'ra, baxshichilik va jirovchilik qadimgi turkiy qabilalar davridayoq shakllangan bo'lib, ular dastlab marosim va urf-odatlar bilan bog'liq holda rivojlangan. Keyinchalik esa epik ijodning mustaqil shakliga aylangan. Dostonlarda qahramonlik, jasorat, vatanparvarlik va axloqiy qadriyatlar markaziy mavzu sifatida namoyon bo'lgan. Bugungi globallashuv davrida an'anaviy folklor shakllarining yo'qolib ketish xavfi kuchaymoqda. Zamonaviy ommaviy madaniyat va texnologik taraqqiyot yosh avlodning folklorga qiziqishini susaytirayotgan bir paytda, baxshichilik va jirovchilik san'atini saqlash masalasi dolzarb muammolardan biriga aylanmoqda. Shu sababli o'zbek va qozoq baxshichilik an'alarining qiyosiy tahlili ularning umumiy ildizlari va milliy xususiyatlarini aniqlashda muhim ilmiy ahamiyatga ega. Mazkur tadqiqotning asosiy maqsadi o'zbek va qozoq baxshichilik an'alarining tarixiy rivojlanishi, ijrochilik xususiyatlari, poetik tizimi va zamonaviy madaniy hayotdagi o'rnini qiyosiy jihatdan tahlil qilishdan iboratdir.

METODOLOGIYA

Mazkur tadqiqotda kompleks ilmiy metodologik yondashuv qo'llanildi. Tadqiqotning nazariy asosini folklorshunoslik, madaniyatshunoslik, etnologiya va epik ijod nazariyasiga oid ilmiy qarashlar tashkil etdi. Birinchi navbatda tarixiy-qiyosiy

metod yordamida o‘zbek baxshichiligi va qozoq jirovchiligining shakllanish bosqichlari o‘rganildi. Ushbu metod orqali ikki xalq epik an‘analarining umumiy ildizlari va rivojlanish jarayonidagi farqli jihatlari aniqlandi. Tarixiy manbalar, folklor to‘plamlari va ilmiy monografiyalar asosiy manba sifatida tahlil qilindi [2, 37-bet].

Struktur-funksional metod yordamida dostonlarning badiiy tuzilishi, obrazlar tizimi va jamiyatdagi funksional vazifalari o‘rganildi. Bu metod dostonlarning faqat badiiy asar emas, balki ma‘naviy-tarbiyaviy vosita ekanligini aniqlash imkonini berdi. Qiyosiy folkloristik yondashuv orqali o‘zbek va qozoq epik repertuari solishtirildi. Xususan, “Alpomish”, “Go‘ro‘g‘li”, “Qoblan batir” kabi dostonlarning syujet, obraz va poetik tizimi qiyosiy tahlil qilindi.

Tadqiqot davomida empirik kuzatuv usuli ham qo‘llanildi. Zamonaviy baxshilar va jirovlarning ijro uslublari, festival va folklor tadbirlaridagi faoliyati kuzatildi. Bundan tashqari, internet platformalari va audio-video materiallar orqali baxshichilikning zamonaviy transformatsiyasi o‘rganildi.

Mazkur metodologik yondashuv o‘zbek va qozoq baxshichilik an‘analarining umumiy va o‘ziga xos jihatlari ilmiy asosda yoritish imkonini berdi.

NATIJALAR

Tadqiqot natijalari o‘zbek va qozoq baxshichilik an‘analari o‘rtasida kuchli tarixiy va madaniy bog‘liqlik mavjudligini ko‘rsatdi. Har ikkala xalq epik ijodida qahramonlik, vatan himoyasi, adolat va sadoqat g‘oyalari markaziy mavzu sifatida namoyon bo‘ladi. O‘zbek baxshichiligida poetik ifoda va dramatik sahnaviylik muhim o‘rin tutadi. Baxshilar dostonlarni ijro etishda ovoz ohangi, mimika va dramatik pauzalardan keng foydalanadi. Qozoq jirovchiligida esa falsafiy mushohada va improvizatsion kuylash ustuvorlik qiladi [3, 45-bet].

Musiqiy jihatdan ham muayyan farqlar kuzatildi. O‘zbek baxshilari asosan dutor va do‘mbira jo‘rligida ijro etsa, qozoq jirovlari dombra va qo‘bizdan foydalanadi.

Qo‘bizning marosimiy va mifologik xususiyati qozoq epik an‘analariga o‘ziga xos ruhiy ohang bag‘ishlaydi. Tadqiqot davomida “Alpomish” dostoni ikki xalq folklorida ham uchrashi aniqlandi. Biroq uning syujet talqini va obraz tizimida ayrim farqlar mavjud. O‘zbek variantida oilaviy qadriyatlar va muhabbat motivlari kuchliroq ifodalansa, qozoq variantida qahramonning jangovar jasorati va ko‘chmanchi hayot tasviri ustunlik qiladi [4, 59-bet].

Natijalar shuni ko‘rsatdiki, baxshichilik va jirovchilik yosh avlodning ma‘naviy tarbiyasida muhim vosita hisoblanadi. Dostonlar orqali yoshlar tarixiy xotira, milliy qadriyatlar va axloqiy me‘yorlarni o‘zlashtiradi. Shuningdek, xalqaro folklor festivallari va madaniy tadbirlar baxshichilik va jirovchilikning zamonaviy madaniy hayotdagi mavqeini mustahkamlashga xizmat qilmoqda. Ayniqsa, raqamli platformalar orqali baxshilar ijrosining keng tarqalishi ushbu san‘at turining global auditoriyaga chiqishiga imkon yaratmoqda.

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FOYDALANILGAN ADABIYOTLAR:

1. Karimov A. *Turkiy xalqlar folklori*. Toshkent: Fan, 2019. [21–33-bet].
2. Yusupov B. *O'zbek baxshichilik san'ati tarixi*. Toshkent: Ma'naviyat, 2021. [37-bet].
3. Nurpeisov E. *Qozoq jirovchilik an'analari*. Olmaota: Bilim, 2020. [45-bet].
4. Abdurahmonov S. *Epik tafakkur va milliy madaniyat*. Toshkent: O'zbekiston, 2022. [59-bet].
5. UNESCO. *Intangible Cultural Heritage Reports*. Paris, 2023. [41-bet].



Linguodidactical analysis of historical texts and their importance in teaching English

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Annotation

This scientific work comprehensively analyzes the linguodidactic properties of historical texts, their methodological and didactic significance in the process of teaching English. The study scientifically reveals the role of authentic historical texts in the formation of communicative competence, linguocultural competence and critical thinking in students. It also shows ways to improve the effectiveness of language teaching using lexical, grammatical, pragmatic and discourse analysis methods based on historical texts.

Key words

language didactics, historical text, authentic material, English language teaching methodology, communicative competence, CLIL, discourse analysis, linguistic culture.

Interest in learning foreign languages is growing all over the world. As you know, there are currently a huge number of languages in the world, their number ranges from 2,500 to 5,000. However, there are languages in the world that are spoken by a very large number of people on our planet. French, German, Russian, English are among



them. The most popular languages in the world are used for communication in the field of trade, political relations and the study of history. Due to its geographical distribution in the world, English dominates. English is the most popular language in 99 countries of the world, covering 99 countries of the world. This language is spoken by 340 English speakers and is owned by 1.5 billion people around the world. The United States is the country with the largest number of English speakers, of which about 215 million. In the UK, 58 million people speak English, in Canada 18 million, etc. It is one of the working languages of the UN. About 90% of all information in the world is stored in English, and about 70% of scientific publications are published in this language. English is the language of international communication and the most widely studied language in the world. . According to some forecasts, in about 50 years, every second inhabitant of our planet will speak English. This, in turn, will lead to an increase in the number of English learners in the world, and in our country in particular. Due to the increase in the number of English learners, it is necessary to improve the quality of English lessons, study and create new teaching methods.

As the same time, history is a science that systematically studies the development of society, the succession of generations, and past events. It is the only memory of humanity for learning from the mistakes of the past, understanding national identity, developing critical thinking, and properly planning for the future.

It is clear that history and English are very important subjects for students. The following article explores the didactic principles of using authentic sources in English in teaching history.





Linguodidactic analysis of historical texts is the process of studying written sources of the past through their linguistic features, grammar, and lexicon. This approach to teaching English enriches students' vocabulary, develops intercultural communication, and helps to understand the evolutionary development of the language.

In today's globalization, English teaching is not only aimed at teaching language structures, but also at developing the communicative and cultural competence of the student. In this regard, authentic materials, in particular historical texts, are an important component of modern linguodidactics.

Historical texts allow students to learn a language in a realistic historical and social context, which not only develops their linguistic knowledge but also their analytical and critical thinking.¹

A historical text is a written discourse that reflects events, social processes, or personal activities that occurred during a specific period.

FORMS OF HISTORICAL TEXTS

No.	Form	Icon	Definition	Key Characteristics	Examples	Didactic Importance in English Language Teaching
1	Historical Documents (Official written records of past events)		Written records created during a particular historical period by governments, institutions, or individuals to document events, laws, agreements, or policies.	<ul style="list-style-type: none"> Formal and official style Use of legal and political terminology Objective and factual presentation Often archaic vocabulary and complex structures 	<ul style="list-style-type: none"> Magna Carta (1215) The Declaration of Independence (1776) The Emancipation Proclamation (1863) Treaties and agreements 	<ul style="list-style-type: none"> Introduces learners to formal and academic language Expands vocabulary related to law, politics, and society Develops reading comprehension skills Enhances ability to interpret authentic texts
2	Political Speeches (Persuasive oral presentations delivered in public)		Oral presentations delivered by political leaders or public figures to influence opinions, inspire action, or explain policies.	<ul style="list-style-type: none"> Persuasive and rhetorical language Use of appeals (ethos, pathos, logos) Repetition and emphasis Emotionally engaging content 	<ul style="list-style-type: none"> Martin Luther King Jr. "I Have a Dream" (1963) Winston Churchill speeches (1940-1945) Abraham Lincoln "Gettysburg Address" (1863) 	<ul style="list-style-type: none"> Improves listening comprehension Enhances speaking and presentation skills Teaches persuasive language and rhetoric Encourages critical thinking and discussion
3	Chronicles (Historical narratives written in sequence)		Detailed written accounts of events arranged in chronological order, usually by historians or eye-witnesses.	<ul style="list-style-type: none"> Chronological sequence Detailed description of events Mixture of facts and interpretations Often reflects the author's point of view 	<ul style="list-style-type: none"> The Anglo-Saxon Chronicle Ibn al-Athir "Al-Kamil fi al-Tarikh" The Chronicles of Froissart 	<ul style="list-style-type: none"> Develops reading for detail and sequence Builds understanding of historical context Expands historical vocabulary Improves summary and note-taking skills
4	Historical Novels (Fictional stories set in historical periods)		Fictional literary works that are set in the past and incorporate real historical events, settings, and characters.	<ul style="list-style-type: none"> Narrative and descriptive language Combination of fact and fiction Rich in dialogue and character development Engaging and imaginative 	<ul style="list-style-type: none"> Sir Walter Scott - "Ivanhoe" Hilary Mantel - "Wolf Hall" Ken Follett - "Pillars of the Earth" 	<ul style="list-style-type: none"> Increases motivation and interest in reading Enhances vocabulary in context Improves inference and interpretation skills Encourages cultural and historical awareness

Historical texts are characterized by the following linguistic features: formal style; complex syntactic structures; passive constructions; historical vocabulary.

The main aspects of studying historical texts from a linguodidactic perspective and using them in lessons are as follows:

¹ G'oziyev E.G. Pedagogik psixologiya. Toshkent, 2012. B. 52.

Understanding the Evolution of Language. In learning English, historical texts (for example, Shakespeare's works, early medieval documents, or religious texts) show how the language has developed into its modern form. The changes in old words and grammatical forms help students to understand the rules of the language logically, rather than memorizing them.

Developing Intercultural Competence. Language is not only a means of communication, but also a mirror of the history and culture of a people. Through historical texts, students learn not only the language, but also the customs, mentality, and historical conditions of English-speaking peoples.

Increasing Lexical and Grammatical Wealth. Ancient texts are a rich source of archaic and historical words and expressions (archaisms, idioms), which are rarely found in modern language use, but are very important in artistic and academic speech. This serves to turn students' passive vocabulary into an active one.

Text Analysis and Developing Critical Thinking. Linguistic-didactic analysis requires not only reading the text, but also analyzing its subtext, the author's purpose, and the socio-political environment of that time. This forms the student's critical thinking skills.

Linguodidactics studies the scientific foundations of language teaching. Its main principles are communicativeness, integrativeness, authenticity, and an active approach. Historical texts fully correspond to these principles.²

Authentic materials are examples of real-life, unrefined language. Historical texts: create a realistic language environment, bring the student closer to academic language, and increase motivation.

² Yo'ldoshev J., Usmonov S. Pedagogik texnologiyalar. Toshkent, 2013. B. 64.

Historical texts contain archaisms (thou, thee), political terms (constitution, empire), and social vocabulary. This enriches students' academic vocabulary.³

Pragmatic analysis studies the following: communicative intention, addressee, context, implicit meaning.

Discourse analysis analyzes the following. It studies the structure of the text, logical connections, argumentation.

Linguistic-cultural analysis: reflects historical texts, national values, cultural identity, historical consciousness.

CLIL approach (Content and Language Integrated Learning). History + English language integration: interdisciplinary connection, real context, deepening of knowledge.

Interactive methods: Role-play, Debate, Case study, Project-based learning, Text analysis.

According to research, vocabulary increases by 35–45%, grammatical errors decrease, and motivation increases significantly.⁴

In conclusion, it can be said that linguodidactic analysis of historical texts is one of the most effective approaches to teaching English. They simultaneously develop linguistic, cultural and cognitive competence in the student. Therefore, their systematic use in the educational process is an important requirement of modern methodology.

REFERENCES.

1. G'oziyev E.G. Pedagogik psixologiya. Toshkent, 2012.
2. Yo'ldoshev J., Usmonov S. Pedagogik texnologiyalar. Toshkent, 2013.
3. Mahmudov N. Til va tafakkur. Toshkent, 2017.
4. Jo'rayev A. Til o'qitish metodikasi. Toshkent, 2015.

³ Mahmudov N. Til va tafakkur. Toshkent, 2017. B. 88

⁴ Jo'rayev A. Til o'qitish metodikasi. Toshkent, 2015. B. 110.

5. Qodirov A. Zamonaviy pedagogik yondashuvlar. Toshkent, 2020.
6. O‘zbekiston Respublikasi Ta’lim to‘g‘risidagi qonun. – Toshkent, 2021.
7. Пассов Е.И. Коммуникативная методика. Москва, 2010.
8. Щукин А.Н. Методика преподавания иностранных языков. Москва, 2015.
9. Гальскова Н.Д. Современная методика обучения языкам. Москва, 2013.
10. Harmer J. The Practice of English Language Teaching. 2007.
11. Richards J.C., Rodgers T.S. Approaches and Methods in Language Teaching. 2014.
12. Brown H.D. Teaching by Principles. 2015.
13. Nunan D. Language Teaching Methodology. 2012.
14. Krashen S.D. Principles of Second Language Acquisition. 2009.

IS “SUPERIOR BARGAINING POWER” ENOUGH? THE LIMITS OF DOMESTIC LEGAL INSTRUMENTS AGAINST THE INFRASTRUCTURAL POWER OF DIGITAL PLATFORMS

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Abstract

This thesis examines a central hypothesis: whether the concept of “superior bargaining power,” established by the Law of the Republic of Uzbekistan “On Competition” (2023), is capable of preventing digital platforms in e-commerce from abusing their control over market access. To distinguish related manifestations of platform power, the author identifies and analyzes three dimensions of such power—data control, bargaining asymmetry, and infrastructural control—and compares the domestic legal framework with the preventive (ex ante) approach embodied in the European Union’s Digital Markets Act (DMA). The findings suggest that the provision on superior bargaining power is effective in situations where a platform exerts pressure on an individual seller, but it is insufficient where a platform governs the market itself through algorithms and access conditions. Consequently, the thesis proposes incorporating a limited set of ex ante obligations into competition legislation, proportionate to the scale and needs of the national market.

Keywords:

digital platform, platform dominance, superior bargaining power, competition law, e-commerce, ex ante regulation, Digital Markets Act (DMA), gatekeeper.

ДОСТАТОЧНА ЛИ «ПРЕВОСХОДНАЯ ПЕРЕГОВОРНАЯ СИЛА»?
ПРЕДЕЛЫ ОТЕЧЕСТВЕННОГО ИНСТРУМЕНТАРИЯ ПРОТИВ
ИНФРАСТРУКТУРНОЙ ВЛАСТИ ЦИФРОВЫХ ПЛАТФОРМ

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Аннотация. В тезисе проверяется одна гипотеза: способна ли концепция «превосходной переговорной силы», закреплённая Законом Республики Узбекистан «О конкуренции» (2023 г.), удержать цифровые платформы в электронной коммерции от злоупотребления контролем над доступом к рынку. Чтобы развести смежные проявления платформенной власти, автор разграничивает три её измерения — данные, переговорную асимметрию и инфраструктурный контроль — и сопоставляет отечественный институт с превентивной (ex ante) логикой Закона Европейского союза о цифровых рынках (DMA). Вывод неутешителен: норма о переговорной силе работает там, где платформа давит на отдельного продавца, но не там, где она через алгоритмы и условия доступа управляет самим рынком. Отсюда предложение — встроить в конкурентное законодательство ограниченный набор ex ante обязанностей, соразмерных масштабу национального рынка.

Ключевые слова: цифровая платформа, платформенная гегемония, превосходная переговорная сила, конкурентное право, электронная коммерция, ex ante регулирование, Закон о цифровых рынках, гейткипер.

1. Постановка проблемы.

Власть крупной платформы плохо описывается привычным языком антимонопольного права. Доля рынка здесь мало что объясняет: маркетплейс становится незаменимым не потому, что велик, а потому, что на нём сошлись покупатели и продавцы, накоплены данные о спросе и выстроена инфраструктура, через которую только и можно дойти до клиента. Экономику такой многосторонней координации в своё время описали Ж.-Ш. Роше и Ж. Тироль [2], а Л. Хан показала, что стандарт «потребительского благосостояния», на котором держится классический антитраст, упускает из виду саму способность платформы диктовать условия [1]. Право реагирует на это с запозданием — постфактум, когда злоупотребление уже состоялось. Этот разрыв между скоростью платформ и темпом законодательства и составляет проблему настоящего исследования. Работа опирается на сравнительно-правовой, формально-юридический и функциональный методы.

Чтобы не смешивать разные вещи под общим словом «монополия», я разделяю власть платформы на три уровня. Первый — власть над данными: платформа знает о рынке больше всех остальных вместе взятых. Второй — переговорный перевес над продавцами, которые от неё зависят. Третий, наименее уловимый, — контроль над самим доступом к рынку: платформа решает, кого и на каких условиях пускать, и вправе предпочесть собственный товар чужому. Такое разделение нужно не ради схемы — оно позволяет увидеть, какой уровень власти узбекское право уже регулирует, а какой пока остаётся без присмотра.

2. «Превосходная переговорная сила» в законодательстве Узбекистана.

Закон «О конкуренции» № ЗРУ-850 (принят 3 июля 2023 г), впервые ввёл в узбекское право понятия «цифровая платформа» и «превосходная переговорная сила». Статья 14 описывает ситуацию, знакомую любому продавцу на маркетплейсе: одна сторона настолько сильнее другой, что фактически диктует

условия сделки, а у контрагента нет реального выбора, кроме как согласиться. Статья 18 запрещает злоупотреблять таким перевесом. Замысел законодателя понятен — защитить слабую сторону договора, то есть отрегулировать именно переговорный уровень платформенной власти. И норма не осталась на бумаге: антимонопольный орган ведёт реестр субъектов, признанных доминирующими в качестве цифровой платформы, и к 2026 г. в него вошли девять операторов на шести рынках — от онлайн-платежей и электронной коммерции до доставки, объявлений, стриминга и такси.

3. Функциональное сопоставление с моделью DMA.

Европейский союз решает близкую задачу противоположным способом. DMA (Регламент (ЕС) 2022/1925) тоже защищает зависимых бизнес-пользователей, но не дожидается нарушения, а связывает крупнейшие платформы обязанностями заранее. Поворот к такому превентивному регулированию подготовил доклад экспертов Еврокомиссии «Competition Policy for the Digital Era» (2019) [3]: его авторы прямо признали, что одними реактивными мерами системные платформы не сдержать. Логику назначения адресатов этих обязанностей — статус «гейткипера» по количественным порогам — подробно разбирают Ф. Бостун и Дж. Монти на материале первых решений Комиссии [6]. Сами обязанности конкретны: не отдавать предпочтение собственным сервисам, не мешать платформе сообщать пользователям об альтернативах за её пределами, не сливать воедино персональные данные из разных сервисов. К 2025 г. гейткиперами признаны семь компаний — Alphabet, Amazon, Apple, ByteDance, Microsoft, Meta и Booking.com. Что эти правила не декларация, показали первые штрафы: 23 апреля 2025 г. Комиссия взыскала 500 млн евро с Apple и 200 млн евро с Meta, а потолок санкции по DMA доходит до 10 % мирового оборота.

Различие, таким образом, не в целях, а в механике. Узбекская норма срабатывает после того, как продавец пожаловался и доказал злоупотребление. DMA действует наоборот: обязанности существуют постоянно и адресованы заранее очерченному кругу платформ, безотносительно к тому, поступила ли жалоба.

4. Диагноз пробела.

Здесь и обнаруживается граница отечественного инструмента. Против переговорного давления на конкретного продавца норма о превосходной переговорной силе работает. Против контроля над доступом к рынку — нет, и по вполне определённым причинам. Закон не выделяет особой категории системно значимых платформ, для которых действовали бы повышенные требования: доминирующий маркетплейс и небольшой интернет-магазин отвечают по одним и тем же правилам. Нет и превентивных обязанностей — прежде всего прямого запрета отдавать предпочтение собственным товарам, а ведь именно самопреференцирование (на его опасность в отношениях «платформа — бизнес» обращает внимание И. Граф [4]) и есть типичная форма инфраструктурного злоупотребления. Наконец, доказывать нарушение должен сам пострадавший продавец — та сторона, которая заведомо слабее и зависимее. В сумме это означает, что алгоритмическое самопредпочтение платформы и управление условиями доступа выпадают из-под действующего регулирования.

5. Вывод.

Превосходная переговорная сила — инструмент нужный, но половинчатый. Он гасит переговорную асимметрию и почти ничего не может поделать с контролем над доступом к рынку. Это не академический нюанс, а практический риск: маркетплейс способен задушить конкурента, не нарушая ни одного прямого запрета, — достаточно понизить его в выдаче, поднять комиссию или поставить

собственный товар на первую строку. Формально давления на отдельного продавца нет, доказывать по статьям 14 и 18 нечего, а конкуренция тем временем сворачивается. Чем дольше сохраняется пробел, тем выше издержки его закрытия: сетевые эффекты работают на укрепление лидера, и рынок, единожды «опрокинувшись» в его пользу, обратно уже не отыгрывается.

Достраивать норму следует не переносом DMA целиком, а несколькими адресными обязанностями для платформ, уже внесённых в реестр доминирующих. Минимально необходимый набор виден из европейского опыта: прямой запрет самопреференцирования, право продавца информировать покупателя об альтернативных каналах и обязанность платформы раскрывать основные параметры ранжирования. Принципиально, что бремя здесь смещается — соблюдение этих требований платформа должна обеспечивать сама, заранее, а не продавец доказывать нарушение задним числом. При этом узбекскому законодателю незачем повторять количественные пороги DMA, рассчитанные на глобальных гейткиперов: на местном рынке роль системных игроков выполняют отечественные операторы со скромным по мировым меркам оборотом, поэтому критерий значимости разумнее привязать к уже существующему реестру и к зависимости бизнес-пользователей, а не к миллиардам евро выручки.

У такого шага есть и обратная сторона, которую нельзя замалчивать: преждевременное или избыточное *ex ante* регулирование рискует придавить те самые отечественные платформы, чей рост государство стремится поощрять, и отпугнуть инвестиции в цифровой сектор. Отсюда и осторожность формулировки: речь о точечной достройке, а не о сплошном копировании. Что направление выбрано верно, косвенно подтверждает сам регулятор — Комитет по конкуренции уже готовит отдельный механизм для транснациональных платформ-нерезидентов со сроком к октябрю 2026 г. Какие именно нормы DMA

выдержат перенос на узбекскую почву, а какие придётся отбросить как несоразмерные, — предмет отдельного исследования, для которого автор предлагает специальный тест трансплантируемости. Главный же вывод тезиса состоит в том, что «превосходная переговорная сила» закрывает лишь одно из трёх измерений платформенной власти, и без превентивного звена защита конкуренции на цифровых рынках Узбекистана останется неполной.

Список использованной литературы

I. Нормативно-правовые акты

1. Закон Республики Узбекистан «О конкуренции» от 3 июля 2023 г. № ЗРУ-850 (вступил в силу 4 октября 2023 г.) Ст. 14, 18. — URL: <https://lex.uz/docs/6518383>
2. Закон Республики Узбекистан «Об электронной коммерции» от 29 сентября 2022 г. № ЗРУ-792 — URL: <https://lex.uz/ru/docs/6213428>
3. Закон Республики Узбекистан «О персональных данных» от 2 июля 2019 г. № ЗРУ-547.
4. Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector (Digital Markets Act) // OJ L 265, 12.10.2022. P. 1–66.
5. European Commission. Decisions of 23 April 2025 in cases DMA.100109 (Apple) and DMA.100055 (Meta).

II. Научная литература

1. Khan L.M. Amazon's Antitrust Paradox // The Yale Law Journal. 2017. Vol. 126, No. 3. P. 710–805.
2. Rochet J.-C., Tirole J. Platform Competition in Two-Sided Markets // Journal of the European Economic Association. 2003. Vol. 1, No. 4. P. 990–1029. doi: 10.1162/154247603322493212.

3. Crémer J., de Montjoye Y.-A., Schweitzer H. Competition Policy for the Digital Era: A Report for the European Commission. Luxembourg: Publications Office of the European Union, 2019. ISBN 978-92-76-01946-6. doi: 10.2763/407537.
4. Graef I. Differentiated Treatment in Platform-to-Business Relations: EU Competition Law and Economic Dependence // Yearbook of European Law. 2019. Vol. 38. P. 448–499. doi: 10.1093/yel/yez008.
5. Akman P. Regulating Competition in Digital Platform Markets: A Critical Assessment of the Framework and Approach of the EU Digital Markets Act // European Law Review. 2022. Vol. 47, No. 1. P. 85–114.
6. Bostoen F., Monti G. The Rhyme and Reason of Gatekeeper Designation under the Digital Markets Act // Journal of Antitrust Enforcement. 2025. jnae054. doi: 10.1093/jaenfo/jnae054.

III. Отечественные источники

1. Комитет по развитию конкуренции и защите прав потребителей Республики Узбекистан. Реестр хозяйствующих субъектов, признанных занимающими доминирующее положение в качестве цифровой платформы. — URL: <https://raqobat.gov.uz/> (дата обращения: 31.05.2026).

The concept of arbitral tribunals and their distinctive features from state courts

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Abstract

This thesis examines the concept of arbitral tribunals and the features that distinguish them from state courts. It traces the historical roots of arbitration from traditional societies, ancient Greece and Rome, and the medieval Lex Mercatoria to the modern era, and analyzes the legal definition of an arbitral tribunal under the Law “On Arbitral Tribunals” of the Republic of Uzbekistan. The author compares arbitration and state courts according to the source of jurisdiction, the range of disputes, the selection of judges, openness, and the enforcement of decisions. The main conclusion is that an arbitral tribunal is not a competitor to the state court but a complementary mechanism, and that developing this institution is especially relevant given the heavy caseload of the courts.

Keywords

arbitral tribunal, competent court, alternative dispute resolution, arbitration agreement, mediation, economic disputes, Lex Mercatoria, Uzbekistan legislation.

Annotatsiya: Ushbu tezisdagi hakamlik sudi tushunchasi va uning vakolatli (davlat) sudlardan farqli jihatlari ko‘rib chiqiladi. Ishda hakamlikning an’anaviy jamiyatlar, qadimgi Gretsiya va Rim, o‘rta asr “Lex Mercatoria”sidan to bugungi kungacha bo‘lgan tarixiy ildizlari kuzatiladi hamda O‘zbekiston Respublikasining “Hakamlik sudlari to‘g‘risida”gi Qonundagi rasmiy ta’rifi tahlil qilinadi. Muallif hakamlik sudi va davlat sudini vakolat manbai, nizolar doirasi, sudya tanlash, oshkorlik va qaror ijrosi bo‘yicha

qiyoslaydi. Asosiy xulosa shuki, hakamlik sudi davlat sudining raqobatchisi emas, balki uni to'ldiruvchi mexanizmdir; sudlardagi katta ish yuki sharoitida esa bu institutni rivojlantirish ayniqsa dolzarbdir.

Kalit so'zlar: *hakamlik sudi, vakolatli sud, nizolarni muqobil hal etish, hakamlik bitimi, mediatsiya, iqtisodiy nizolar, Lex Mercatoria, O'zbekiston qonunchiligi.*

Ko'p odamlar nizoni faqat sud hal qiladi deb o'ylaydi. Aslida esa insoniyat tarixiga nazar tashlasak, nizolarni sudsiz, o'zaro kelishuv yo'li bilan hal qilish davlat sudidan ham qadimiyroq ekanini ko'ramiz. Bugun biz "zamonaviy islohot" deb atayotgan nizolarni muqobil hal etish usullari aslida juda uzoq ildizlarga ega. Mana shu usullardan biri - hakamlik sudi. Ushbu tezisda men hakamlik sudi nima ekanini, u qayerdan kelib chiqqanini va eng muhimi, oddiy davlat sudidan nimasi bilan farq qilishini ko'rib chiqmoqchiman.

Mavzu nega dolzarb? Chunki bugungi kunda davlat sudlarida ish hajmi toboro ortib bormoqda. Rasmiy ma'lumotlarga ko'ra, 2025-yilda sudlar 4 milliondan ortiq ishni ko'rib chiqqan, ulardan 690 mingdan ortig'i iqtisodiy nizolar bo'lgan. Bir sudyaga bir oyda o'rtacha 388 ta iqtisodiy ish to'g'ri kelgan, vaholanki xalqaro me'yor bo'yicha bu raqam 16 tadan oshmasligi kerak.¹ Bunday sharoitda nizolarning bir qismini sudan tashqarida hal qila oladigan hakamlik kabi institutlar nafaqat tadbirkorga, balki butun sud tizimiga ham yordam beradi. Shuning uchun hakamlik sudi tushunchasini va uning o'rnini aniq tushunib olish bugun ayniqsa muhim.

Avval tarixga qisqacha to'xtalib o'taman, chunki hakamlikning mohiyatini uning kelib chiqishisiz tushunish qiyin. Nizolarni muqobil hal etish bo'yicha taniqli tadqiqotchi Jerom Barretning yozishicha, inson azaldan kelishmovchilikni ikki yo'l

¹«2025-yilda sudlar 4 mln dan ziyod ishni ko'rib chiqdi» // Gazeta.uz, 2026-yil 6-fevral. URL: <https://www.gazeta.uz/oz/2026/02/06/courts/>

bilan hal qilgan. Bular kuch ishlatish yoki tinch yo'l bilan. Tinch yo'lining eng oddiy shakli - muzokara, ya'ni ikki tomonning o'zaro gaplashib kelishuvi. Agar ularga uchinchi kishi yordam bersa - bu vositachilik (mediatsiya), agar o'sha uchinchi kishiga yakuniy qaror chiqarish huquqi berilsa - bu allaqachon hakamlik bo'ladi.² Mana shu oddiy mantiq hakamlikning butun mohiyatini ochib beradi: tomonlar o'zlari ishonadigan shaxsga nizoni hal qilishni topshiradi.

Barret bu institutning ildizlarini turli xalqlar misolida ko'rsatadi. Masalan, Polineziyaliklar oilaviy janjalni hurmatli oqsoqol oldida hal qilishgan, bunda maqsad shunchaki "kim haq" degani emas, balki buzilgan munosabatni tiklash bo'lgan. Xitoyda esa miloddan avvalgi V asrda Konfutsiy odamlar o'rtasidagi tabiiy uyg'unlik buzilmasligi kerakligini, rasmiy sudlashuv esa bu uyg'unlikka zid ekanligini ta'kidlagan. Xitoyda hatto barcha ma'muriy bosqichlarda maxsus "vositachi" lavozimi ham bo'lgan. Nizoni "yutib chiqish" emas, balki munosabatni saqlab qolish g'oyasi minglab yillar avval ham bo'lgan. Bugungi mediatsiya falsafasi ham aynan shunga asoslanadi.

Hakamlik haqiqiy kasbiy institut sifatida qadimgi Gretsiya va Rimda shakllangan. Miloddan avvalgi 400-yillarda Afinada sudlar shu qadar band bo'lgan-ki, maxsus "public arbitrator" lavozimi joriy etilgan. Aristotelning yozishicha, 60 yoshga to'lgan har bir erkak fuqaro hakamlik qilishga majbur bo'lgan. Sitseron esa hakamlikni sudga nisbatan "yumshoq va mo'tadil" yo'l deb atagan. O'rta asrlarda, X–XI asrlarda Yevropa savdo bozorlarida "Lex Mercatoria" — savdogarlar huquqi paydo bo'ldi: savdogarlar davlat sudidagi cheksiz qog'ozbozlik va sudralishdan charchab, o'z orasidan chiqqan, savdo ishini yaxshi biladigan kishilarni hakam etib tanlay boshlashdi. Qizig'i, o'sha davr savdogarlari ham bugungi tadbirkorlar kabi vaqt va pulni qadrlagan - davlat sudlarida

²Barrett J. T., Barrett J. P. A History of Alternative Dispute Resolution: The Story of a Political, Social, and Cultural Movement. – San Francisco: Jossey-Bass, 2004. – P. 1–14.A

bular ikkisini ham boy berishini tushunishgan. Aytish mumkinki, zamonaviy xalqaro tijorat arbitraji aynan o‘sha o‘rta asr savdogarlari an‘anasining davomidir.

Bu yerda bir narsani alohida ta‘kidlagim keladi. Ko‘pincha hakamlik “G‘arbdan kelgan yangi narsa” deb tushuniladi, lekin tarix buning aksini ko‘rsatadi. Sharqda ham, jumladan bizning mintaqamizda ham nizolarni oqsoqollar, mahalla yoki obro‘li kishilar orqali hal qilish an‘anasi azaldan bo‘lgan - bu ham aslida hakamlikning bir ko‘rinishidir. Ya‘ni hakamlik g‘oyasi bizning madaniyatimizga ham yot emas, aksincha, juda yaqin.

Hakamlikning zamonaviy bosqichi esa, Barretning fikricha, XX asr bilan bog‘liq. Eng muhim burilish 1976-yilda AQShdagi Paund konferensiyasi bo‘ldi: professor Frank Sander o‘zining “ko‘p eshikli sud binosi” g‘oyasini ilgari surdi - ya‘ni adolatni faqat sud orqali emas, balki mediatsiya, arbitraj kabi turli “eshiklar” orqali ham topsa bo‘ladi, degan fikrni asosladi. Bu g‘oya bugun butun dunyoda nizolarni muqobil hal etish tizimining asosiga aylangan. Demak, hakamlik birdan paydo bo‘lgan narsa emas - u asrlar davomida sayqallanib kelgan.

Bevosita bugungi kundagi hakamlik sudlariga to‘xtalsak, hakamlik sudi o‘zi nima? So‘zning o‘zi lotincha “arbiter” - ya‘ni betaraf hakam degan ma‘noni bildiradi. Oddiy qilib aytsam, hakamlik - bu tomonlar o‘z ixtiyori bilan, kelishib, nizoni davlat sudiga emas, balki o‘zlari tanlagan betaraf shaxsga hal qilish uchun topshirishidir. O‘zbekiston qonunchiligida ham buning aniq ta‘rifi mavjud bo‘lib, “Hakamlik sudlari to‘g‘risida”gi Qonunning 3-moddasiga ko‘ra, hakamlik sudi - fuqarolik-huquqiy munosabatlardan kelib chiqadigan nizolarni, jumladan tadbirkorlar o‘rtasidagi iqtisodiy nizolarni hal etuvchi nodavlat organdir.³ Ya‘ni hakamlik davlat tuzilmasiga kirmaydi va faqat fuqarolik hamda iqtisodiy nizolar bilan shug‘ullanadi.

³O‘zbekiston Respublikasining «Hakamlik sudlari to‘g‘risida»gi Qonuni, 2006-yil 16-oktabr, O‘RQ-64-son (2021-yil 21-apreldagi O‘RQ-683-son Qonun tahririda), 3-modda. URL: <https://lex.uz/acts/-1072079>

Hakamlik sudi qaysi nizoni ko‘rib chiqishi mumkinligini esa bitta narsa belgilaydi - hakamlik bitimi. Bu tomonlarning “agar oramizda nizo chiqsa, uni sudga emas, hakamlikka topshiramiz” degan yozma kelishuvidir. U shartnoma ichidagi alohida band shaklida ham, mustaqil hujjat shaklida ham bo‘lishi mumkin. Agar shunday kelishuv bo‘lmasa, hakamlik sudi nizoga aralasha olmaydi. Mana shu jihat hakamlikni davlat sudidan tubdan ajratib turadi. Davlat sudiga murojaat qilish uchun hech kimning roziligi kerak emas, hakamlikka esa faqat ikkala tomon rozi bo‘lsagina ish tushadi.

Hakamlikning huquqiy tabiati bo‘yicha olimlar o‘rtasida bahs bor. Ba’zilar uni sof shartnomaviy hodisa deydi (chunki u tomonlar kelishuvidan tug‘iladi), ba’zilar esa davlat bilan bog‘liq deydi (chunki qaror oxir-oqibat davlat tomonidan ijro ettiriladi). Geri Born kabi yetakchi olimlar ko‘proq “aralash” yondashuvni ma’qul ko‘radi - ya’ni hakamlik kelib chiqishi bo‘yicha shartnomaviy, oqibatlari bo‘yicha esa davlatga bog‘liq.⁴ O‘zbekistondagi hakamlik ham xuddi shunday - u tomonlar irodasidan tug‘iladi, lekin qonun doirasida ishlaydi va qarori kerak bo‘lsa davlat sudi orqali majburan ijro ettiriladi. Demak, hakamlik “davlatdan butunlay mustaqil” emas, balki “davlat nazoratidagi xususiy odil sudlov” deyish to‘g‘riroq bo‘ladi.

Endi eng muhim qismga - hakamlik sudi davlat sudidan nimasi bilan farq qiladi degan savolga o‘tish maqsadga muvofiq. Tadqiqotchi D.Mahkamov to‘g‘ri ta’kidlaganidek, bu ikki institut bir-biriga raqib emas, balki bir-birini to‘ldiradi.⁵ Lekin ular orasida jiddiy farqlar bor. Birinchi va eng asosiy farq - vakolat qayerdan kelishida. Davlat sudining huquqi qonundan keladi, hakamlik sudining huquqi esa tomonlarning kelishuvidan. Ikkinchi farq - qaysi nizolarni ko‘rishida: davlat sudi deyarli hamma ishni

⁴Born G. International Commercial Arbitration. 3rd ed. – The Hague: Kluwer Law International, 2021. – P. 84–97.

⁵Mahkamov D. Hakamlik sudi va davlat sudlari o‘rtasidagi farqlar. – ResearchGate, 2022. URL: <https://www.researchgate.net> (murojaat sanasi: 2026-yil).

(jinoiy, ma'muriy, fuqarolik) ko'radi, hakamlik esa faqat fuqarolik va iqtisodiy nizolar bilan cheklangan - ma'muriy, oila yoki mehnat nizolariga aralasha olmaydi.⁶

Uchinchi farq - sudyani kim tanlashida. Davlat sudida ishni qaysi sudya ko'rishini siz tanlay olmaysiz, hakamlikda esa tomonlar o'zlari hakamni tanlaydi. Bu juda katta afzallik. Masalan, qurilish bo'yicha murakkab nizo bo'lsa, o'sha sohani yaxshi biladigan mutaxassisni hakam etib olish mumkin. To'rtinchi farq - maxfiylik. Davlat sudida ish odatda ochiq ko'riladi, hakamlikda esa yopiq. Hakam muhokama davomida bilgan ma'lumotni oshkor qila olmaydi.⁷ Tadbirkorlar uchun bu juda muhim- chunki tijorat siri va obro' saqlanib qoladi. Beshinchi farq - qarorning yakuniyligida. Hakamlik qarori odatda bir bosqichli, davlat sudidagidek apellyatsiya, kassatsiya degan uzun zinapoyalar yo'q.

Hakamlik sudlarining ham kuchsiz tomoni mavjud. U davlatning majburlash kuchiga ega emas. Agar yutqazgan tomon qarorni o'z ixtiyori bilan bajarmasa, g'olib baribir ijro uchun davlat sudiga borishga majbur bo'ladi. Mana shu yerda hakamlik va davlat sudi bir-birini to'ldiradi. Hakamlik sudi nizoni hal qiladi, davlat sudi esa kerak bo'lsa qarorni majburan ijro ettiradi. Menimcha, aynan shuning uchun ham bu ikkisini raqib emas, sherik deb qarash to'g'ri.

Xulosa o'rnida, hakamlik sudi - bu tomonlarning o'z xohishiga asoslangan, davlatga qarashli bo'lmagan, fuqarolik va iqtisodiy nizolarni hal qiladigan muqobil institutdir. Uning ildizlari juda qadimiy, mohiyati esa oddiy. Odamlar o'zlari ishonadigan betaraf kishiga nizoni hal qilishni topshiradi. U davlat sudidan vakolat manbai, nizolar doirasi, sudya tanlash, maxfiylik va qaror ijrosi bo'yicha farq qiladi, lekin hech qachon uning o'rnini bosmaydi - aksincha, uni to'ldiradi.

⁶O'zbekiston Respublikasining «Hakamlik sudlari to'g'risida»gi Qonuni, 2006-yil 16-oktabr, O'RB-64-son (2021-yil 21-apreldagi O'RB-683-son Qonun tahririda), 3-modda. URL: <https://lex.uz/acts/-1072079>

O‘zbekiston uchun hakamlikni rivojlantirish bugungi kunning real ehtiyoji hisoblanadi. Sudlarda yuqorida ko‘rganimizdek ish hajmi katta, tadbirkorlar esa nizoni tez va maxfiy hal qilishni xohlaydi. Agar odamlar hakamlikning afzalliklarini yaxshi bilsa va unga ishonsa, iqtisodiy nizolarning katta qismini sudga olib bormay, hakamlik orqali hal qilish mumkin. Buning uchun esa, ikki narsa kerak: birinchidan, malakali va halol hakamlar bo‘lishi. Ikkinchidan, jamiyatda hakamlik qaroriga ishonch shakllanishi. Mana shu ikki shart bajarilsa, hakamlik sudi haqiqatan ham davlat sudiga yaxshi yordamchi bo‘la oladi.

Foydalanilgan adabiyotlar:

1. O‘zbekiston Respublikasining “Hakamlik sudlari to‘g‘risida”gi Qonuni. 16.10.2006-yildagi O‘RQ-64-son (2021-yil 21-apreldagi O‘RQ-683-son Qonun tahririda) // O‘zbekiston Respublikasi qonun hujjatlari milliy bazasi. <https://lex.uz/acts/-1072079>
2. Barrett J. T., Barrett J. P. A History of Alternative Dispute Resolution: The Story of a Political, Social, and Cultural Movement. – San Francisco: Jossey-Bass, 2004.
3. Born G. International Commercial Arbitration. 3rd ed. – The Hague: Kluwer Law International, 2021.
4. Mahkamov D. Hakamlik sudi va davlat sudlari o‘rtasidagi farqlar // ResearchGate, 2022. <https://www.researchgate.net>
5. “2025-yilda sudlar 4 mln dan ziyod ishni ko‘rib chiqdi” // Gazeta.uz, 2026-yil 6-fevral. <https://www.gazeta.uz/oz/2026/02/06/courts/>

Advanced Analysis of Prime Number Generation Methods in Cryptographic Systems

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Abstract

This thesis analyzes prime number generation methods employed in modern cryptographic systems and examines their underlying mathematical principles. The study explores the generation of large prime numbers, random number generation mechanisms, and the operational characteristics of primality testing algorithms. The performance, efficiency, and practical benefits of the Fermat and Miller–Rabin tests in the prime generation process are evaluated. Furthermore, the concept of safe primes and their significance in public-key cryptographic frameworks, including RSA and Diffie–Hellman systems, are investigated. The findings demonstrate that prime number generation algorithms play a vital role in maintaining the security, reliability, and robustness of cryptographic systems.

Keywords:

prime number, prime number generation, primality test, Miller–Rabin algorithm, Fermat test, RSA, Diffie–Hellman, cryptography, safe primes, random number generator.

Information security has become a critical requirement in modern digital infrastructures, where cryptographic algorithms are widely utilized to protect confidential information across electronic commerce, banking, cloud technologies, and governmental systems [1]. The security of public-key cryptosystems such as RSA, Diffie–Hellman, and ElGamal relies heavily on the generation and utilization of large prime numbers [2]. Therefore, prime number generation remains one of the fundamental problems in contemporary cryptography.

The process of prime generation incorporates random number production, primality testing, and compliance with cryptographic security criteria [3]. Due to their favorable balance between accuracy and computational efficiency, probabilistic methods such as Miller–Rabin and Solovay–Strassen are extensively used in practical environments [4]. Furthermore, the growing influence of quantum computing has increased the importance of developing efficient and secure prime generation techniques [5]. Accordingly, this article focuses on the mathematical principles, algorithmic structures, and practical performance of prime number generation methods. The simplest approaches to prime number generation is to produce a random odd integer and test its primality. If the generated number n satisfies the following condition:

$$n > 1$$

and is divisible only by 1 and itself, then the number is considered prime [6]. Random number generators are commonly used in prime generation procedures. In cryptographic systems, a random integer is usually selected within the following interval:

$$2^{k-1} < n < 2^k$$

where k denotes the bit length of the number. In RSA cryptosystems, 1024-bit, 2048-bit, or 4096-bit prime numbers are commonly used [7].

To verify the primality of generated numbers, the Fermat primality test is widely applied. This test is based on Fermat's Little Theorem [8]:

$$a^{p-1} \equiv 1 \pmod{p}$$

If this relation does not hold, the number is considered composite. However, for some Carmichael numbers, this test may produce incorrect results [9].

One of the most efficient methods used in practical cryptography is the Miller–Rabin primality test. In this algorithm, the value $n - 1$ is represented as follows [10]:

$$n - 1 = 2^s \cdot d$$

where d is an odd integer. Then, for randomly selected values of a , the following expression is computed:

$$a^d \pmod{n}$$

If during the testing process the condition

$$a^{2^r d} \equiv -1 \pmod{n}$$

is not satisfied, the number is considered composite. This algorithm provides high speed and practical efficiency [11].

Safe primes also play an important role in prime number generation. If the following condition holds:

$$p = 2q + 1$$

where both p and q are prime numbers, then p is called a safe prime [12]. Such primes are widely used in the Diffie-Hellman algorithm.

In the RSA algorithm, two large prime numbers are selected to generate the following value [13]:

$$n = pq$$

The security of many public-key cryptographic systems is based on the computational hardness of large integer factorization. Therefore, the cryptographic quality and unpredictability of generated prime numbers are essential requirements for secure system design.

Cryptographically secure pseudorandom number generators play a central role in prime generation by producing unpredictable candidate values suitable for cryptographic applications [14]. In addition, optimization techniques such as preliminary divisibility checks using small prime numbers significantly improve computational efficiency by eliminating unsuitable candidates before applying expensive primality tests [15].

However, the emergence of quantum computing presents new challenges to prime-based cryptographic mechanisms. The capability of Shor's algorithm to efficiently factorize large integers threatens conventional systems such as RSA [16]. Consequently, strengthening existing algorithms and developing secure post-quantum alternatives have become important areas of contemporary research. Overall, efficient prime number generation and reliable primality testing continue to be indispensable components of secure modern cryptographic systems.

REFERENCES

1. Stallings W. *Cryptography and Network Security*. — Pearson, 2017.
2. Rivest R., Shamir A., Adleman L. "A Method for Obtaining Digital Signatures and Public-Key Cryptosystems". *Communications of the ACM*, 1978.
3. Menezes A., van Oorschot P., Vanstone S. *Handbook of Applied Cryptography*. — CRC Press, 1996.
4. Rabin M. O. "Probabilistic Algorithm for Testing Primality". *Journal of Number Theory*, 1980.
5. Bernstein D., Buchmann J., Dahmen E. *Post-Quantum Cryptography*. — Springer, 2009.
6. Hardy G. H., Wright E. M. *An Introduction to the Theory of Numbers*. — Oxford University Press, 2008.
7. Paar C., Pelzl J. *Understanding Cryptography*. — Springer, 2010.
8. Rosen K. H. *Elementary Number Theory and Its Applications*. — Pearson, 2010.
9. Carmichael R. D. "On Composite Numbers P Which Satisfy the Fermat Congruence". *American Mathematical Monthly*, 1910.
10. Miller G. L. "Riemann's Hypothesis and Tests for Primality". *Journal of Computer and System Sciences*, 1976.

11. Rabin M. O. “Probabilistic Algorithm for Testing Primality”. *Journal of Number Theory*, 1980.
12. Schneier B. *Applied Cryptography*. — Wiley, 1996.
13. Rivest R., Shamir A., Adleman L. “A Method for Obtaining Digital Signatures and Public-Key Cryptosystems”. *Communications of the ACM*, 1978. Signatures and Public-Key Cryptosystems”. *Communications of the ACM*, 1978.
14. Kelsey J., Schneier B., Ferguson N. *Yarrow-160: Notes on the Design and Analysis of the Yarrow Cryptographic Pseudorandom Number Generator*. — Selected Areas in Cryptography, Springer, 1999.
15. Crandall R., Pomerance C. *Prime Numbers: A Computational Perspective*. — Springer, 2005.
16. Peter Shor “*Algorithms for Quantum Computation: Discrete Logarithms and Factoring*”. Proceedings of the 35th Annual Symposium on Foundations of Computer Science, 1994.

THE SIGNIFICANCE OF SEX HORMONE METABOLISM AND GENETIC FACTORS IN NON-ALCOHOLIC FATTY LIVER DISEASE

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Abstract. Non-alcoholic fatty liver disease (NAFLD) is a group of liver disorders that begins with excessive fat accumulation in hepatocytes and may subsequently progress to steatohepatitis, fibrosis, cirrhosis, and hepatocellular carcinoma. In modern international clinical guidelines, this pathology is increasingly defined as metabolic dysfunction-associated steatotic liver disease (MASLD), characterized by hepatic steatosis together with the presence of cardiometabolic risk factors. This study examines the role of sex hormone metabolism and genetic factors in the development and progression of non-alcoholic fatty liver disease. Particular attention is given to the balance between estrogens and androgens, insulin resistance, sex hormone-binding globulin (SHBG), and genetic polymorphisms related to hormone metabolism. Understanding these mechanisms may contribute to improved diagnosis, risk assessment, and personalized therapeutic approaches for patients with NAFLD.

Keywords: non-alcoholic fatty liver disease (NAFLD), reproductive age, sex hormones, estrogen-androgen balance, insulin resistance, SHBG, CYP19A1, UGT2B15, UGT2B17.

Noalkogol yog‘li jigar kasalligida jinsiy gormonlar metabolizmi va genetik omillarning ahamiyati

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Annotatsiya. Noalkogol yog‘li jigar kasalligi jigar hujayralarida ortiqcha yog‘ to‘planishi bilan boshlanib, keyinchalik steatogepatit, fibroz, sirroz va gepatotsellyulyar karsinoma kabi og‘ir asoratlarga olib kelishi mumkin bo‘lgan kasalliklar majmuasidir. Zamonaviy xalqaro tavsiyalarda ushbu patologiya metabolik disfunktsiya bilan bog‘liq steatotik jigar kasalligi sifatida baholanib, uning asosiy mezonlari jigar steatozi va kardiometabolik xavf omillari mavjudligi bilan izohlanadi [1; 492–542-b.].

Kalit so‘zlar: *noalkogol yog‘li jigar kasalligi, reproduktiv yosh, jinsiy gormonlar, estrogen-androgen muvozanati, insulinrezistentlik, SHBG, CYP19A1, UGT2B15, UGT2B17.*

Reproduktiv yoshdagi ayollarda jinsiy gormonlar jigar metabolizmini boshqaruvchi muhim biologik omillar qatoriga kiradi. Estrogenlar insulin sezgirligini qo‘llab-quvvatlash, visseral yog‘ to‘planishini kamaytirish va gepatotsitlarda lipid almashinuvini muvozanatda saqlashda ishtirok etadi. Biroq giperandrogenizm, abdominal semizlik va insulinrezistentlik mavjud bo‘lgan holatlarda estrogenlarning himoyalovchi ta’siri susayadi. Natijada jigarda lipidlar to‘planishi, oksidlovchi stress va yallig‘lanish jarayonlari kuchayadi [2; 1797–1835-b.].

Jinsiy gormonlarni bog‘lovchi globulin jigar tomonidan ishlab chiqariladigan oqsil bo‘lib, testosteron va estradiolning biologik faol erkin fraksiyasini boshqaradi. Uning pasayishi erkin androgenlar miqdorining ortishi, insulinrezistentlik va jigar steatozi xavfining kuchayishi bilan bog‘liq bo‘lishi mumkin. Shu bois SHBG reproduktiv yoshdagi ayollarda noalkogol yog‘li jigar kasalligini erta baholashda muhim gormonal-metabolik ko‘rsatkichlardan biri sifatida qaraladi [3].

CYP19A1 geni aromataza fermenti sintezini kodlaydi. Aromataza androgenlarning estrogenlarga aylanishida ishtirok etib, ayol organizmida jinsiy gormonlar nisbatini

saqlashda muhim rol o'ynaydi. Ushbu gen polimorfizmlari estrogen-androgen muvozanatiga ta'sir ko'rsatib, tuxumdonlar polikistoz sindromi, giperandrogenizm va metabolik buzilishlarga moyillikni oshirishi mumkin [4].

UGT2B15 va UGT2B17 genlari androgenlarning glyukuronidlanishi, ya'ni ularning biologik faolligini kamaytirish va organizmdan chiqarilish jarayonlarida ishtirok etadi. Ushbu genlardagi funksional o'zgarishlar steroid gormonlar almashinuvi, jigarining metabolik javobi va kasallikka individual moyillik shakllanishiga ta'sir qilishi mumkin [5].

Shu jihatdan, reproduktiv yoshdagi ayollarda noalkogol yog'li jigar kasalligini baholashda faqat antropometrik ko'rsatkichlar, transaminazalar darajasi yoki ultratovush tekshiruvi natijalariga tayanish yetarli emas. Klinik, biokimyoviy, gormonal va molekulyar-genetik ko'rsatkichlarni birgalikda o'rganish kasallikni erta aniqlash, xavf guruhlarini belgilash va shaxsiylashtirilgan profilaktik yondashuvlarni ishlab chiqish uchun muhim ilmiy asos yaratadi.

Xulosa. Reprodukativ yoshdagi ayollarda noalkogol yog'li jigar kasalligi metabolik, endokrin va genetik omillar o'zaro ta'sirida shakllanadigan murakkab patologik jarayondir. Estrogen-androgen nisbatining buzilishi, SHBG miqdorining kamayishi hamda CYP19A1, UGT2B15 va UGT2B17 genlarining funksional xususiyatlari kasallik rivojlanishi va klinik kechishiga ta'sir ko'rsatishi mumkin. Mazkur markerlarni kompleks o'rganish noalkogol yog'li jigar kasalligida gormonal-genetik xavfni baholash, erta tashxis qo'yish va individual profilaktika choralarini takomillashtirish uchun istiqbolli ilmiy yo'nalish hisoblanadi.

Foydalanilgan adabiyotlar

1. Jancova P., Ismail K., Vistejnova L. Relationship between MASLD and women's health: A review // *Women's Health*. – 2025. – Vol. 21. – DOI: 10.1177/17455057251376883. Elektron manba: SAGE Journals.

2. Xu Q., Zhang J., Lu Y., Wu L. Association of metabolic-dysfunction associated steatotic liver disease with polycystic ovary syndrome // *iScience*. – 2024. – Vol. 27, №2. – Article 108783. – DOI: 10.1016/j.isci.2024.108783. Elektron manba: PubMed / iScience.

3. Weng C., Shao Z., Xiao M., Song M., Zhao Y., Pang Y., Huang T., Yu C., Lv J., Li L., Sun D. Association of sex hormones with non-alcoholic fatty liver disease: An observational and Mendelian randomization study // *Liver International*. – 2024. – DOI: 10.1111/liv.15866. Elektron manba: PubMed / Wiley Online Library.

4. Zhang X., Mou Y., Aribas E., Amiri M., Nano J., Bramer W.M., Kavousi M., de Knecht R.J., Asllanaj E., Ghanbari M. Associations of Sex Steroids and Sex Hormone-Binding Globulin with Non-Alcoholic Fatty Liver Disease: A Population-Based Study and Meta-Analysis // *Genes*. – 2022. – Vol. 13, №6. – Article 966. – DOI: 10.3390/genes13060966. Elektron manba: MDPI / PubMed.

5. Song M.J., Choi J.Y. Androgen dysfunction in non-alcoholic fatty liver disease: Role of sex hormone binding globulin // *Frontiers in Endocrinology*. – 2022. – Vol. 13. – Article 1053709. – DOI: 10.3389/fendo.2022.1053709. Elektron manba: Frontiers / PubMed.

6. Li X., Min M., Duan F., Ruan X., Xu L. Biochemical, sex hormonal, and anthropometric predictors of non-alcoholic fatty liver disease in polycystic ovary syndrome // *BMC Women's Health*. – 2025. – Vol. 25. – Article 118. – DOI: 10.1186/s12905-025-03648-9. Elektron manba: Springer Nature.

7. Gauthier-Landry L., Bélanger A., Barbier O. Multiple roles for UDP-glucuronosyltransferase 2B15 and 2B17 enzymes in androgen metabolism and prostate cancer evolution // *Journal of Steroid Biochemistry and Molecular Biology*. – 2015. – Vol. 145. – P. 187–192. – DOI: 10.1016/j.jsbmb.2014.05.009. PMID: 24861263. Elektron manba: PubMed / Elsevier.

FOSTERING STUDENTS' CREATIVE PROBLEM-SOLVING SKILLS IN MATHEMATICS THROUGH GENERATIVE ARTIFICIAL INTELLIGENCE TOOLS

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Annotation: The rapid advancement of digital transformation processes and the integration of generative artificial intelligence (AI) technologies into education are creating new opportunities for improving the content and methodology of mathematics education. In particular, generative AI tools such as ChatGPT, Gemini, Claude, and Copilot expand students' opportunities to engage in independent thinking, develop multiple solution strategies, and demonstrate creative approaches while solving mathematical problems. Contemporary research indicates that, alongside its positive impact on learning outcomes, the effective implementation of generative AI requires the development of appropriate pedagogical mechanisms and instructional frameworks. This article analyzes the theoretical and pedagogical foundations for fostering students' creative approaches to solving mathematical problems through the use of generative AI tools and proposes an innovative methodological model aimed at enhancing creative problem-solving competencies in mathematics education.

Keywords: generative artificial intelligence, mathematics education, creative thinking, mathematical problem solving, creative competence, ChatGPT, innovative educational technologies.

Introduction

In recent years, artificial intelligence (AI) technologies have been widely integrated into nearly all spheres of society and have become an essential component of human activity. In particular, the rapid development of generative artificial intelligence tools has significantly simplified the processes of information retrieval, analysis, and problem-solving. As a result, users increasingly tend to accept AI-generated responses as reliable and unquestionably accurate information, often without conducting independent analysis or verification.

This phenomenon is especially evident in the field of education, particularly in students' approaches to solving mathematical problems. Practical observations indicate that some students are becoming inclined to accept solutions proposed by artificial intelligence without critically analyzing them, verifying their mathematical validity, or comparing them with alternative solution methods. However, generative AI models may, in certain cases, produce inaccurate, incomplete, or erroneous results. Therefore, unquestioning reliance on AI-generated solutions may negatively affect the development of students' critical thinking, analytical reasoning, and independent problem-solving skills.

Such a tendency may adversely affect the development of students' competencies in independent thinking, critical analysis, evidence-based decision-making, and creative problem-solving. From this perspective, fostering students' digital literacy, algorithmic thinking, and the ability to critically evaluate outcomes generated by artificial intelligence has become one of the most pressing pedagogical challenges.

In twenty-first-century education, the development of students' abilities to think creatively, solve complex problems, engage in critical analysis, and generate innovative ideas is recognized as a key educational priority. Therefore, when integrating artificial intelligence technologies into the educational process, it is essential to employ them not merely as tools for providing ready-made answers, but rather as educational instruments

that stimulate students' intellectual engagement and support processes of analysis, reflection, and reasoning.

Accordingly, the effective and pedagogically sound use of artificial intelligence in education requires the implementation of instructional approaches that encourage learners to question, evaluate, and validate AI-generated outputs, thereby promoting deeper learning and the development of higher-order cognitive skills.

Mathematics plays a crucial role in the development of these competencies, as mathematical activity is fundamentally based on processes such as analysis, modeling, generalization, and the discovery of novel solutions.

In recent years, the advancement of generative artificial intelligence technologies has created new pedagogical opportunities within the field of education. Generative AI has emerged not only as a tool for providing information but also as an intellectual partner that supports students in idea generation, problem analysis, and the development of alternative solution strategies.

At the same time, a growing body of research suggests that the inappropriate or excessive use of generative artificial intelligence may reduce students' engagement in independent thinking and cognitive activity. Therefore, the scientific investigation of the pedagogical potential, benefits, and limitations of these technologies has become an increasingly important and relevant research priority.

Problem Statement

In traditional mathematics education, students often rely on predetermined algorithms and standard solution procedures. As a result, opportunities for developing non-standard thinking and generating creative solutions are frequently limited.

At present, the following contradiction can be observed:

- There is an increasing demand for professionals who possess creative thinking skills and the ability to solve complex problems innovatively;

- Mathematics education provides significant opportunities for fostering creativity and developing innovative approaches to problem-solving;
- However, scientifically grounded methodological approaches for the purposeful integration and effective use of generative artificial intelligence tools in mathematics education remain insufficiently developed.

Taking these circumstances into account, the present study aims to develop a pedagogical mechanism for fostering students' creative approaches to solving mathematical problems through the use of generative artificial intelligence tools and to substantiate its effectiveness within the educational process.

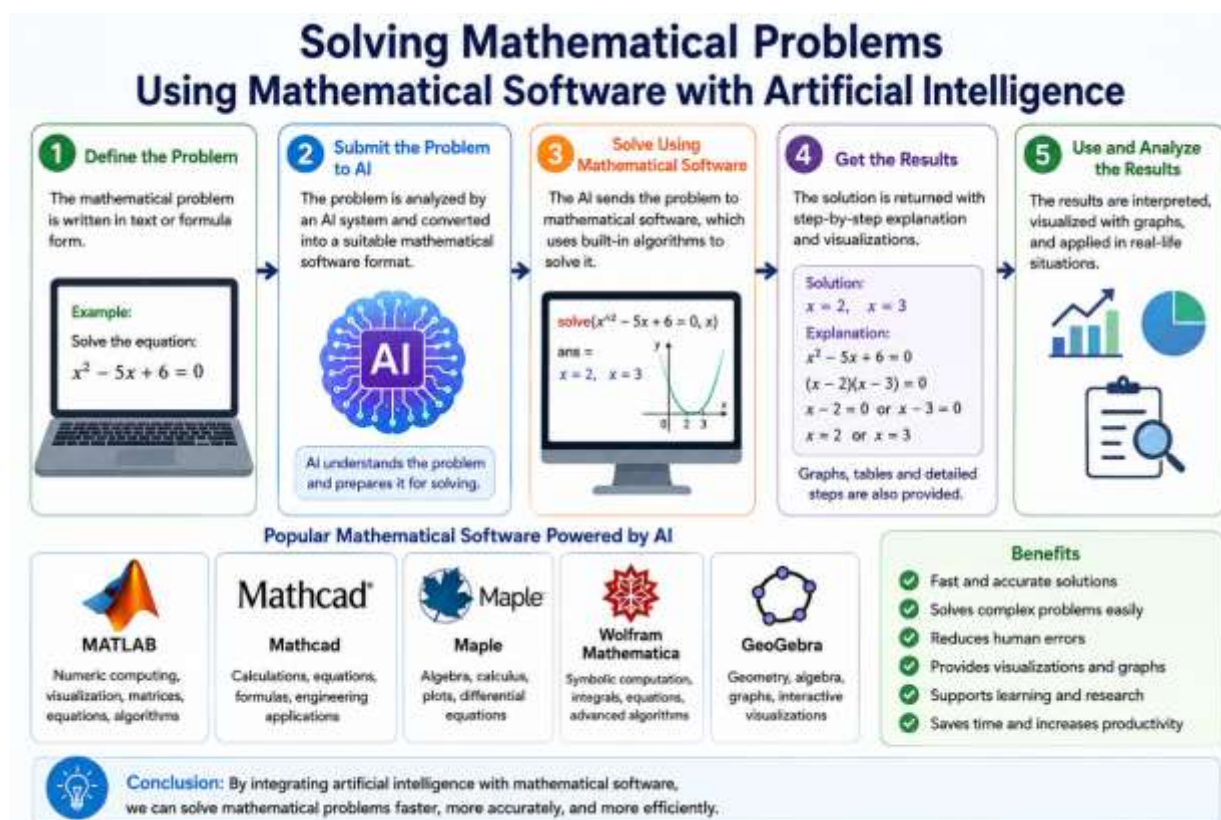
Theoretical Foundations

At present, the combined use of generative artificial intelligence and mathematical software packages is considered one of the most effective approaches for solving mathematical problems, analyzing spatial figures, and developing three-dimensional (3D) models. In the fields of education and scientific research, digital technologies—particularly mathematical software packages and Generative Artificial Intelligence (AI)—are increasingly being integrated, creating a fundamentally new and innovative technological ecosystem. These tools not only perform complex calculations within seconds but also enable the visualization of abstract mathematical concepts in a manner that enhances comprehension and practical understanding.

Mathematical software packages, such as MATLAB, Mathematica, and Maple, provide highly accurate computational capabilities, generate graphical representations, and offer powerful environments for scientific modeling and simulation. However, effective utilization of these software systems generally requires users to possess programming knowledge and an understanding of coding algorithms. This requirement may present challenges and barriers for many learners and practitioners.

In contrast, generative artificial intelligence systems significantly simplify user interaction. To obtain assistance, users typically need only provide a problem statement, an image of the mathematical task, or, in the case of geometric problems, the name and properties of the geometric figure. Generative AI can explain mathematical solutions step by step, interpret formulas, generate algorithms, and support the personalization of the learning process. These capabilities provide substantial benefits for both students and researchers.

Furthermore, in the areas of spatial geometry and three-dimensional modeling, artificial intelligence facilitates the automatic construction, visualization, and rapid generation of geometric objects and 3D models. In engineering, architecture, design, and education, these technologies are increasingly contributing to the development of innovative solutions and enhancing the efficiency of problem-solving and modeling processes.



In the fields of pedagogy and psychology, creative thinking is commonly assessed through the following criteria:

- Originality and accuracy;
- Flexibility;
- Fluency;
- The ability to perceive and analyze a problem from multiple perspectives.

Mathematical creativity, in turn, is characterized by the ability to identify multiple solutions to a given problem, develop novel solution methods, and apply mathematical concepts and ideas to real-world situations.

Recent studies indicate that generative artificial intelligence tools provide students with opportunities to:

- Explore alternative solution approaches;
- Construct mathematical models;
- Formulate and test hypotheses;
- Analyze complex problems through a step-by-step reasoning process.

These capabilities contribute to the enhancement of students' creative and analytical thinking skills, thereby supporting deeper engagement in mathematical problem-solving activities.

Proposed Pedagogical Model

The use of generative artificial intelligence in mathematical problem-solving can be organized through the following stages:

Stage 1. Problem Comprehension

Students examine the problem statement and utilize artificial intelligence tools to analyze different interpretations and perspectives of the problem.

Stage 2. Idea Generation

With the assistance of ChatGPT or other generative AI tools, multiple potential solution strategies and approaches are generated.

Stage 3. Critical Analysis

Students critically evaluate the solutions proposed by artificial intelligence, identify possible errors or limitations, and suggest alternative approaches.

Stage 4. Creative Transformation

Based on the existing solutions, students develop new mathematical models, modify solution strategies, or construct alternative methods for solving the problem.

Stage 5. Reflection

Students evaluate their own learning activities and analyze the effectiveness of using artificial intelligence throughout the problem-solving process.

Research Hypothesis

It is hypothesized that if generative artificial intelligence tools are integrated into the mathematical problem-solving process in a purposeful and methodologically grounded manner, students will demonstrate higher levels of:

- Original thinking;
- Problem-solving ability;
- Mathematical creativity;
- Research and inquiry skills;

when compared with students engaged in traditional instructional approaches.

Consequently, the pedagogically sound integration of generative artificial intelligence into mathematics education is expected to enhance students' cognitive engagement, creative performance, and overall effectiveness in mathematical problem-solving.

Results and Discussion

Contemporary research indicates that generative artificial intelligence possesses significant potential to support creative activities within educational environments. However, its effectiveness is directly dependent on students' active engagement in the learning process and their ability to critically evaluate and analyze the generated outputs.

Therefore, in mathematics education, generative artificial intelligence should be employed not merely as a tool for providing ready-made answers, but rather as an intellectual partner that facilitates reasoning, exploration, and knowledge construction. Such an approach promotes the development of students' independent thinking, critical analysis, and creative problem-solving abilities.

The findings suggest that the pedagogically guided integration of generative AI into mathematical problem-solving can create a more interactive and intellectually stimulating learning environment. By encouraging learners to evaluate alternative solutions, formulate hypotheses, and reflect on their reasoning processes, generative AI contributes to the enhancement of higher-order cognitive skills and mathematical creativity.

Conclusion

Generative artificial intelligence technologies are creating new opportunities for personalizing mathematics education, analyzing complex problems, and fostering students' creative potential. Their integration into the mathematical problem-solving process contributes to the development of creative thinking, research competencies, and innovative skills among learners.

Future research should focus on conducting experimental studies in this field, refining criteria for assessing creative thinking, and developing evidence-based pedagogical models for the effective integration of generative artificial intelligence into mathematics education. These directions represent important scientific and educational priorities for advancing both theory and practice.

In addition, it can be emphasized that while mathematical software packages ensure computational accuracy and efficiency, generative artificial intelligence expands opportunities for analysis, explanation, reasoning, and creative modeling. The integration of these technologies is shaping a new stage in the development of digital education and scientific research, providing innovative pathways for teaching, learning, and knowledge generation.

References

1. M.P.Masharipov “Matematik masalalarni yechishda matematik paket dasturlaridan foydalanish”.T.:2021 yil, o’quv qo’llanma.
2. S.S.Jumanazarov “Tinglovchilarni innovatsion faolayotga yo’naltirish”.T.:2021 yil
3. Downes, s. (2010). New technology options for instructional design. *Journal of educational technology systems*, 38(4), 405-420.
4. Luckin, r., holmes, w., griffiths, m., & forcier, l. B. (2023). *Intelligence unleashed: an argument for ai in education*. London: pearson.
5. Siemens, g. (2005). Connectivism: a learning theory for the digital age. *International journal of instructional technology and distance learning*, 2(1), 3-10.
6. William, d. (2018). *Embedded formative assessment*. Solution tree press.

CRITERIA AND INDICATORS FOR DETERMINING TEACHERS' PEDAGOGICAL COMPETENCIES

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ABSTRACT: *This article provides a comprehensive overview of the theoretical and methodological foundations, main criteria and assessment indicators for determining teachers' pedagogical competencies. It also analyzes the factors influencing the development of pedagogical competence and modern methods of its assessment.*

Keywords: *pedagogical competence, professional development, methodological skills, assessment criteria, reflection, innovation, ICT.*

ЎҚИТУВЧИЛАРНИНГ ПЕДАГОГИК КОМПЕТЕНЦИЯЛАРИНИ АНИҚЛАШ МЕЗОНЛАРИ ВА КЎРСАТКИЧЛАРИ

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АННОТАЦИЯ: *Ушбу мақолада ўқитувчиларнинг педагогик компетенцияларини аниқлашнинг назарий-методологик асослари, асосий мезонлари ва баҳолаш кўрсаткичлари кенг ёритилган. Шунингдек, педагогик компетенцияни ривожлантиришга таъсир этувчи омиллар ҳамда уни баҳолашнинг замонавий усуллари таҳлил қилинган.*

Калит сўзлар: *педагогик компетенция, касбий ривожланиш, методик маҳорат, баҳолаш мезонлари, рефлексия, инновация, АКТ.*

XXI аср жамияти билимлар иқтисодиёти ва инновацион ривожланиш даври сифатида таълим тизимига, хусусан, ўқитувчи кадрлар тайёрлаш жараёнига янги талаблар қўймоқда. Анъанавий педагогик ёндашувлар ўрнини эгаллаётган компетенцияга асосланган таълим фалсафаси, ўқитувчидан нафақат чуқур назарий билим, балки уларни амалда қўллай олиш, ўқувчиларни танқидий

фикрлашга, ижодкорликка ва доимий мустақил ўрганишга ундай оладиган мураккаб кўникмалар мажмуасини талаб қилмоқда. Ўзбекистонда таълим соҳасида амалга оширилаётган кенг кўламли ислохотлар, хусусан, узлуксиз таълим тизимини ривожлантиришга қаратилган ҳаракатлар ушбу масалани янада долзарб қилади. Таълим сифатини таъминлашда бўлажак ўқитувчиларнинг педагогик компетентлиги ҳал қилувчи аҳамиятга эга бўлиб, уларнинг касбий тайёргарлиги жараёнида бу компетенцияларни самарали шакллантириш ва холис баҳолаш механизмларини ишлаб чиқиш устувор вазифа саналанади. Бугунги глобаллашув жараёнида таълим тизими олдида қўйилаётган талаблар тубдан ўзгариб бормоқда. Замонавий ўқитувчи нафақат билим берувчи, балки ўқувчиларни мустақил фикрлашга, муаммоларни ҳал этишга ва ҳаётга тайёрлашга хизмат қилувчи шахсдир.

Шу нуқтаи назардан, ўқитувчиларнинг педагогик компетенцияларини аниқлаш, баҳолаш ва ривожлантириш масаласи долзарб аҳамият касб этади. Педагогик компетенция ўқитувчининг профессионал фаолиятини самарали ташкил этиш имконини берувчи комплекс сифатида қаралади.

Педагогик компетенция тушунчаси XX асрнинг иккинчи ярмидан бошлаб таълим назарияси ва амалиётида марказий ўрин эгаллай бошлади. Дастлабки ёндашувлар кўпроқ маълумотлар ва элементар кўникмалар мажмуаси сифатида талқин қилинган бўлса, кейинчалик бу тушунча ўқитувчининг касбий фаолиятида дуч келадиган турли вазиятларда самарали ҳаракат қилиш, муаммоларни ҳал этиш ва доимий равишда ўз устида ишлаш қобилияти сифатида кенгайтирилди. Компетенцияга асосланган таълим (КАТ) ғояси педагогикада фаол ўқитиш ва баҳолаш ёндашувларини шакллантиришга туртки бўлди.

Педагогик компетенция — бу ўқитувчининг касбий фаолиятни самарали амалга ошириш учун зарур бўлган билим, кўникма, малака ва шахсий сифатларининг уйғунлашган тизимидир.

Илмий адабиётларда педагогик компетенция қуйидаги таркибий қисмларга ажратилади:

1. Когнитив компонент – назарий билимлар мажмуи.
2. Фаолият компоненти – амалий кўникма ва малакалар.
3. Шахсий компонент – педагогнинг индивидуал хусусиятлари.
4. Мотивацион компонент – касбга бўлган қизиқиш ва интилиш.
5. Рефлексив компонент – ўз фаолиятини таҳлил қилиш қобилияти.

Мазкур компонентлар ўзаро боғлиқ ҳолда педагогик фаолият самарадорлигини таъминлайди.

Педагогик компетенция қуйидаги асосий турларга ажратилади:

1. Касбий (предметга оид) компетенция - фан бўйича чуқур билим ва дарс мазмунини тўғри тушунтириш, ўқув материални тизимли баён қилиш саналади.
2. Методик компетенция - дарсни лойиҳалаш ва режалаштириш, замонавий педагогик технологияларни қўллаш ва интерактив методлардан фойдаланиш киради.
3. Коммуникатив компетенция - ўқувчилар билан самарали мулоқот, нутқ маданияти ҳамда ижобий психологик муҳит яратиш муҳим саналади.
4. Ахборот-коммуникацион (АКТ) компетенция - рақамли воситалардан фойдаланиш, онлайн платформаларда ишлаш ва мултимедиали дарсларни ташкил этиш ҳисобланади.
5. Рефлексив компетенция - ўз фаолиятини таҳлил қилиш, хатолар устида ишлаш ва ўзини ривожлантириш стратегияларини белгилаш муҳим омилларидир.

Педагогик компетенцияларни аниқлаш мезонлари деганда ўқитувчининг касбий даражасини аниқлаш ҳисобланади ва бу учун қуйидаги мезонлар муҳим саналанади:

1. Касбий билим мезони - фан бўйича чуқур билимга эга бўлиш, янгиликлардан хабардорли, педагогика ва психология асосларини билиш.
2. Методик фаолият мезони - дарсни аниқ мақсад асосида ташкил этиш, турли методлардан фойдаланиш ва дифференциал ёндашувни қўллаш.
3. Коммуникатив фаолият мезони - ўқувчилар билан самарали мулоқот, конфликтларни бошқариш ҳамда жамоада ишлаш қобилияти.
4. Инновацион фаолият мезони - янги педагогик технологияларни қўллаш, креатив ёндашув, Геймификация ва АКТдан фойдаланиш.
5. Рефлексив фаолият мезони - ўз ишини баҳолаш, таҳлил қилиш ҳамда доимий ўз устида ишлаш.

Педагогик компетенциялар кўрсаткичларида ҳар бир мезон аниқ индикаторлар орқали баҳоланади:

Мезон Кўрсаткичлар - касбий билим фан бўйича саводхонлик, илмийлик, тушунтириш аниқлиги бўлса, методик маҳорат эса дарснинг самарадорлиги, методлар хилма-хиллиги ва коммуникативлик, мулоқот сифати, ўқувчилар фаоллигида кўринади.

Инновация АКТдан фойдаланиш, янги методлар қўллаш ва рефлексия эса ўз фаолиятини таҳлил қилиш даражаси ҳисобланади.

Педагогик компетенцияларни баҳолаш усуллари деганда замонавий таълим тизимида турли усуллардан тизимли қўллай олишга айтилади ва бунда қуйидаги баҳолаш усуллари кенг қўлланилади:

- ✓ Кузатув методи - дарс жараёнини таҳлил қилиш орқали ўқитувчининг фаолияти баҳоланади.

- ✓ Тест ва сўровномалар - назарий билим ва касбий тайёргарлик аниқланади.
- ✓ Портфолио таҳлили - ўқитувчининг иш фаолияти ҳужжатлари ўрганилади.
- ✓ Ўз-ўзини баҳолаш - педагог ўз фаолиятини мустақил баҳолайди.
- ✓ Ўқувчилар натижалари - таълим самарадорлиги орқали баҳолаш амалга оширилади.

Педагогик компетенцияни ривожлантириш қуйидаги йўллар орқали амалга оширилади:

1. Малака ошириш курслари
2. Семинар ва тренинглари
3. Мустақил таълим
4. Илмий-тадқиқот фаолияти ва инновацион лойиҳаларда иштирок.

Замонавий ёндашувлар: Ҳозирги кунда педагогик компетенцияни ривожлантиришда қуйидаги ёндашувлар муҳим:

1. Компетенциявий ёндашув
2. Шахсга йўналтирилган таълим
3. STEAM таълими
4. Рақамли педагогика
5. Геймификация технологиялари

Хулоса қилиб айтганда, ўқитувчиларнинг педагогик компетенцияларини аниқлаш ва баҳолаш замонавий таълим тизимининг энг муҳим таркибий қисмларидан биридир. Педагогик компетенция ўқитувчининг нафақат билим даражаси, балки унинг методик маҳорати, коммуникатив қобилияти, инновацион ёндашуви ва рефлексив фаолиятини ҳам ўз ичига олган мураккаб тизимдир.

Тадқиқотлар шуни кўрсатадики, аниқ ишлаб чиқилган мезон ва кўрсаткичлар асосида ўқитувчилар фаолиятини баҳолаш уларнинг касбий

ривожланишини тизимли равишда йўлга қўйишга хизмат қилади. Бу эса ўз навбатида таълим сифатининг ошишига, ўқувчиларнинг билим даражаси ва мустақил фикрлаш кўникмаларининг ривожланишига ижобий таъсир кўрсатади.

Шунингдек, педагогик компетенцияларни ривожлантириш жараёни узлуксиз бўлиши лозим. Ўқитувчи доимий равишда ўз устида ишлаши, янги педагогик технологияларни ўзлаштириши ва амалиётга жорий этиши зарур. Айниқса, рақамли таълим муҳити, инновацион методлар ва компетенциявий ёндашувлар бугунги кунда ўқитувчи фаолиятининг ажралмас қисмига айланмоқда.

Келгусида педагогик компетенцияларни баҳолаш тизимини янада такомиллаштириш, индивидуал ривожланиш траекторияларини ишлаб чиқиш ҳамда халқаро тажрибаларни жорий этиш муҳим аҳамият касб этади. Шу асосда, ўқитувчиларнинг касбий салоҳияти ошиб боради ва бу таълим тизимининг умумий самарадорлигига ижобий таъсир кўрсатади.

Фойдаланилган адабиётлар:

1. Авлиякулов Н.Х., Мусаева Н.А. Педагогик технологиялар. – Тошкент: Фан ва технология, 2012.
2. Толипов О.Қ., Усмонбоева М. Педагогик технологияларнинг татбиқий асослари. – Тошкент: Фан, 2006.
3. Ишмухамедов Р.Ж., Абдуқодиров А.А., Пардаев А. Таълимда инновацион технологиялар. – Тошкент: Истеъдод, 2008.

CUSTOMER LOYALTY FORMATION AND MANAGEMENT SYSTEMS IN RETAIL ENTERPRISES

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Abstract: This thesis examines the current issues of customer loyalty formation and management systems in retail enterprises. The importance of CRM systems and loyalty programs in the regional retail market is analyzed and practical recommendations are developed based on international experience.

Keywords: customer loyalty, CRM systems, loyalty programs, customer retention, customer lifetime value, relationship marketing, retail trade, customer experience.

Аннотация: В данном тезисе рассматриваются актуальные вопросы формирования и управления лояльностью клиентов на предприятиях розничной торговли. Проанализировано значение CRM-систем и программ лояльности на региональном рынке розничной торговли и разработаны практические рекомендации на основе зарубежного опыта.

Annotatsiya: Ushbu tezisdagi chakana savdo korxonalarida mijozlar sadoqatini shakllantirish va boshqarish tizimlarining dolzarb masalalari ko'rib chiqilgan. Mintaqaviy chakana savdo bozorida CRM tizimlari va sodiqlik dasturlarining ahamiyati tahlil qilingan va xorij tajribasi asosida amaliy tavsiyalar ishlab chiqilgan.

Ключевые слова: лояльность клиентов, CRM-системы, программы лояльности, удержание клиентов, пожизненная ценность клиента, маркетинг отношений, розничная торговля, клиентский опыт.

Kalit so'zlar: mijozlar sadoqati, CRM tizimlari, sodiqlik dasturlari, mijozlarni ushlab qolish, mijoz umr davri qiymati, munosabatlar marketingi, chakana savdo, mijoz tajribasi.

In recent years, the retail sector in Uzbekistan has been developing rapidly in conditions of increasing competition. Within the framework of the "Uzbekistan — 2030" strategy, improving the quality of trade services and ensuring customer satisfaction have become priority directions of state policy. In 2024, retail trade turnover reached 187.4 trillion UZS, with modern retail formats capturing an increasing market share from traditional bazaars. In this highly competitive environment, customer acquisition costs have increased by 38% over the past five years, making customer retention and loyalty formation strategically more important than attracting new customers. Research shows that increasing customer retention by 5% can boost profits by 25-95%, and loyal customers spend on average 67% more than new customers. However, systematic approaches to customer loyalty management in regional retail enterprises remain underdeveloped, requiring comprehensive solutions.

When analyzing the current state of customer loyalty management, the gap between large retail chains and small regional enterprises becomes apparent. In Tashkent and major regional centers, modern CRM systems and loyalty programs are relatively widespread, while in Khorezm, Karakalpakstan, and Surkhandarya regions, customer relationship management practices remain largely traditional and unsystematic. Survey data indicates that only 28% of regional retail enterprises maintain customer databases, 16% operate formal loyalty programs, and merely 8% utilize CRM software systems. This situation significantly limits the competitiveness of regional retail enterprises and requires a systematic approach to customer loyalty formation [1].

The first important direction of customer loyalty formation is implementing Customer Relationship Management (CRM) systems. CRM systems enable retail

enterprises to collect, store, and analyze customer data, providing a foundation for personalized service and targeted marketing. Key functionalities include customer database management, purchase history tracking, segmentation and profiling, communication automation, and analytics dashboards. Research demonstrates that retail enterprises implementing CRM systems achieve 27% higher customer retention rates, 23% improvement in customer satisfaction scores, and 18% increase in average transaction values. For regional retail enterprises in Khorezm region, cloud-based CRM solutions offer cost-effective entry points with subscription models starting from 200,000-500,000 UZS monthly [2].

The second important direction involves developing structured loyalty programs with clear value propositions. Effective loyalty programs incentivize repeat purchases and strengthen emotional connections with the brand. Various program models exist: points-based systems (earning points per purchase for redemption), tiered programs (bronze, silver, gold levels with increasing benefits), cashback programs (percentage return on purchases), coalition programs (partnerships across multiple retailers), and paid membership programs (premium benefits for subscription fee). Survey data shows that 73% of consumers are more likely to recommend brands with good loyalty programs, and loyalty program members generate 12-18% more annual revenue than non-members. Critical success factors include simplicity of understanding, attainable rewards, personalized offers, and seamless redemption processes [3].

The third direction focuses on measuring and optimizing Customer Lifetime Value (CLV). CLV represents the total revenue a business can expect from a single customer account throughout the entire relationship. Understanding CLV enables retailers to allocate marketing resources efficiently, identify high-value customer segments, and design retention strategies with appropriate investment levels. CLV calculation incorporates average purchase value, purchase frequency, customer lifespan,

and profit margins. Research indicates that top 20% of customers typically generate 80% of profits, emphasizing the importance of identifying and nurturing high-CLV customers. Strategies to increase CLV include cross-selling and upselling, subscription models, exclusive experiences for VIP customers, and proactive churn prevention through early warning systems that identify at-risk customers [4].

The fourth direction involves creating emotional loyalty through exceptional customer experience management. While transactional loyalty programs provide rational incentives, emotional loyalty creates deeper, more sustainable customer relationships. Key elements include consistent service quality across all touchpoints, personalized interactions recognizing individual preferences, surprise and delight moments exceeding expectations, community building connecting customers with shared interests, and responsive complaint handling transforming negative experiences into loyalty opportunities. Research shows that emotionally connected customers have 306% higher lifetime value and recommend brands at much higher rates. For regional retail enterprises, training frontline staff in customer experience excellence, empowering employees to resolve issues immediately, and collecting regular feedback through surveys and reviews are essential investments [5].

Customer loyalty formation and management in retail enterprises requires a comprehensive and consistent approach. Implementing CRM systems, developing structured loyalty programs, measuring and optimizing customer lifetime value, and creating emotional loyalty through exceptional customer experience are interconnected priority directions that should be implemented systematically. Consistent implementation of these measures will not only increase the competitiveness of retail enterprises but also accelerate structural changes in the regional economy, create sustainable competitive advantages, and ensure long-term profitability. The cost of acquiring new customers being 5-7 times higher than retaining existing ones makes

loyalty management not just a marketing function but a core business strategy essential for survival and growth in the increasingly competitive retail landscape of Uzbekistan.

References:

1. O'zbekiston Respublikasi Prezidentining "O'zbekiston — 2030" strategiyasi, 2023.
2. Kumar V., Reinartz W. Customer Relationship Management: Concept, Strategy, and Tools. 3rd Edition. Springer, 2018.
3. Reichheld F.F. The Loyalty Effect: The Hidden Force Behind Growth, Profits, and Lasting Value. Harvard Business Review Press, 2001.
4. State Statistics Committee. Retail Trade and Consumer Behavior Indicators. Tashkent, 2024.
5. Berry L.L. Relationship Marketing of Services: Perspectives from 1983 and 2000 // Journal of Relationship Marketing. 2002. Vol. 1(1). P. 59-77.

A DIACHRONIC–PRAGMATIC MODEL FOR THE ANALYSIS OF AL-ADDĀD IN CLASSICAL AND MODERN LINGUISTIC SCHOLARSHIP

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Abstract. The phenomenon of al-Addād (الأضداد), commonly described as the coexistence of two opposite meanings within a single lexical form, occupies a unique position in Arabic linguistic thought. Since the earliest stages of Arabic lexicography, scholars have debated whether such lexical items represent a genuine linguistic phenomenon or merely reflect dialectal variation, semantic change, and contextual reinterpretation. While classical scholars compiled extensive corpora of al-Addād and regarded them as an inherent feature of Arabic, other scholars questioned their legitimacy, arguing that a linguistic sign cannot simultaneously denote contradictory meanings without undermining communicative clarity. Contemporary studies have revived this debate through the frameworks of semantic change, enantiosem, polysemy, and pragmatic interpretation. This study aims to integrate diachronic and pragmatic perspectives into a unified analytical model for examining Arabic enantiosem.

Keywords: enantiosem, al-Addād, Arabic semantics, semantic change, pragmatics, polysemy, lexical ambiguity, Arabic lexicography

1. Introduction

The relationship between language and meaning has remained one of the central concerns of linguistic inquiry throughout history. Among the numerous semantic phenomena documented in world languages, enantiosem occupies a particularly intriguing position. Enantiosem refers to a situation in which a single lexical form develops two opposite or contradictory meanings. Examples of this phenomenon have

been identified in many languages, including English, Russian, German, and Arabic. In Arabic linguistic tradition, the phenomenon is known as al-Aḍḍād (الأضداد), a term that literally means “opposites.”

The study of al-Aḍḍād constitutes one of the oldest and most controversial branches of Arabic lexical semantics. Classical Arab linguists devoted independent treatises to the subject and compiled extensive collections of words believed to possess opposite meanings. Scholars such as Qutrub, Abu Ubayda, al-Asma‘i, al-Tawwazi, Ibn al-Sikkit, Abu al-Tayyib al-Lughawi, and Ibn al-Anbari regarded the phenomenon as sufficiently significant to warrant separate linguistic investigation.

Despite this long scholarly tradition, the status of al-Aḍḍād has remained controversial. Some scholars considered it evidence of the richness and flexibility of Arabic vocabulary. Others viewed it as an artificial category created by lexicographers who merged dialectal variants and historically distinct meanings under a single lexical entry. The debate reached its most explicit form in the works of Ibn Durustawayh, who rejected the notion that a single linguistic sign could genuinely express two contradictory meanings.

The controversy surrounding al-Aḍḍād extends beyond Arabic linguistics. Modern semantic theory raises similar questions regarding the nature of polysemy, homonymy, semantic change, lexical ambiguity, and contextual interpretation. Contemporary linguists increasingly recognize that opposite meanings often emerge through historical semantic development rather than through accidental contradiction. Consequently, many examples previously classified as anomalous are now interpreted as products of semantic evolution.

Recent developments in cognitive linguistics and pragmatics have further transformed the study of lexical opposition. Researchers now emphasize the role of contextual interpretation, communicative intention, conceptual framing, and prototype-

based semantic organization. These approaches provide new tools for reexamining classical Arabic discussions of al-Aḍḍād.

The present study seeks to bridge classical Arabic scholarship and modern semantic theory by integrating diachronic and pragmatic approaches. Rather than treating enantiosemy solely as a lexical anomaly, the study examines it as the outcome of historical semantic processes interacting with contextual mechanisms of interpretation.

2. Literature Review

The phenomenon of al-Aḍḍād occupies a distinctive place in the history of Arabic linguistic thought. Unlike many semantic categories that emerged gradually within general lexicographical works, al-Aḍḍād developed into an independent field of inquiry. Early Arabic scholars produced specialized treatises devoted entirely to words that appeared to express opposite meanings. The existence of such works demonstrates that classical linguists regarded the phenomenon not as a marginal curiosity but as an important component of Arabic lexical structure.

The earliest discussions of al-Aḍḍād can be traced to the formative period of Arabic philology during the second and third Islamic centuries. During this period, linguistic scholars sought to preserve and systematize the Arabic language through the collection of Bedouin speech, poetry, tribal dialects, and Qur'anic vocabulary. As linguistic material accumulated, scholars encountered numerous examples in which a single lexical form appeared to denote two opposite meanings.

One of the earliest figures associated with the study of al-Aḍḍād is Qutrub (d. 206 AH), whose work *Kitāb al-Aḍḍād* is frequently cited in later bibliographical sources. Although the original text survives only partially, references to it indicate that Qutrub attempted to collect and classify lexical items exhibiting semantic opposition. His work

established a tradition subsequently continued by Abu Ubayda, al-Asma'ī, al-Tawwazi, Ibn al-Sikkit, Abu Hatim al-Sijistani, Abu al-Tayyib al-Lughawi, and Ibn al-Anbari.

These scholars generally accepted the existence of al-Addād as a genuine linguistic phenomenon. Their methodology relied primarily on collecting textual evidence from poetry, tribal speech, Qur'anic interpretation, and oral transmission. The presence of opposite meanings within a single lexical item was often accepted if supported by authoritative linguistic sources.

3. Methodology

This study adopts a qualitative descriptive-analytical design combining historical linguistics, lexical semantics, pragmatics, and comparative analysis. The objective is not merely to identify examples of al-Addād but to explain the mechanisms responsible for their emergence and persistence in Arabic.

The research is based on the assumption that enantiosemy cannot be adequately explained through a single theoretical perspective. Historical semantic development accounts for the emergence of opposite meanings, whereas pragmatic analysis explains how speakers and listeners successfully interpret them in actual discourse. Consequently, the study integrates both dimensions into a unified analytical framework.

4. Results

The analysis of the collected corpus reveals that the emergence of opposite meanings in Arabic lexical items is not random but follows identifiable semantic and historical patterns. Four major mechanisms were found to account for the majority of cases traditionally classified as al-Addād: dialectal divergence, semantic shift, language contact and borrowing, and perspective reversal. These mechanisms demonstrate that many examples of apparent lexical contradiction can be explained through historical and

pragmatic developments rather than through the assumption of inherent semantic inconsistency.

One of the oldest and most frequently cited explanations for the emergence of opposite meanings is dialectal divergence. Classical Arabic scholars themselves were aware that different Arab tribes often employed the same lexical form with distinct meanings. The word الجَوْن provides one of the most famous illustrations of this phenomenon. Classical lexicographers recorded the word as denoting both “black” and “white,” and it consequently became a standard example in works devoted to al-*Aḥdād*. However, Ibn al-Anbari offered an alternative interpretation, arguing that the two meanings did not originate within a single linguistic system. Instead, one tribal group used the term to refer to black, whereas another employed it to denote white. As linguistic interaction increased and lexicographical traditions expanded, both usages were incorporated into a single dictionary entry. From a modern linguistic perspective, this case is more accurately interpreted as the result of dialectal convergence than genuine enantiosem. Since the two meanings cannot be convincingly traced to a common semantic prototype and appear to originate from separate dialectal traditions, الجَوْن is better classified as a case of pseudo-enantiosem.

A second mechanism responsible for the development of opposite meanings is semantic shift. Historical semantic change frequently involves processes such as extension, narrowing, amelioration, pejoration, metaphorization, and reanalysis. Under particular conditions these developments may produce meanings that appear contradictory. A representative example is the verb شَرَى, which in classical sources may signify both “to buy” and “to sell.” Although these meanings initially seem incompatible, closer analysis reveals that both emerge from a single transactional event. The underlying semantic prototype is exchange. Depending on whether the event is conceptualized from the perspective of the buyer or the seller, the lexical item may refer

either to purchasing or selling. Consequently, the apparent contradiction does not arise from lexical inconsistency but from different participant perspectives within the same event structure. The continuity of semantic development and the existence of a common conceptual foundation make شَرَى a strong candidate for genuine enantiosemym.

Language contact and borrowing constitute a third mechanism contributing to the development of semantic opposition. Historical interaction between Arabic and neighboring linguistic traditions occasionally introduced alternative interpretations that became associated with existing lexical forms. In such cases, a word may initially enter the language with a specific meaning and subsequently acquire a contrasting interpretation through contact with another linguistic or cultural system. Over time, both meanings become established and are eventually recorded by lexicographers. This process suggests that some examples of al-Addād are historically secondary developments rather than original features of the Arabic lexicon. The role of language contact therefore highlights the importance of diachronic investigation when evaluating claims of lexical contradiction.

The fourth mechanism identified in the corpus is perspective reversal, which appears to be particularly significant from a cognitive-semantic perspective. In these cases, opposite meanings emerge because speakers conceptualize the same situation from different viewpoints. This phenomenon is especially common in domains such as trade, movement, possession, and social interaction. Rather than encoding two unrelated meanings, the lexical item represents a single event structure whose interpretation varies according to the participant or conceptual perspective foregrounded in discourse. Such cases provide strong evidence for cognitive explanations of enantiosemym and demonstrate the importance of pragmatic context in semantic interpretation.

Several case studies further illustrate the operation of these mechanisms. Among the most debated examples in Arabic linguistic and legal tradition is the term القَرء, which

has been interpreted as both الحيض “menstruation” and الطهر “ritual purity.” The significance of this lexical item extends beyond semantics because its interpretation directly affects Islamic legal rulings concerning the waiting period following divorce. Classical jurists became divided into two major interpretive camps, with some understanding the term as menstruation and others as purity. Traditional scholarship generally regarded القَرء as one of the strongest examples of al-Addād. However, a diachronic-pragmatic analysis suggests a more nuanced interpretation. The underlying semantic prototype appears to involve a transitional phase within the female reproductive cycle. Both menstruation and purity represent distinct stages within the same cyclical process, and the opposite meanings emerge through different conceptual focalizations of that process. Because the term exhibits a shared semantic prototype, historical continuity, and contextual accessibility, it satisfies the criteria proposed in this study for genuine enantiosemy.

The case of الجَوْن leads to a different conclusion. Although classical lexicographers frequently cited the term as denoting both black and white, the available evidence strongly supports a dialectal explanation. No convincing common semantic prototype has been identified, and the historical record indicates separate tribal origins for the two meanings. Consequently, the word fails to meet the requirements of shared semantic origin and historical continuity and should therefore be excluded from the category of genuine enantiosemy.

Another important example is the verb خَفِيَ, which has been associated with the meanings “to be hidden” and “to become apparent.” At first glance these interpretations appear directly contradictory. Nevertheless, contextual and cognitive analysis reveals that both meanings belong to the broader semantic domain of visibility and perceptual access. The opposition arises not from unrelated semantic content but from shifts in attentional focus and conceptual perspective. The underlying conceptual structure

remains stable, while contextual factors determine which aspect of the semantic network becomes salient. This example therefore supports cognitive models that view enantiosemy as the result of alternative conceptual profiling rather than semantic inconsistency.

A similar pattern is observed in the word رَهْوَةٌ, which classical sources describe as referring both to elevated ground and to a low-lying area where water accumulates. Modern semantic analysis suggests that these meanings can be reconciled through the reconstruction of a common prototype associated with places connected to water collection or retention. Once functional characteristics are prioritized over purely geometric ones, the apparent contradiction becomes significantly less problematic. The example demonstrates how prototype semantics can account for many traditional cases of al-Aḍḍād by identifying a deeper conceptual unity beneath surface-level opposition.

Taken together, these findings indicate that genuine Arabic enantiosemy is considerably more restricted than classical lexicographical traditions often suggest. Many celebrated examples are better explained through dialectal divergence, semantic change, borrowing, or contextual reinterpretation. At the same time, a smaller group of lexical items appears to satisfy the criteria for true enantiosemy, namely the existence of a shared semantic prototype, historical continuity, and contextual accessibility. The results therefore support a balanced position between the classical acceptance of al-Aḍḍād as a widespread phenomenon and the radical skepticism of scholars who reject its existence altogether.

5. Discussion

The findings of this study demonstrate that classical Arabic linguists and contemporary semantic scholars often describe the same linguistic phenomena through different theoretical frameworks and terminological systems. Classical scholars

traditionally discussed the phenomenon under the label al-Addād (الأضداد), whereas modern linguistics employs terms such as enantiosemy, semantic reversal, semantic contradiction, oppositional polysemy, and homo-polysemous opposites. Although the terminology differs, both traditions seek to explain the same fundamental question: how a single lexical form can become associated with two apparently contradictory meanings while remaining functional within a communicative system.

The analysis indicates that neither of the two dominant positions in the historical debate provides a fully satisfactory explanation of the available evidence. The traditional approach, represented by many classical lexicographers, tends to include an excessively broad range of examples within the category of al-Addād. Because the classification often relies on the existence of two reported meanings rather than on clearly defined semantic criteria, lexical items originating from dialectal variation, contextual polysemy, semantic specialization, or even homonymy are frequently grouped together under the same label. As a result, the classical tradition appears to overestimate the scope of the phenomenon.

At the opposite end of the spectrum, the skeptical position, most famously associated with Ibn Durustawayh, seeks to eliminate the category almost entirely by explaining alleged cases of enantiosemy through dialectal divergence, semantic change, or contextual interpretation. While this approach contributes valuable methodological rigor and highlights the importance of communicative clarity, it often underestimates the extent to which opposite meanings can coexist within a single lexical system. The present analysis demonstrates that certain examples, including *شَرَى*, *الْقَرْء*, and *خَفِي*, cannot be adequately explained as accidental homonyms or purely dialectal variants. Their semantic development reveals continuity, conceptual coherence, and contextual accessibility, indicating that genuine enantiosemy remains a viable linguistic category.

The findings therefore support an intermediate position between unconditional acceptance and complete rejection. The proposed diachronic–pragmatic model offers a systematic framework capable of distinguishing genuine enantiosemy from pseudo-enantiosemy. According to this model, many traditional examples are more accurately interpreted as products of dialectal divergence or contextual polysemy, whereas a smaller group of lexical items satisfies the criteria necessary for classification as true enantiosemic units. The distinction between genuine and pseudo-enantiosemy thus becomes a central methodological requirement for future research.

The results further indicate that neither historical semantics nor pragmatic interpretation alone can fully account for the phenomenon. Historical analysis explains how opposite meanings emerge through processes such as semantic shift, borrowing, and dialectal differentiation, but it cannot by itself explain how speakers successfully select the intended interpretation in actual communication. Conversely, pragmatic analysis clarifies how contextual cues guide interpretation, yet it cannot fully explain the historical origins of semantic opposition. Only the integration of diachronic and pragmatic perspectives provides a comprehensive explanation for both the development and functioning of enantiosemic expressions.

A critical evaluation of competing approaches reveals important strengths and limitations on both sides of the debate. The principal strength of the classical affirmative tradition lies in its extraordinary empirical richness. Classical scholars preserved a vast amount of linguistic evidence drawn from poetry, tribal dialects, Qur’anic exegesis, and oral transmission. Without these efforts, much of the material necessary for contemporary semantic investigation would no longer be available. Classical linguists also recognized an important linguistic reality that remains consistent with modern pragmatic theory: speakers are generally capable of interpreting apparently contradictory meanings without significant communicative breakdown. Moreover,

scholars such as Ibn al-Anbari often sought underlying conceptual connections between opposite meanings, thereby anticipating modern approaches based on semantic prototypes and cognitive categorization.

Nevertheless, classical scholarship frequently lacked explicit methodological criteria for distinguishing different types of semantic ambiguity. Words were often classified as *al-Addād* simply because authoritative linguistic sources attributed two meanings to them. Little attention was devoted to separating genuine enantiosemy from dialectal variation, homonymy, contextual polysemy, or semantic specialization. Consequently, many classical corpora likely exaggerate the actual extent of the phenomenon.

The skeptical tradition also possesses significant strengths. By emphasizing linguistic economy, semantic coherence, and communicative transparency, scholars such as Ibn Durustawayh introduced a level of analytical rigor that remains valuable today. Modern semantic research confirms that numerous alleged examples of enantiosemy can indeed be explained through mechanisms such as semantic shift, dialectal divergence, homonymy, and pragmatic inference. In this respect, the skeptical position serves as an important corrective to indiscriminate classification.

At the same time, the skeptical approach encounters its own limitations. A complete rejection of enantiosemy fails to account for well-documented cases in which opposite meanings demonstrably coexist within a single lexical system and remain accessible to speakers through contextual interpretation. The existence of shared semantic prototypes and continuous developmental pathways in words such as *الْقَرْء* and *شَرَى* suggests that at least some cases of enantiosemy represent genuine semantic phenomena rather than accidental lexical convergence. For this reason, a categorical denial of enantiosemy appears empirically difficult to sustain.

The findings of this study also carry several broader theoretical implications for Arabic linguistics and semantic theory. First, the evidence suggests that enantiosemy should be understood as a gradient rather than binary phenomenon. Traditional discussions often assume that a lexical item either belongs to al-Addād or does not. The present analysis indicates instead that semantic opposition exists along a continuum ranging from strong and prototypical cases of enantiosemy to weaker cases that approach contextual polysemy or dialectal variation. Such a continuum more accurately reflects the complexity of the linguistic data.

Second, the study confirms the central importance of historical semantic development. Many lexical items traditionally treated as static examples of semantic contradiction are better understood as products of long-term semantic evolution. Consequently, investigations of enantiosemy should move beyond purely synchronic description and incorporate systematic historical reconstruction whenever possible.

Third, the analysis highlights the indispensable role of pragmatics in semantic interpretation. Even when opposite meanings coexist within a lexical item, communication rarely becomes impossible because contextual information, discourse structure, collocational patterns, syntactic environments, and speaker intentions typically provide sufficient cues for disambiguation. Pragmatic interpretation therefore functions as a crucial mechanism allowing enantiosemic expressions to remain communicatively viable.

Fourth, the study demonstrates that classical Arabic scholarship and contemporary linguistic theory should be viewed as complementary rather than competing traditions. Classical scholars contribute extensive lexical documentation, textual evidence, and valuable semantic observations, whereas modern linguistics provides methodological precision, explanatory models, and theoretical frameworks capable of interpreting those observations. Combining the strengths of both traditions produces a more

comprehensive understanding of al-Aḍḍād than either approach could achieve independently.

Finally, the results underscore the need for a stronger corpus-based research agenda in the study of Arabic enantiosemy. Much existing scholarship continues to rely heavily on dictionaries and traditional lexicographical sources. Future investigations should incorporate historical corpora, digital text collections, computational semantic analysis, and corpus-linguistic methodologies capable of tracing semantic development across large bodies of authentic textual data. Such approaches would provide a firmer empirical basis for evaluating disputed examples and contribute to a more precise understanding of the relationship between semantic change, contextual interpretation, and lexical opposition in Arabic.

6. Conclusion

This study has examined the phenomenon of al-Aḍḍād through an integrated diachronic–pragmatic framework that combines insights from classical Arabic linguistics, modern Arabic semantic studies, and contemporary Western linguistic theory.

The analysis demonstrates that the traditional debate concerning the existence of al-Aḍḍād cannot be resolved through purely lexical or purely logical arguments. Instead, the phenomenon must be investigated within a broader framework that takes into account historical semantic development, dialectal variation, contextual interpretation, and cognitive conceptualization.

The study shows that many examples traditionally classified as al-Aḍḍād are more accurately explained through dialectal divergence, semantic shift, borrowing, or contextual polysemy. Words such as الجَوْن illustrate how lexicographical traditions may

merge meanings originating in distinct dialectal systems. Such examples should not automatically be regarded as genuine enantiosemym.

At the same time, the research identifies a smaller but significant group of lexical items that satisfy the criteria of genuine enantiosemym. Examples such as *الْقَرْءُ*, *شَرَى*, *حَفِي*, and several related forms exhibit semantic continuity, shared conceptual foundations, and contextual accessibility. Their opposite meanings emerge from historical development while remaining available within the synchronic linguistic system.

References

- Al-Awsy, S. Q. I. M. (2024). Studies on al-Aḍḍād in Classical Arabic Linguistics. *Arabic Linguistic Journal*.
- Al-Khamash, S. S. (1991). A Study of Homo-Polysemous Opposites in Arabic (Doctoral Dissertation). Indiana University.
- Al-Maghfara, Z., & Fardusi, M. A. (2023). Classical Debates on al-Aḍḍād and Lexical Ambiguity in Arabic. *Journal of Arabic Language Studies*, 15(2), 41–83.
- Alyasin, T. K. (2024). The Impact of Opposites in the Holy Qur'an: Al-Qur' as a Jurisprudential Example. *Journal of Islamic Linguistic Studies*, 1(24), 1–28.
- Cruse, D. A. (2011). *Meaning in Language: An Introduction to Semantics and Pragmatics* (3rd ed.). Oxford University Press.
- Geeraerts, D. (2010). *Theories of Lexical Semantics*. Oxford University Press.
- Hurford, J. R., Heasley, B., & Smith, M. (2007). *Semantics: A Coursebook* (2nd ed.). Cambridge University Press.
- Ismail, M. A. A. (2022). The Phenomenon of Opposites in the Tafsir of al-Tha'labi. *Journal of Qur'anic Studies*, 12(3), 1–22.
- Jackendoff, R. (2002). *Foundations of Language*. Oxford University Press.

Lakoff, G. (1987). *Women, Fire, and Dangerous Things*. University of Chicago Press.

Lyons, J. (1977). *Semantics (Vols. 1–2)*. Cambridge University Press.

Murphy, M. L. (2003). *Semantic Relations and the Lexicon*. Cambridge University Press.

Palmer, F. R. (1981). *Semantics (2nd ed.)*. Cambridge University Press.

Saeed, J. I. (2016). *Semantics (4th ed.)*. Wiley-Blackwell.

Slevani, V. R. A. (2020). The Phenomenon of Semantic Contradiction in Arabic Language and Its Effect on Meaning. *Journal of Arts, Literature, Humanities and Social Sciences*, 50, 203–224.

Sweetser, E. (1990). *From Etymology to Pragmatics*. Cambridge University Press.

Traugott, E. C., & Dasher, R. B. (2002). *Regularity in Semantic Change*. Cambridge University Press.

السيد، ر. أ.، وآخرون. (2021). المشترك المعنوي في أضداد معجم الصحاح للجوهري: دراسة تحليلية تطبيقية. *مجلة كلية الآداب، جامعة الفيوم*، 33(2)، 1–75.

المقوشي، ع. ع.، والمساعد، أ. (2022). التضاد والمشارك اللفظي في الدراسات اللغوية العربية. *مجلة الدراسات اللغوية العربية*، 18(1)، 1–40.

المنجد، م. ن. (2015). ظاهرة الأضداد في التراث اللغوي العربي. *المنارة*، 20(4)، 245–278.

محمد، م. ع.، وعليوي، هـ. إ. (2020). ظاهرة التضاد في معجم متن اللغة: دراسة في التغير الدلالي. *مجلة أبحاث ميسان*، 16(31)، 1–25.

ملك، إ. ح. م.، وإسماعيل، أ. (2021). الأضداد بين التراث اللغوي والدراسات الحديثة. *مجلة اللغة العربية وأدائها*، 9(2)، 230–255.

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