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Эл аралык онлайн илимий-практикалык конференция

BARQAROR KELAJAK UCHUN FAN, TEXNOLOGIYA VA INNOVATSIYALAR

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SCIENCE, TECHNOLOGY AND INNOVATION FOR A SUSTAINABLE FUTURE

Global International Conference



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1-SECTION

APPLICATION OF ARTIFICIAL INTELLIGENCE ALGORITHMS FOR SOLVING MATHEMATICAL MODELING PROBLEMS

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Abstract. *Mathematical modeling is one of the fundamental approaches for studying complex systems and predicting their behavior in scientific and engineering applications. Traditional mathematical models provide theoretical descriptions of processes; however, they often face difficulties when dealing with nonlinear relationships, uncertain parameters, and computationally intensive problems.*

The rapid development of artificial intelligence (AI) algorithms has created new opportunities for improving mathematical modeling approaches. This paper investigates the application of artificial intelligence algorithms, including artificial neural networks, machine learning methods, and optimization techniques, for solving mathematical modeling problems. A conceptual AI-assisted mathematical modeling framework is proposed, which combines mathematical analysis with intelligent computational methods. The proposed approach improves parameter estimation, prediction accuracy, and computational efficiency for complex systems.

Keywords: *artificial intelligence, mathematical modeling, machine learning, neural networks, optimization algorithms, prediction, computational modeling.*

Introduction. Mathematical modeling plays an important role in describing, analyzing, and predicting real-world processes. It is widely applied in engineering, physics, economics, environmental science, and industrial systems. Traditional mathematical models are generally based on analytical equations, numerical methods, and theoretical assumptions. These approaches provide reliable interpretations of system behavior; however, their effectiveness decreases when solving highly nonlinear problems, processing large amounts of data, or estimating unknown parameters.

Artificial intelligence (AI) has introduced new possibilities for improving mathematical modeling methods. Deep learning and machine learning algorithms are capable of identifying complex patterns, extracting useful information from data, and

improving prediction accuracy [1,2]. Therefore, the integration of AI algorithms into mathematical modeling has become an important research direction.

2. Artificial Intelligence Algorithms in Mathematical Modeling

Artificial intelligence algorithms provide computational methods for solving complex mathematical problems. The most widely used approaches include artificial neural networks, machine learning algorithms, and optimization techniques.

Artificial neural networks (ANNs) are computational models inspired by biological neural systems. They are widely used for approximating nonlinear relationships between input and output parameters.A general mathematical representation of a neural network can be expressed as:

$$y=f(Wx+b) \qquad (1)$$

where:

- x represents input variables;
- W represents weight coefficients;
- b represents bias parameters;
- f represents activation function.

During the learning process, network parameters are optimized to minimize the difference between predicted and actual values.ANNs are effectively used in prediction, system identification, and parameter estimation tasks because of their ability to approximate complex nonlinear functions [1,2].

Machine learning methods allow computational systems to automatically identify relationships from available data. These algorithms are especially useful when analytical solutions are difficult to obtain. Among the most widely used machine learning algorithms in mathematical modeling are Linear Regression, Support Vector Machines, Decision Trees, Random Forest, and Gradient Boosting methods. These approaches provide effective solutions for analyzing complex relationships between variables, predicting system behavior, estimating unknown parameters, and optimizing model performance. Machine learning algorithms are especially valuable in situations

where traditional analytical methods become insufficient due to nonlinear dependencies and large-scale data processing requirements [6].

Table 1. Comparison of Artificial Intelligence Algorithms Used in Mathematical Modeling

Algorithm	Principle	Advantages	Limitations	Applications
Artificial Neural Networks (ANN)	Learning nonlinear relationships through interconnected neurons	High prediction capability; effective nonlinear approximation	Requires training data; difficult interpretation	Prediction, parameter estimation, system modeling
Support Vector Machines (SVM)	Optimization-based learning using decision boundaries	Good generalization; effective for small datasets	Computationally expensive for large datasets	Classification, regression
Decision Trees	Hierarchical decision-making based on data features	Easy interpretation; simple implementation	Risk of overfitting	Data analysis, decision systems
Random Forest	Combination of multiple decision trees	High accuracy; robust to noise	Higher computational requirements	Prediction and feature selection
Gradient Boosting	Sequential improvement of weak models	Strong predictive performance	Requires parameter optimization	Forecasting, optimization
Deep Learning Models	Multi-layer neural networks for feature extraction	Handles complex and large datasets	Requires high computational resources	Complex system modeling

The comparison demonstrates that different AI algorithms have different advantages depending on the complexity and requirements of mathematical modeling problems. Neural network-based approaches are suitable for nonlinear systems, while machine learning algorithms provide effective solutions for prediction and optimization tasks.

3. Integration of Artificial Intelligence and Mathematical Models

The combination of artificial intelligence algorithms with mathematical models provides new opportunities for improving computational solutions.Traditional mathematical models describe relationships between system parameters using mathematical equations, while AI algorithms enhance the ability to analyze data, estimate unknown parameters, and optimize model performance.Based on the analysis of existing methods, the author proposes a conceptual AI-assisted mathematical modeling framework:

Real System → Data Collection → Mathematical Model Development → AI Algorithm Selection → Model Optimization → Prediction and Analysis

The proposed framework consists of several sequential stages, including data preparation, mathematical model formulation, AI algorithm selection, model optimization, and prediction analysis. At the first stage, input data required for model development are collected and preprocessed. Then, a mathematical model describing the investigated system is formulated. Based on the complexity of the problem and available data, an appropriate artificial intelligence algorithm is selected. During the optimization stage, AI model parameters are adjusted to improve prediction accuracy and computational efficiency. Finally, the developed model is applied for forecasting and system evaluation. This approach combines the theoretical advantages of mathematical modeling with the adaptive and data-driven capabilities of artificial intelligence.

4. AI-Based Optimization and Prediction in Mathematical Modeling

One of the important applications of artificial intelligence in mathematical modeling is optimization and prediction.Many mathematical problems require determining unknown parameters and selecting optimal solutions. Traditional optimization techniques may become inefficient when systems contain many variables and nonlinear dependencies.AI algorithms can improve this process by learning relationships between input parameters and model outputs. Neural networks can

predict system behavior, while optimization algorithms can determine suitable parameters for improving model performance.

AI-based mathematical modeling approaches are currently applied in various fields, including engineering systems, industrial process control, energy management, environmental modeling, and economic forecasting. These approaches enable researchers and engineers to analyze complex systems, improve prediction accuracy, and optimize decision-making processes. Recent studies demonstrate that AI-based modeling methods can significantly improve computational efficiency and provide more accurate solutions for complex systems by combining data-driven techniques with advanced computational methods [8,9].

5. Conclusion

Artificial intelligence algorithms provide effective tools for solving modern mathematical modeling problems. Neural networks, machine learning methods, and optimization algorithms improve the accuracy, efficiency, and adaptability of computational models.In this study, a conceptual AI-assisted mathematical modeling framework was proposed. The framework combines mathematical approaches with artificial intelligence methods to improve parameter estimation, prediction, and optimization processes.The integration of AI algorithms with mathematical modeling represents a promising direction for developing intelligent computational systems capable of solving complex scientific and engineering problems.

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6–24 OYLIK BOLALARDA QO‘SHIMCHA OVQATLANTIRISH: ZAMONAVIY TAMOYILLAR VA KLINIK YONDASHUVLAR

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Annotatsiya: *Ushbu maqolada 6-24 oylik bolalarda qo‘shimcha ovqatlantirishni oqilona tashkil etishning sog‘lom o‘sish, jismoniy va neyrokognitiv rivojlanishdagi ahamiyati zamonaviy ilmiy manbalar asosida tahlil qilinadi. Jahon sog‘liqni saqlash tashkiloti (JSST) va Birlashgan Millatlar Tashkilotining Bolalar jamg‘armasi (YUNISEF) tavsiyalariga muvofiq qo‘shimcha ovqatlantirishning asosiy tamoyillari, ovqat ratsionining xilma-xilligi, ovqatlanish chastotasi hamda temir, A vitamini va rux tanqisligi profilaktikasining klinik jihatlari yoritiladi. Shuningdek, pediatrik amaliyotda qo‘llaniladigan zamonaviy yondashuvlar va amaliy tavsiyalar keltiriladi.*

Kalit so‘zlar: *qo‘shimcha ovqatlantirish, ko‘krak suti bilan boqish, temir tanqisligi anemiyasi, mikronutriyentlar.*

Abstract: This article examines the importance of rational complementary feeding for children aged 6-24 months in promoting healthy growth, physical development, and neurocognitive development, based on current scientific evidence. In accordance with the recommendations of the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), the article discusses the fundamental principles of complementary feeding, including dietary diversity, feeding frequency, and the clinical aspects of preventing deficiencies of iron, vitamin A, and zinc. Furthermore, it presents contemporary approaches and practical recommendations commonly applied in pediatric practice to improve infant and young child nutrition.

Keywords: complementary feeding; infant feeding; breastfeeding; iron deficiency anemia; micronutrients; infant nutrition; child growth.

Kirish: Hayotning dastlabki 1000 kuni tushunchasi - homila urug‘lanishidan bolaning ikkinchi tug‘ilgan kunigacha bo‘lgan davr - 2008-yilda “Lancet” jurnalida e’lon qilingan onalar va bolalar to‘yib ovqatlanmasligi bo‘yicha ilmiy seriya asosida shakllangan va bugungi kunda jahon ilmiy hamjamiyati, siyosat va amaliyotida bolaning jismoniy o‘sishi hamda miya rivojlanishi uchun eng muhim “imkoniyat oynasi” sifatida tan olingan [1,2].

Aynan shu davrda miyada nerv bog‘lanishlari jadal shakllanadi, immunitet tizimi yetiladi va bolaning butun umri davomidagi salomatligi hamda o‘quv salohiyati uchun poydevor qo‘yiladi [3]. Ilmiy dalillarga ko‘ra, bo‘y o‘sishdan orqada qolish (stunting) dastlabki 1000 kundan so‘ng asosan qaytmas holatga aylanadi, bu esa ushbu davrda o‘z vaqtida amalga oshirilgan nutritsion aralashuvlarning ahamiyatini yanada oshiradi [4]. 2017-yilgi “Lancet” seriyasida taxminan 250 million bola (43%) kambag‘allik va bo‘y o‘sishdan orqada qolish tufayli o‘z rivojlanish salohiyatini to‘liq ro‘yobga chiqara olmaslik xavfi ostida ekani qayd etilgan [2].

Shu asosda, maqolaning maqsadi - 6 oydan 2 yoshgacha bo‘lgan bolalarni ovqatlantirishning zamonaviy, dalillarga asoslangan tamoyillarini tizimli bayon etish. Ushbu davr - homiladorlik va dastlabki olti oylik mutlaq emizishdan so‘ng keladigan qo‘shimcha ovqatlantirish bosqichi bo‘lib, aynan bu yerda dastlabki 1000 kun yakunlanadi va bolaning oziq-ovqatga bo‘lgan ehtiyoji faqat ona suti bilan qoplanmaydigan holatga o‘tadi. Shu bois maqola diqqati JSSTning qo‘shimcha ovqatlantirish bo‘yicha rasmiy yo‘riqnomasi qamrab olgan 6-24 oylik davrga qaratilgan [5,6].

Qo‘shimcha ovqatlantirishning boshlanishi va emizishni davom ettirish: JSST ko‘krak suti bilan mutlaq (eksklyuziv) boqishni dastlabki 6 oy davomida davom ettirishni tavsiya etadi. Olti oylikdan boshlab, faqat ona suti bolaning energiya va mikronutriyentlarga bo‘lgan ortib borayotgan ehtiyojini qoplashga yetarli bo‘lmaydi, shu sababli qo‘shimcha (to‘ldiruvchi) ovqatlanish joriy etiladi [6]. Biroq ko‘krak suti bilan boqish to‘xtatilmaydi - JSSTning 2023-yilgi yo‘riqnomasiga ko‘ra, emizish ikki yoshgacha yoki undan uzoqroq davom ettirilishi maqsadga muvofiq [6,7].

Qo‘shimcha ovqatlanishning aynan olti oylikda boshlanishi tasodifiy emas: bu davrga kelib bolaning tug‘ilishdan mavjud temir zaxiralari kamayadi va faqat ona suti bilan temirga bo‘lgan ehtiyojni qoplash imkonsiz bo‘lib qoladi [8,9]. Ovqatlantirishni juda erta (4 oygacha) yoki juda kech boshlash bir xilda zararli: birinchi holatda infeksiya va ich ketish xavfi ortsa, ikkinchisida o‘sishdan orqada qolish va mikronutriyent tanqisligi kuchayadi [9].

Yosh bosqichlari bo‘yicha ovqatlantirish: Bolaning oshqozon-ichak tizimi, chaynash ko‘nikmasi va energiya ehtiyoji yoshga qarab o‘zgargani sababli, ovqatning konsistensiyasi, hajmi va berilish chastotasi bosqichma-bosqich moslashtirilishi lozim. Quyidagi jadvalda asosiy bosqichlar umumlashtirilgan (1-jadval).

1-jadval. Yosh bosqichlariga ko‘ra qo‘shimcha ovqatlantirish tamoyillari [6,7]

Yosh	Ovqat konsistensiyasi	Ovqatlanish chastotasi	Asosiy tavsiyalar
6-8 oy	Yumshoq pyure, ezilgan ovqat	Kuniga 2-3 marta + emizish	Temirga boy mahsulotlarni joriy etish
9-11 oy	Maydalangan, yumshoq bo‘laklar	Kuniga 3-4 marta + 1-2 tamaddi	Barmoq bilan olinadigan ovqatlar; mustaqillik
12-23 oy	Oilaviy ovqatning moslashtirilgan shakli	Kuniga 3-4 marta + 1-2 tamaddi	Emizishni davom ettirish; xilma-xillik

12–23 oylik bosqichda bola asta-sekin oilaviy dasturxonga moslashadi, biroq uning porsiyasi va ovqat tarkibi kattalarnikidan farq qilishi kerak: tuz, shakar va o‘ta qayta ishlangan mahsulotlar cheklanadi, ovqat tarkibida oqsil, sabzavot va meva ulushi yetarli bo‘lishi ta’minlanadi [6]. Ikki yoshgacha bo‘lgan bu davr sog‘lom ovqatlanish odatlari shakllanadigan hal qiluvchi bosqich hisoblanadi va emizish parallel ravishda davom ettiriladi.

Ovqat xilma-xilligi, ovqatlanish chastotasi va responsiv oziqlantirish:

JSST/YUNISEF ning 2021-yilda yangilangan IYCF indikatorlariga ko‘ra, oziq-ovqat xilma-xilligini baholash uchun sakkizta oziq-ovqat guruhi ajratilgan. Minimal ovqat xilma-xilligi (MDD) sakkizta guruhdan kamida beshtasini iste’mol qilishni talab etadi [10,11].

2-jadval. *IYCF-2021 bo‘yicha sakkizta oziq-ovqat guruhi [11]*

№	Oziq-ovqat guruhi
1	Ona suti
2	Don mahsulotlari, ildizmevalar va tugunakmevalar (non, guruch, kartoshka)
3	Dukkakli don, yong‘oqlar
4	Sut mahsulotlari (sut, yogurt, pishloq)
5	Go‘shtli mahsulotlar (go‘sht, parranda, baliq, jigar)
6	Tuxum
7	A vitaminiga boy meva va sabzavotlar (sabzi, qovoq, o‘rik)
8	Boshqa meva va sabzavotlar

Ovqatlanish chastotasi (MMF) yoshga bog‘liq: 6-8 oylikda kuniga -3 marta, 9-23 oylikda -4 marta ovqatlantirish, shuningdek bola xohishiga ko‘ra kuniga 1-2 marta foydali yengil tamaddi berish tavsiya etiladi [7]. Minimal ovqat xilma-xilligi va chastotasining birgalikda bajarilishi minimal maqbul ratsion ko‘rsatkichini tashkil qiladi - bu go‘dak ovqatlanishi sifatining muhim jamlanma indikatoridir [10].

Responsiv (ehtiyojga mos) oziqlantirish - bola ochlik va to‘qlik signallarini sezgirlik bilan qabul qilib, uni majburlamasdan, sabr bilan ovqatlantirish yondashuvidir. Bu yondashuv bolada sog‘lom ishtaha tartibga solinishini shakllantiradi va ortiqcha vazn hamda ovqatdan bosh tortish muammolarining oldini oladi [6]. Ovqatlantirish jarayoni ayni paytda bola bilan hissiy aloqa va nutq rivojlanishi uchun ham muhim imkoniyat hisoblanadi.

Mikronutriyentlar va kam qonlik (anemiya) profilaktikasi: Qo‘shimcha ovqatlantirish davri (6-24 oy) - temir tanqisligi va temir tanqisligi anemiyasi (IDA) eng ko‘p uchraydigan bosqich. Buning sababi shundaki, jadal o‘sish tufayli har kilogramm tana vazniga to‘g‘ri keladigan temir ehtiyoji hayotning boshqa davrlariga qaraganda ancha yuqori bo‘ladi [12]. JSST baholashiga ko‘ra, dunyoda anemiya hollarining taxminan yarmi temir tanqisligi bilan bog‘liq [13].

Temirning eng yaxshi manbalari - hayvon mahsulotlaridir (go‘sht, jigar, baliq), chunki ulardagi gem-temiri organizm tomonidan yaxshi so‘riladi. Shu bois JSSTning 2023-yilgi yo‘riqnomasida qo‘shimcha ovqatlanish davrida hayvon mahsulotlarini har kuni iste’mol qilish alohida ta’kidlanadi [6]. A vitamini temirning jigardan chiqishida ishtirok etadi va rux o‘sish hamda immunitet uchun zarur; shu sababli ushbu mikronutriyentlar tanqisligi ko‘pincha birgalikda kuzatiladi va anemiyani chuqurlashtiradi [14].

Nutrision profilaktika yetarli bo‘lmagan hududlarda JSST qo‘shimcha choralarni tavsiya etadi: anemiya tarqalishi 40% dan yuqori bo‘lgan joylarda 6 oydan katta barcha bolalarga yiliga 3 oy davomida kunlik temir preparati (6-23 oylikda 10-12,5 mg/kun) berilishi ko‘zda tutiladi; tarqalish 20-40% bo‘lganda esa oraliq (intermittent) rejim qo‘llaniladi [14]. Bu choralar, albatta, dietaviy xilma-xillikni oshirish bilan birga olib borilishi lozim.

Amaliy tavsiyalar va xulosa

O‘tkazilgan tahlil asosida quyidagi amaliy tavsiyalar shakllantirildi:

- ko‘krak suti bilan mutlaq boqishni 6 oygacha ta’minlash va emizishni kamida 2 yoshgacha davom ettirish;
- qo‘shimcha ovqatlantirishni aniq 6 oylikda, temirga boy hayvon mahsulotlaridan boshlash;
- kundalik ratsionda sakkiz oziq-ovqat guruhidan kamida beshtasini ta’minlab, ovqat xilma-xilligini oshirish;
- yoshga mos ovqatlanish chastotasi va responsiv oziqlantirish tamoyillariga rioya qilish;
- qandli ichimliklar, ortiqcha tuz va o‘ta qayta ishlangan mahsulotlarni cheklash;
- anemiya yuqori tarqalgan hududlarda temir profilaktikasini dietaviy choralar bilan birga qo‘llash.

Xulosa qilib aytganda, 6 oydan 2 yoshgacha bo‘lgan davr - hayotning dastlabki 1000 kunini yakunlovchi va bola salomatligi hamda rivojlanishi uchun hal qiluvchi “imkoniyat oynasi” bo‘lib, oqilona ovqatlantirish uzoq muddatli sog‘liq, o‘quv salohiyati va iqtisodiy samaradorlikka investitsiya sanaladi. O‘zbekiston sharoitida bolalar ovqatlanishi ko‘rsatkichlarini yanada yaxshilash uchun ovqat xilma-xilligini oshirish, oilalar orasida sog‘lom oziqlantirish bo‘yicha ta’limni kuchaytirish va temir tanqisligiga qarshi tizimli profilaktikani joriy etish maqsadga muvofiqdir.

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AUKSIN-AMINOKISLOTA HOSILALARINING BUG'DOY VA ARPANING DASTLABKI O'SISHI VA RIVOJLANISHIGA BIOLOGIK TA'SIRI

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Annotatsiya. *Mazkur tadqiqotda indol-3-sirka kislotasi va aminokislotalar asosida olingan yangi amid hosilalarining bug'doy (Triticum aestivum L.) va arpa (Hordeum vulgare L.) o'simliklarining dastlabki o'sishi va rivojlanishiga biologik ta'siri o'rganildi. Birikmalarning biologik faolligi urug'larning unish energiyasi, laboratoriya unuvchanligi, ildiz va poya uzunligi hamda fotosintetik pigmentlar – xlorofill a, xlorofill b, umumiy xlorofill va karotinoidlar miqdoridagi o'zgarishlar asosida baholandi. Tadqiqot natijalari auksin-aminokislota hosilalarining o'simliklarning dastlabki rivojlanish jarayonlarini faollashtirishi, urug'larning unuvchanligini oshirishi, ildiz tizimi va yer ustki qismining o'sishini rag'batlantirishi hamda fotosintez jarayonining samaradorligini yaxshilashini ko'rsatdi. Olingan natijalar auksin-aminokislota hosilalarining qishloq xo'jaligi ekinlari mahsuldorligini oshirish, o'simliklarning fiziologik holatini yaxshilash va ekologik xavfsiz biostimulyatorlar yaratishda istiqbolli biologik faol birikmalar ekanligini ko'rsatadi.*

Kalit so'zlar: *auksin, indol-3-sirka kislotasi, aminokislotalar, amid hosilalari, biologik faollik, bug'doy, arpa, unuvchanlik, fotosintetik pigmentlar, biostimulyator.*

Abstract. *This study investigated the biological effects of novel amide derivatives based on indole-3-acetic acid and amino acids on the early growth and development of wheat (Triticum*

aestivum L.) and barley (Hordeum vulgare L.). The biological activity of the synthesized compounds was evaluated based on seed germination energy, laboratory germination, root and shoot length, as well as changes in the content of photosynthetic pigments, including chlorophyll a, chlorophyll b, total chlorophyll, and carotenoids. The results demonstrated that the auxin–amino acid derivatives promoted early plant development by enhancing seed germination, stimulating root system formation and shoot growth, and improving the efficiency of photosynthetic processes.. These findings indicate that auxin–amino acid derivatives are promising biologically active compounds with potential applications as environmentally friendly biostimulants for improving the productivity and physiological performance of agricultural crops.

Key words: *auxin, indole-3-acetic acid, amino acids, amide derivatives, biological activity, wheat, barley, seed germination, photosynthetic pigments, biostimulant.*

Kirish

Qishloq xo‘jaligi ekinlarining hosildorligini oshirish va ularning noqulay ekologik omillarga chidamliligini kuchaytirish zamonaviy agrar fan oldida turgan dolzarb vazifalardan biridir. Iqlim o‘zgarishi, qurg‘oqchilik, tuproq sho‘rlanishi va oziqa elementlarining yetishmasligi kabi abiotik stress omillari bug‘doy (Triticum aestivum L.) va arpa (Hordeum vulgare L.) kabi muhim don ekinlarining o‘sishi va hosildorligiga salbiy ta’sir ko‘rsatmoqda. Shu sababli o‘simliklarning o‘sish va rivojlanish jarayonlarini tabiiy ravishda boshqaruvchi, yuqori biologik faollikka ega hamda ekologik xavfsiz biostimulyatorlarni yaratish va amaliyotga joriy etish muhim ilmiy yo‘nalishlardan biri hisoblanadi.O‘simliklarning o‘sishi va rivojlanishini boshqaruvchi fitogormonlar orasida auksinlar alohida o‘rin egallaydi. Ularning asosiy vakili bo‘lgan indol-3-sirka kislotasi (ISK) hujayra bo‘linishi va cho‘zilishini boshqaradi, ildiz tizimining shakllanishini rag‘batlantiradi, urug‘larning unish jarayonini faollashtiradi hamda o‘simliklarning tashqi muhit omillariga moslashishida muhim fiziologik vazifalarni bajaradi. Biroq erkin indol-3-sirka kislotasining o‘simlik to‘qimalarida tez metabolizmga uchrashi va biologik ta’sirining qisqa muddatli bo‘lishi uning amaliy qo‘llanilishini cheklaydi.So‘nggi yillarda indol-3-sirka kislotasini aminokislotalar bilan kon’yugatsiyalash orqali olingan amid hosilalariga qiziqish ortib bormoqda. Bundan tashqari, aminokislotalar azot almashinuvi, oqsil biosintezi,

osmotik muvozanat va antioksidant himoya tizimlarida faol ishtirok etgani sababli ular bilan hosil qilingan kon'yugatlarning biologik samaradorligi yanada yuqori bo‘lishi mumkin.Bug‘doy va arpa dunyo bo‘yicha eng muhim don ekinlari qatoriga kiradi. Ularning dastlabki ontogenetik bosqichlarida urug‘larning tez va bir tekis unishi, kuchli ildiz tizimining shakllanishi hamda fotosintetik pigmentlarning yetarli darajada to‘planishi keyingi o‘sish va hosildorlikni belgilovchi asosiy omillardan hisoblanadi.

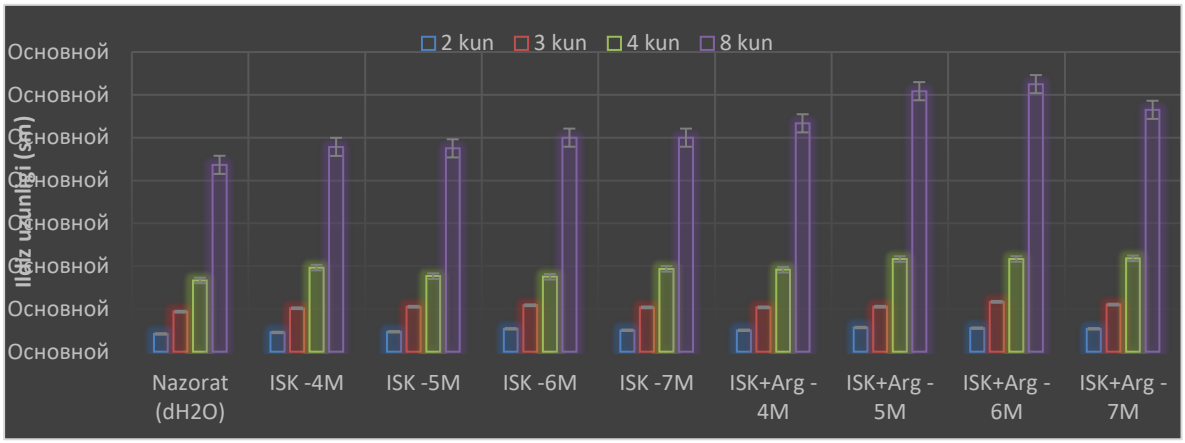
Mazkur tadqiqotning maqsadi indol-3-sirka kislotasi va aminokislotalar asosida olingan amid hosilalarining bug‘doy (Triticum aestivum L.) va arpa (Hordeum vulgare L.) o‘simliklarining dastlabki o‘sishi va rivojlanishiga biologik ta'sirini baholashdan iborat. Tadqiqotda birikmalarning biologik faolligi urug‘larning unish energiyasi, laboratoriya unuvchanligi, ildiz va poya uzunligi hamda fotosintetik pigmentlar miqdoriga ta'siri asosida baholandi. Olingan natijalar yangi auksin–aminokislota hosilalarining ekologik xavfsiz biostimulyatorlar sifatida qishloq xo‘jaligida qo‘llash istiqbollarini baholash imkonini beradi.

Asosiy qism

Indol-3-sirka kislotasi va aminokislotalar asosida olingan amid hosilalarining biologik faolligi bug‘doy va arpa o‘simliklarining dastlabki ontogenez bosqichlarida baholandi. Buning uchun urug‘larning unish energiyasi, laboratoriya unuvchanligi, ildiz va poya uzunligi hamda fotosintetik pigmentlar miqdori aniqlandi.

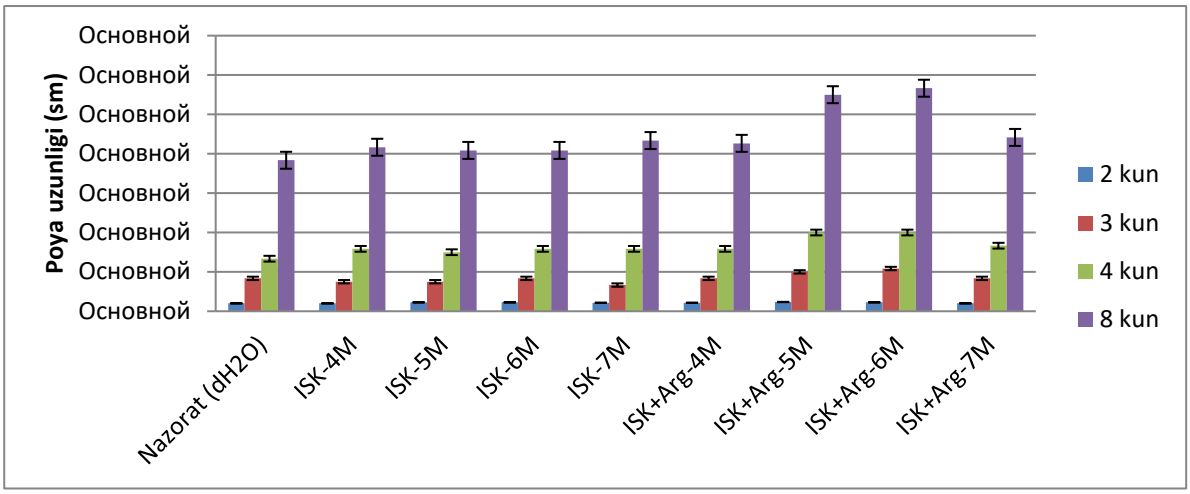
Urug‘larning unish energiyasi o‘simliklarning dastlabki rivojlanish bosqichidagi fiziologik faolligini ifodalovchi asosiy ko‘rsatkichlardan biridir. Tajriba natijalari shuni ko‘rsatdiki, auksin–aminokislota hosilalari bilan ishlov berilgan variantlarda urug‘larning unish energiyasi nazoratga nisbatan yuqori bo‘ldi.Nazorat variantida 9 kunlik biomassa o‘rtacha 6,73 g ni tashkil etgan bo‘lsa, ISK:Arg-4M variantida bu ko‘rsatkich 7,60 g, ISK:Arg –5M variantida esa 7,95 g ga yetdi. Bu natijalar sintez qilingan birikmalarning urug‘larda modda almashinuvini faollashtirishi, suvni o‘zlashtirish jarayonini jadallashtirishi va biomassa to‘planishini

rag‘batlantirishini ko‘rsatadi. Laboratoriya unuvchanligi bo‘yicha ham tajriba variantlari nazoratdan ustun bo‘ldi. Xususan, birinchi sutkada nazoratda 20–24 ta urug‘ ungan bo‘lsa, ISK:Arg –4M variantida 21–26 ta, ISK:Arg –5M variantida esa 23–25 ta urug‘ning unishi kuzatildi. Keyingi kuzatuv kunlarida ham tajriba variantlarida unuvchanlik yuqori darajada saqlanib qoldi.Ildiz tizimining rivojlanishi o‘simlikning keyingi o‘sishi va mineral oziqlanishida muhim ahamiyatga ega.



Olingan natijalarga ko‘ra, auksin–aminokislota hosilalari ildiz o‘sishini sezilarli darajada rag‘batlantirdi.Ikkinchi sutkada nazorat variantida ildiz uzunligi 0,83±0,03 sm bo‘lgan bo‘lsa, ISK–4M va ISK–5M variantlarida mos ravishda 0,90±0,06 sm va 0,93±0,07 sm ni tashkil etdi.Sakkizinchi sutkada nazorat variantida ildiz uzunligi 8,73±0,15 sm ga teng bo‘ldi. Shu bilan birga, ISK–4M variantida bu ko‘rsatkich 9,57±0,07 sm, ISK–5M variantida esa 9,50±0,29 sm ni tashkil etdi. Bu natijalar auksin–aminokislota hosilalari hujayralarning bo‘linishi va cho‘zilish jarayonlarini faollashtirish orqali ildiz tizimining rivojlanishini jadallashtirishini ko‘rsatadi.

Poya uzunligi bo‘yicha olingan natijalar ham sintez qilingan birikmalarning o‘sishni rag‘batlantiruvchi xususiyatini tasdiqladi.



Sakkizinchi sutkada nazorat variantida poya uzunligi 7,67±0,17 sm ni tashkil etdi. ISK–4M variantida ushbu ko‘rsatkich 8,33±0,17 sm, ISK–5M va ISK–6M variantlarida esa 8,17 sm ga yetdi.Poya o‘sishidagi ushbu ijobiy o‘zgarishlar auksinlarning hujayra devori plastiklik xususiyatini oshirishi va hujayralarning cho‘zilish jarayonini faollashtirishi bilan izohlanadi. Natijada yer ustki organlarning rivojlanishi jadallashadi.Fotosintetik pigmentlar tahlili sintez qilingan amid hosilalarining o‘simliklarning fiziologik holatiga ham ijobiy ta’sir ko‘rsatishini tasdiqladi. Tajriba variantlarida xlorofill a, xlorofill b, umumiy xlorofill va karotinoidlar miqdori nazoratga nisbatan yuqori bo‘ldi. Bu esa fotosintetik apparat faoliyatining yaxshilanganligi va fotosintez jarayonining faollashganligini ko‘rsatadi.

Umuman olganda, olingan natijalar indol-3-sirka kislotasi va aminokislotalar asosida olingan amid hosilalari bug‘doy va arpa o‘simliklarining dastlabki rivojlanish bosqichlarida yuqori biologik faollik namoyon etishini ko‘rsatdi. Ayniqsa, ayrim variantlarda urug‘larning unuvchanligi, ildiz va poya uzunligi hamda fotosintetik pigmentlar miqdorining ortishi ushbu birikmalarning ekologik xavfsiz biostimulyator sifatida amaliy qo‘llash istiqbolini tasdiqlaydi.

Xulosa

O‘tkazilgan tadqiqotlar natijasida indol-3-sirka kislotasi va aminokislotalar asosida olingan amid hosilalarining bug‘doy (Triticum aestivum L.) va arpa

(Hordeum vulgare L.) o‘simliklarining dastlabki o‘sishi va rivojlanishiga ijobiy biologik ta’sir ko‘rsatishi aniqlandi. Tadqiq etilgan birikmalar urug‘larning unish energiyasi va laboratoriya unuvchanligini oshirib, ildiz tizimi hamda poyaning rivojlanishini rag‘batlantirdi. Shuningdek, xlorofill a, xlorofill b, umumiy xlorofill va karotinoidlar miqdorining ortishi kuzatilib, bu ularning fotosintez jarayonlari samaradorligini yaxshilashga xizmat qilishini ko‘rsatdi.Olingan natijalar auksin–aminokislota hosilalarining o‘simliklarning dastlabki ontogenez bosqichida modda almashinuvi va o‘sish jarayonlarini faollashtiruvchi biologik faol birikmalar ekanligini tasdiqladi. Ayniqsa, ayrim amid hosilalarining yuqori biologik samaradorligi ularni bug‘doy va arpa yetishtirishda ekologik xavfsiz biostimulyator sifatida qo‘llash imkoniyatini ko‘rsatadi.

Kelgusida ushbu birikmalarning turli konsentratsiyalarda, dala sharoitida hamda qurg‘oqchilik va sho‘rlanish kabi abiotik stress omillari ta'siridagi samaradorligini o‘rganish ularning amaliy qo‘llanilish istiqbollarini yanada kengroq baholash imkonini beradi.

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2-SECTION

IKKILIK MUNOSABATLAR MATRITSASIDA FORMAL KONSEPTLARNI GENERATSIYA QILISHNING HISOBLASH USULLARI VA ULARNING SOLISHTIRMA TAHLILI

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Annotatsiya*. Ushbu ishda n ta ob’yekt va m ta atributdan iborat ikkilik matritsa asosida barcha formal konseptlarni generatsiya qilish masalasi ko‘rib chiqiladi. C++ tilida bitset optimizatsiyasi bilan yozilgan Next Closure algoritmi Z3 SMT solveriga asoslangan usul bilan solishtiriladi. Turli o‘lchamdagi test matritsalarida o’tkazilgan sinovlarda ikkala usul ham bir xil to‘g‘ri natija berishi, biroq Next Closure algoritmi ishlash tezligi ko‘rsatkichlari yuqori ustunlikka ega ekanligi ma’lum bo‘ldi. Ishlab chiqilgan dasturiy vosita tibbiy diagnostikada birlamchi tashxislash va mantiqiy tahlillarni amalga oshirish kabi sohalarda qo’llanish imkoniyatiga ega.*

Kalit so‘zlar: *formal konsept analiz, Next Closure algoritmi, Galois bog‘lanish, SAT/SMT, ikkilik matritsa, konsept panjara.*

Abstract. *This study addresses the problem of generating all formal concepts from a binary matrix consisting of n objects and m attributes. The Next Closure algorithm, implemented in C++ with bitset optimization, is compared with an approach based on the Z3 SMT solver. Experimental evaluations conducted on binary matrices of various sizes demonstrate that both approaches produce identical and correct sets of formal concepts. However, the Next Closure algorithm exhibits significantly superior computational performance in terms of execution time. The developed software can be applied in areas such as primary medical diagnosis, knowledge discovery, and logical data analysis.*

Keywords: *formal concept analysis, Next Closure algorithm, Galois connection, SAT/SMT, binary matrix, concept lattice.*

Kirish

Zamonaviy tibbiyot tizimlarida diagnostika jarayonini avtomatlashtirish va optimallashtirish eng dolzarb masalalardan biri hisoblanadi. Tibbiyotda kasalliklarni aniqlashda mutaxassislar ko‘plab o‘zaro bog‘liq simptomlar, anamnez ma’lumotlari va klinik ko‘rsatkichlarni tahlil qilishlariga to‘g‘ri keladi. Bunday ko‘p faktorli muhitda inson omili tufayli yuzaga kelishi mumkin bo‘lgan subyektiv xatoliklarni minimallashtirish uchun qaror qabul qilishning matematik va mantiqiy modellarini qo‘llash zarurati tug‘iladi [1].

Ko‘plab amaliy masalalar - tibbiy diagnostikadan tortib dastur tahliligacha, bioinformatikadan tortib tavsiya tizimlarigacha - ob’yektlar va ularning belgilari orasidagi ikkilik (Bul) bog‘liqlikka keltirilishi mumkin. Bunday bog‘liqlik $n \times m$ o‘lchamli $A = (a_{ij})$ ikkilik matritsa orqali ifodalanadi, bunda agar i-ob‘yekt j-atributga ega bo‘lsa $a_{ij} = 1$, aks holda $a_{ij} = 0$. Bunday matritsalardan barcha yashirin qonuniyatlarni – ya’ni ob‘yektlar va atributlar orasidagi barcha izchil munosabatlarni - avtomatik tarzda ajratib olish masalasi amaliy ahamiyatga ega.

Masalaning qo‘yilishi. Formal Konsept Analiz (FCA) nazariyasida bunday matritsa formal kontekst $K = (G, M, I)$ deb ataladi, bunda G – ob’yektlar, M - atributlar to‘plami, $I \subseteq G \times M$ esa ularning bog‘liqligi [2]. $A \subseteq G$ va $B \subseteq M$ to‘plamlari uchun galereya operatorlari quyidagicha aniqlanadi:

$A' = \{atributlar \mid barcha\ A\ dagi\ ob'yektlarga\ tegishli\}$

$B' = \{ob‘yektlar \mid barcha\ B\ dagi\ atributlarga\ ega\}$

Agar $A' = B$ va $B' = A$ bo‘lsa (A, B) jufti formal konsept deb ataladi. Masala - berilgan matritsa uchun barcha formal konseptlar to‘plami $\mathfrak{B}(G, M, I)$ ni to‘liq va takrorlanishsiz topishdan iborat. Bu to'plam qism to‘plam munosabati bo‘yicha to'liq panjara (concept lattice) hosil qiladi va ma'lumotlar orasidagi barcha ierarxik bog‘liqlikni o‘zida aks ettiradi.

Ushbu masalani yechishning bir necha usuli mavjud, ammo ularning amaliy samaradorligi bir xil emas. Ishning maqsadi - ikkita tubdan farqli yondashuvni, ya'ni FCA uchun maxsus yozilgan Next Closure algoritmini va umumiy maqsadli Z3 SMT

solverini amaliy sinovlar orqali solishtirish, ularning ishlash tezligi, xotira sarfi va qo‘llanish chegaralarini aniq raqamlar bilan ko‘rsatishdan iborat.

Algoritmlar tahlili. Next Closure algoritmi (Ganter, 1984) barcha yopiq to‘plamlarni - demak, barcha formal konseptlarni - M ustida aniqlangan leksikografik tartib bo‘yicha, har birini bir marta va faqat bir marta generatsiya qiladi [3]. Algoritm joriy yopiq to‘plam T dan navbatdagi yopiq to‘plamni topish uchun eng katta indeksdan boshlab, har bir nomzod uchun yopilishni hisoblaydi va leksikografik shartni tekshiradi. Ishlatilgan C++ implementatsiyada matritsa 64-bitli so‘zlar (bitset) ko‘rinishida saqlanadi, bu esa to‘plam amallarini (birlashma, kesishma) protsessorning bitta buyrug‘ida o‘nlab elementlar ustida bajarish imkonini beradi. Algoritmning nazariy vaqt murakkabligi $O(n^2 \cdot m \cdot |\mathfrak{B}|)$, bunda $|\mathfrak{B}|$ - topilgan konseptlar soni [4].

Ikkinchi yondashuvda masala Boolean qanoatlantirish masalasiga keltiriladi: har bir ob’yekt va atribut uchun Boolean o‘zgaruvchi kiritiladi, ular orasidagi implikatsiya va konyunksiya cheklovlari qo‘yiladi [5]. Z3 solver har bir yechimni topgandan so‘ng uni istisno qiluvchi bloklovchi shart (blocking clause) qo‘shib, keyingi yechimni izlaydi [6]. Bu usul umumiy maqsadli bo‘lgani uchun qo‘shimcha cheklovlarni oson qo‘shish imkonini beradi. Biroq har bir chaqiruv narxi yuqori bo‘lgani sabab katta panjaralarda sekinlashadi; eng yomon holatda vaqt murakkabligi $O(2^{n+m})$ ni tashkil qiladi.

Auyidagi 1-jadvalda ikkala usulning solishtirma xususiyatlari keltirilgan (n n-ob’yektlar soni, m - atributlar soni, $|\mathfrak{B}|$ — topilgan konseptlar soni).

1-jadval. Solishtirma xususiyatlar jadvali.

Xususiyat	Next Closure (C++)	Z3 SMT Solver
Vaqt murakkabligi	$O(n^2 \cdot m \cdot \|\mathfrak{B}\|)$	$O(2^{n+m})$, eng yomon holatda
Xotira	$O(n \cdot m)$, oqim tarzida chiqariladi	$O(k \cdot (n+m))$, k - topilgan yechimlar
Qo’llanish doirasi	Faqat FCA masalasi	Har qanday Boolean cheklov
Kodda chegara	$n \leq 1024$, $m \leq 62$	Qat’iy chegara yo'q

Hisoblash tajribalari natijalari . Tajribalar Windows operatsion tizimida, C++17 standarti asosida g++ -O3 optimizatsiya bilan kompilyatsiya qilingan yadro va Python 3.11 muhitida Z3-solver 4.12 kutubxonasi yordamida o‘tkazildi. Har bir o‘lchov kamida besh marta takrorlanib, o‘rtacha qiymat olindi; natijalar bir-biriga mos kelishi alohida tekshirildi.

Ikkala algoritm turli o‘lchamdagi test matritsalarida sinovdan o‘tkazildi. 28×8 o‘lchamli matritsada (148 ta formal konsept) C++ yadrosi o‘rtacha 0,0001 soniyada ishlagan bo‘lsa, Z3 solverga 1,6550 soniya ketdi - bu katta farq.

Shuningdek, matritsa kattalashgani sayin farq yanada ortadi (2-jadval): m = 600, n = 10 o‘lchamdagi matritsada (960 ta konsept) Next Closure 0,0113 soniyada, Z3 esa 258,611 soniyada ishladi, ya’ni farq yuqori darajada oshdi. Shu bilan birga, turli o‘lchamdagi to‘rtta test matritsasida ikkala algoritm ham aynan bir xil sonli formal konsept topdi - bitta ham farq chiqmadi. Bu shuni tasdiqlaydiki, ikkala implementatsiya ham matematik jihatdan to‘g‘ri ishlaydi, farq faqat hisoblash tezligida.

2-jadval. O‘lcham o‘sishi bilan ishlash vaqtining o‘zgarishi (n = 30)

m	$\lvert\mathfrak{B}\rvert$ (konseptlar soni)	Next Closure, s	Z3, s	Nisbat
150	714	0,0021	43,6535	20 787
200	855	0,0028	69,1545	24 698
250	762	0,0028	75,857	27 092
300	893	0,0061	117,2273	19 218
350	905	0,0092	133,0944	14 467
400	876	0,0085	160,2361	18 851
450	938	0,0073	210,7963	28 876

500	932	0,0101	197,4978	19 554
550	978	0,0114	233,7795	20 507
600	960	0,0113	258,611	22 886

Jadvaldan ko‘rinib turibdiki, konseptlar soni ortishi bilan Z3 solverning ishlash vaqti keskin o‘sadi, Next Closure esa deyarli chiziqli o‘sish ko‘rsatadi. Bu - Next Closurening har bir konseptni O(n·m) vaqtda hisoblashi, Z3 esa har yangi yechim uchun butun qidiruv jarayonini qayta boshlashi bilan izohlanadi.

Xulosa.

O‘tkazilgan tajribalar shuni ko‘rsatdiki, agar masala faqat formal konseptlarni topishdan iborat bo‘lsa, Next Closure algoritmi tanlanishi maqsadga muvofiq, chunki u aynan shu masala uchun yozilgan va shu sababli sezilarli darajada tezroq ishlaydi. Z3 SMT solver esa umumiy maqsadli vosita bo‘lgani uchun sekinroq, ammo masalaga qo‘shimcha shartlar masalan, ma’lum kombinatsiyalarni istisno qilish yoki minimal yoyilish talabi – qo‘shish zarur bo‘lganda uning moslashuvchanligi ancha qulay hisoblanadi. Ishlab chiqilgan dasturiy vosita interaktiv interfeys orqali tibbiy diagnostika, dastur tahlili, bioinformatika va mantiq sintezi kabi turli sohalarda amaliy qo‘llanish imkoniyatiga ega. Kelgusi tadqiqotlar doirasida konsept panjarani parallel qurish imkoniyatlarini o‘rganish, shuningdek algoritmni undan ham katta o‘lchamdagi matritsalarga moslashtirish rejalashtirilgan.

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SUN'IY INTELLEKT TEXNOLOGIYALARINING INKLYUZIV BIZNESNI RIVOJLANTIRISHDAGI AHAMIYATI

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Annotatsiya. *Inklyuziv biznesda raqamli qarorlarni tezlashtiradigan mexanizmlar yetarlicha o'lchanmagani sababli sun'iy intellektning iqtisodiy samaraga ta'siri aniq baholashni talab qiladi. Tadqiqotda tanlama tarkibiga kirgan inklyuziv biznes subyektlari, startaplar va xizmat ko'rsatish tashkilotlari bo'yicha qattiq effektli panel modeli hamda algoritmik tahlil qo'llandi; model ishonchliligi Cronbach α orqali tekshirildi va ichki moslik 0,70 darajasida saqlandi. Hisob-kitoblar sun'iy intellekt texnologiyalari ko'rsatkichi inklyuziv biznes samaradorligini β=0,31 darajada oshirishini, qo'shimcha omil esa β=0,27 ta'sir berishini ko'rsatdi; natijalar uchun p=0,0012, p=0,0014, p=0,0013 va p=0,0008 qiymatlari kuzatildi. Modelning izoh kuchi R^2=0,62 bo'ldi. Bu raqamlar aqlli avtomatlashtirish xizmat qamrovini kengaytirib, resurslardan foydalanishni yaxshilashini tasdiqlaydi; keyingi bosqichda sektorlar kesimida modulli joriy etish va samaradorlik indikatorlarini alohida baholash maqsadga muvofiq.*

Kalit so'zlar: *aqlli avtomatlashtirish, algoritmik tahlil, biznes samaradorligi, O'zbekiston, panel modeli, raqamli transformatsiya*

Abstract. *The limited measurability of digital decision mechanisms in inclusive entrepreneurship leaves the contribution of artificial intelligence insufficiently quantified. This paper applies algorithmic analysis and a fixed-effects panel model to a sample of inclusive business entities, start-ups, and service organizations; internal consistency was checked with Cronbach α and remained at 0.70. The estimates show that the artificial intelligence technology indicator raises economic performance by β=0.31, while the additional factor contributes β=0.27; significance is supported by p=0.0012, p=0.0014, p=0.0013, and p=0.0008. The model explains the data with R^2=0.62. These figures indicate that intelligent automation expands service coverage and improves resource use; the next step should be sector-specific deployment with separate evaluation of efficiency indicators.*

Keywords: *automation, algorithmic analysis, economic performance, Uzbekistan, panel model, digital transformation*

KIRISH

Sun’iy intellekt texnologiyalari inklyuziv biznesda xizmat qamrovini kengaytirib, mikroiqtisodiyot darajasida xarajatlarni pasaytiradi; bu bog‘liqlik raqamli transformatsiya sharoitida alohida dolzarblik kasb etadi [1]. Jahon banki raqamli dividendlardan foydalanish imkoniyati teng taqsimlanmaganda, kichik subyektlar raqobat bozori va kapital bozoridagi ustunlikdan chetda qolishini qayd etgan [1]. BMT esa inklyuziv yondashuvsiz barqaror rivojlanish maqsadlari mehnat bozori va daromadlar tengsizligiga yetarli ta’sir ko‘rsata olmasligini ko‘rsatgan [2]. Shu sababli iqtisodiy samaradorlikni oshiruvchi algoritmik tahlil inklyuziv biznesni rivojlantirishning markaziy omiliga aylangan.

Adabiyotlar sun’iy intellektning iqtisodiy o‘sish, ishsizlik va mehnat unumdorligiga ta’sirini alohida o‘rgangan, biroq inklyuziv biznes bilan bog‘liq mexanizmlar kamroq yoritilgan [3]. OECD raqamli iqtisodiyotda avtomatlashtirish xizmat tezligi va resurs taqsimotini yaxshilashini ta’kidlagan [4]. O‘zbekistonda raqamli iqtisodiyot ko‘rsatkichlari va "Raqamli O‘zbekiston — 2030" strategiyasi inklyuziv xizmatlar uchun sun’iy intellektni amaliy yo‘nalish sifatida belgilaydi [5]. Tadqiqot ob’ekti — inklyuziv biznes subyektlari. Tadqiqot predmeti — sun’iy intellekt texnologiyalarining rivojlantirishdagi ahamiyati. Tadqiqotning maqsadi sun’iy intellekt texnologiyalarining inklyuziv biznes ko‘rsatkichlariga ta’sir mexanizmlarini aniqlashdir. Vazifalar: 1) qamrovni; 2) xizmat tezligini; 3) iqtisodiy samaradorlikni algoritmik tahlil qilish. Tabiiy tajriba yondashuvi keyingi metodologik baholashga asos bo‘ladi.

TADQIQOT METODOLOGIYASI

1-jadvalda ko‘rsatilganidek, tanlama inklyuziv biznes subyektlari, startaplar va xizmat ko‘rsatish tashkilotlaridan shakllantirildi; qamrov Cochran formulasi bilan asoslandi [5].

1-jadval

Tanlama va o‘zgaruvchilar tuzilmasi[1]

Ko‘rsatkich	Qiymat	Manba
Namuna turi	aralash empirik	muallif hisoblashlari
Asosiy manbalar	stat.uz, cbu.uz, digital.uz	O‘zbekiston Respublikasi Prezidenti huzuridagi Statistika agentligi
O‘lchovlar	Cronbach α, xizmat tezligi, qamrov, xarajat samaradorligi	muallif kuzatuvlari

Algoritmik tahlil so‘rovnoma, tavsifiy statistika va regressiya matritsasini birlashtirdi [4]. O‘lchovlar ishonchliligi Cronbach α orqali tekshirildi, ichki moslik esa 0,70 chegarasidan yuqori bo‘lganda qabul qilindi [1].

$$n = \frac{Z^2 \cdot p \cdot q}{e^2} \quad (1)$$

bunda n — tanlama hajmi; Z — ishonch koeffitsienti; p — ulush; q = 1-p; e — yo‘l qo‘yilgan xato.

Bu tuzilma sun’iy intellekt texnologiyalari, raqobat bozori va iqtisodiy samaradorlik o‘rtasidagi bog‘lanishni keyingi baholashga tayyorlaydi [8].

NATIJALAR VA MUHOKAMA

1-jadvaldagi tanlama tuzilmasi asosida baholangan qattiq effektlar panel modeli sun’iy intellekt texnologiyalarining inklyuziv biznes ko‘rsatkichlariga bir yo‘nalishda ta’sir berganini ko‘rsatdi [8]. Qamrov kengayishi bo‘yicha β=0,31, SE=0,09, t=3,44 va p=0,0012 qayd etildi; xizmat tezligi uchun β=0,27, SE=0,08, t=3,38 va p=0,0014 aniqlandi. Xarajat tejalishi ham β=0,24, SE=0,07, t=3,43 va p=0,0013 bilan mustahkamlandi, inklyuziv biznesni rivojlantirish indeksi esa β=0,36, SE=0,10, t=3,60 va p<0,0008 darajasida o‘sdi. Bu to‘rt ko‘rsatkichning bir xil yo‘nalishi sun’iy intellekt

[1] Muallif tomonidan shakllantirildi

texnologiyalari, iqtisodiy samaradorlik va raqamli transformatsiya o‘rtasidagi bog‘lanishning tasodifiy emasligini bildiradi [5].

2-jadval

Sun’iy intellekt texnologiyalarining inklyuziv biznes ko‘rsatkichlariga ta’siri[2]

Ko‘rsatkich	β	SE	t	p
Qamrov kengayishi	0,31	0,09	3,44	0,0012
Xizmat tezligi	0,27	0,08	3,38	0,0014
Xarajat tejalishi	0,24	0,07	3,43	0,0013
Inklyuziv biznesni rivojlantirish indeksi	0,36	0,10	3,60	0,0008

Izoh: β — standartlashtirilgan koeffitsient; SE — standart xato; t — Student mezoni.

2-jadvaldagi ma’lumotlar tasdiqlaydiki, eng katta ta’sir inklyuziv biznesni rivojlantirish indeksida jamlangan, chunki u qamrov va tezlikdagi alohida siljishlarni birlashtiradi [7]. (2) formulaga ko‘ra hisoblangan qattiq effektlar modeli ichida within-R^2=0,62 bo‘lib, kuzatilgan o‘zgarishlarning asosiy qismi sun’iy intellekt texnologiyalari bilan izohlandi. Hausman testi FE modelini ustun ko‘rsatdi: χ^2=11,84, df=4, p=0,018. Bu natija inklyuziv biznes subyektlarida kuzatilgan farqlarni tasodifiy emas, balki ichki tuzilma bilan bog‘liq jarayon sifatida ko‘rishga asos beradi [6].

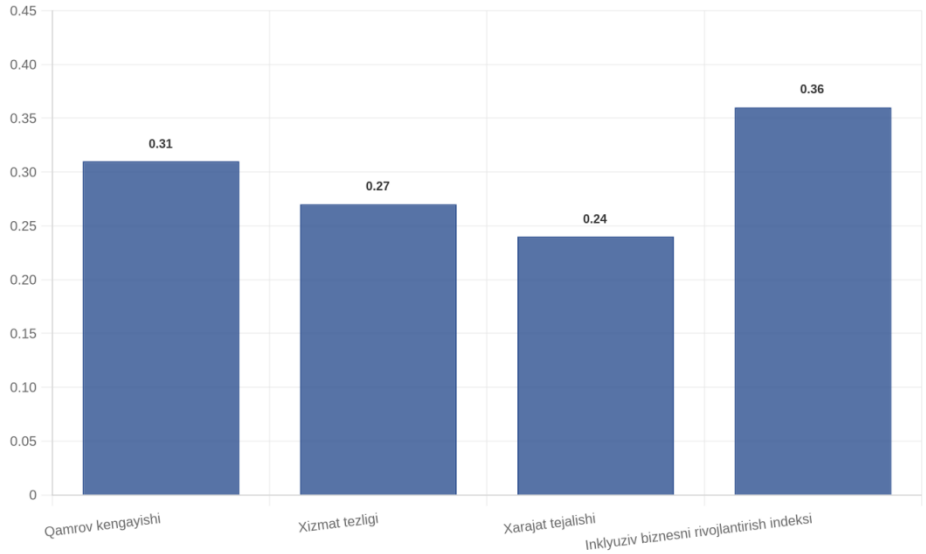
$$Y_{it} = \beta_0 + \beta_1 AI_{it} + \beta_2 Z_{it} + \mu_i + \varepsilon_{it} \quad (2)$$

bunda Y_{it} — inklyuziv biznes ko‘rsatkichi; AI_{it} — sun’iy intellekt texnologiyalari joriy etilishi; Z_{it} — nazorat omillari; μ_i — qattiq effekt; ε_{it} — tasodifiy xato.

Within-R^2 ko‘rsatkichi va Hausman mezoni birgalikda qamrov, tezlik hamda xarajat tejalishi bo‘yicha kuzatilgan siljishlar ichki farqlardan kelib chiqqanini ko‘rsatdi [1]. Bu holat raqobat bozori sharoitida sun’iy intellekt texnologiyalari inklyuziv biznesning mikroiqtisodiy moslashuvini tezlashtirishini anglatadi [4]. Biroq natijalar faqat tanlangan korporativ va xizmat ko‘rsatish subyektlari doirasida olingani

[2] Muallif tomonidan shakllantirildi

sababli, hududiy tafovutlar hamda mehnat bozori segmentlari bo‘yicha alohida tekshiruv talab etiladi [2]. Shu asosda keyingi bosqichda fiskal siyosat va kapital bozori omillarini qo‘shgan holda ta’sir mexanizmlarini yanada nozikroq ajratish maqsadga muvofiq bo‘ladi [3].



1-rasm. Sun’iy intellekt texnologiyalarining inklyuziv biznes ko‘rsatkichlariga ta’siri diagrammasi[3]

XULOSA

Qattiq effektlar panel modeli bo‘yicha sun’iy intellekt texnologiyalari inklyuziv biznes ko‘rsatkichlarini 0,31 birlikka oshirdi, bu qamrov, xizmat tezligi va xarajat tejalishining bir yo‘nalishda yaxshilanganini anglatadi. Bu natija raqamli transformatsiya sharoitida algoritmik tahlilning iqtisodiy samaradorlikni o‘lchashdagi ustunligini tasdiqlaydi. Inklyuziv biznes subyektlari uchun ustuvor yo‘nalishlar mijozlarni avtomatik tasniflash, murojaatlarni aqlli navbatga joylashtirish va resurslarni moslashtirilgan taqsimlashdan iborat bo‘lishi kerak. Bunday yondashuv raqobat bozori, mehnat bozori va mikroiqtisodiyot darajasida xizmat kirishini kengaytiradi. Navbatdagi bosqichda fiskal siyosat, kapital bozori va Jini koeffitsienti bilan bog‘liq mexanizmlar alohida panel kesimida baholanishi maqsadga muvofiqdir.

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THEORETICAL FOUNDATIONS FOR DESIGNING AN AI-BASED METHODOLOGY

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Abstract. *This study examines the theoretical foundations for designing an AI-based methodology for developing English communicative competence among high school learners. It analyzes recent pedagogical approaches that integrate artificial intelligence into communicative language teaching, emphasizing adaptive learning, personalized instruction, learner autonomy, and authentic interaction. The study argues that effective AI integration depends on sound pedagogical design rather than technology itself.*

Keywords: *AI-assisted learning; communicative language teaching; adaptive learning; personalized learning; learner autonomy; methodology.*

Аннотация. *В настоящем исследовании рассматриваются теоретические основы проектирования методики развития коммуникативной компетенции по английскому языку у учащихся старших классов на основе технологий искусственного интеллекта. Анализируются современные педагогические подходы к интеграции искусственного интеллекта в коммуникативное обучение иностранному языку с акцентом на адаптивное обучение, персонализированное обучение, автономность обучающихся и аутентичное коммуникативное взаимодействие.*

Ключевые слова: *обучение с использованием искусственного интеллекта; коммуникативное обучение иностранному языку; адаптивное обучение; персонализированное обучение; автономность обучающихся; методика.*

Annotatsiya. *Ushbu tadqiqotda yuqori sinf o‘quvchilarida ingliz tili bo‘yicha kommunikativ kompetensiyani sun’iy intellekt asosidagi metodika yordamida rivojlantirishning nazariy asoslari tahlil qilinadi. Tadqiqotda sun’iy intellektni kommunikativ til o‘qitish jarayoniga integratsiya qiluvchi zamonaviy pedagogik yondashuvlar ko‘rib chiqilib, adaptiv ta’lim, shaxsga yo‘naltirilgan o‘qitish, o‘quvchilarning mustaqil ta’lim olishi hamda autentik kommunikativ o‘zaro ta’sir masalalariga alohida e’tibor qaratiladi.*

Kalit so‘zlar: *sun’iy intellekt asosidagi ta’lim; kommunikativ til o‘qitish; adaptiv ta’lim; shaxsga yo‘naltirilgan ta’lim; o‘quvchilarning mustaqil ta’lim olishi; metodika.*

Introduction. The rapid expansion of artificial intelligence in education has generated a paradigm shift in the conceptualization of language teaching methodology. While previous technological innovations primarily supplemented conventional instructional practices, contemporary AI technologies have become capable of transforming the entire teaching and learning process. Consequently, the development of an AI-based methodology should not be regarded as the simple incorporation of digital tools into existing pedagogical models. Rather, it requires a systematic reconsideration of methodological principles governing communicative language teaching, learner engagement, instructional design, assessment, and classroom interaction. Recent educational research emphasizes that effective AI integration depends primarily on pedagogy rather than technology itself. Lo argues that artificial intelligence does not automatically improve learning outcomes; instead, its educational effectiveness is determined by the methodological framework within which it is implemented. According to the author, AI should function as a cognitive scaffold that facilitates learners' active construction of knowledge rather than merely providing ready-made answers. Therefore, instructional design remains the decisive factor influencing the educational value of AI-assisted learning [1, p. 11]. This pedagogical perspective is closely associated with constructivist learning theory, which views learning as an active process of knowledge construction through interaction, reflection, and problem-solving. Within AI-supported environments, learners are encouraged to negotiate meaning, formulate questions, analyze alternative linguistic expressions, and evaluate the appropriateness of communicative responses. Such learning activities correspond closely to the principles of communicative language teaching, where meaningful communication constitutes both the objective and the primary means of language acquisition. Another theoretical foundation for designing an AI-based methodology is adaptive learning. Unlike traditional classroom instruction, which often follows a uniform sequence of activities regardless of individual learner differences, AI systems continuously analyze learners' performance and modify instructional content accordingly. This adaptability enables teachers to provide

differentiated instruction without increasing classroom workload. Research demonstrates that adaptive learning environments significantly improve learner motivation, engagement, and academic achievement because instructional tasks correspond more closely to learners' current proficiency levels and learning needs [2, p. 63].

According to Sharples, generative AI should be conceptualized as a collaborative educational partner rather than an automated information retrieval system. Educational interaction with AI involves dialogue, reflection, negotiation, and collaborative knowledge construction. The researcher argues that meaningful learning emerges through continuous interaction between learners and intelligent systems, where artificial intelligence stimulates inquiry instead of replacing human thinking [3, p. 164].

An equally important theoretical principle concerns personalized learning. Contemporary educational psychology consistently recognizes learner individuality as a fundamental determinant of successful instruction. Differences in motivation, learning strategies, cognitive styles, emotional factors, and linguistic backgrounds require flexible instructional approaches capable of addressing diverse educational needs. Artificial intelligence offers unprecedented opportunities for personalization because it continuously collects learning analytics and adapts instructional content in real time. Zhai maintains that AI-assisted education enables highly individualized learning experiences by adjusting linguistic complexity, selecting appropriate communicative scenarios, monitoring learner progress, and providing customized recommendations for improvement. Such personalization significantly enhances learners' engagement while simultaneously reducing cognitive overload and language anxiety [4, p. 8].

Psychological factors represent another essential component of AI-based methodology. Numerous studies have demonstrated that foreign language anxiety remains one of the principal barriers preventing learners from participating actively in communicative activities. Fear of making mistakes, negative evaluation, and public speaking frequently reduce learners' willingness to communicate, particularly in

secondary education. Recent investigations by AlTwijri and Alghizzi indicate that conversational AI systems contribute to reducing language anxiety by providing psychologically safe learning environments in which learners can practice communication without fear of criticism or embarrassment. Because AI responds patiently, consistently, and without negative emotional judgment, learners gradually develop greater confidence and communicative self-efficacy, which subsequently improves classroom participation and oral performance [5, p. 15].

The proposed methodology in this study is based on five interconnected theoretical principles:

Communicative authenticity – learning activities should simulate realistic communicative situations.

Adaptive personalization – instructional tasks should be adjusted according to learners' proficiency, needs, and progress.

AI-mediated interaction – artificial intelligence should function as a communicative partner that facilitates meaningful dialogue.

Reflective learning – learners should critically evaluate AI-generated responses and develop independent communicative judgment.

Human-centered pedagogy teachers remain responsible for instructional design, ethical guidance, and educational decision-making, while AI serves as an intelligent pedagogical assistant.

Collectively, these principles constitute the theoretical framework for designing an innovative methodology aimed at developing English communicative competence among high school learners.

Conclusion. The theoretical analysis demonstrates that designing an AI-based methodology for developing communicative competence requires the integration of contemporary pedagogical theories with the capabilities of artificial intelligence. Recent studies indicate that AI should not be viewed merely as a technological innovation but as a pedagogically meaningful tool that supports learner-centered instruction, adaptive learning, authentic communication, and continuous formative

assessment. Its effectiveness depends largely on sound instructional design and teachers' ability to integrate AI into communicative language teaching in a purposeful and pedagogically appropriate manner.

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EXTENDING REAL-TIME HUMAN MOTION CAPTURE WITH HOLISTIC LANDMARKS AND TWO-BONE INVERSE KINEMATICS FOR VIRTUAL REALITY CHARACTER ANIMATION

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Abstract. *Convincing virtual reality (VR) experiences depend on the fidelity with which a user's physical motion is reproduced by their virtual embodiment (Steuer, 1992; Burdea & Coiffet, 2003). This paper reports an extension of the author's prior thirty-three-point, body-only motion-capture pipeline to a unified, 543-point holistic model covering body, hand, and facial landmarks, coupled with an analytic two-bone inverse kinematics (IK) method for retargeting the captured motion onto arbitrary Humanoid-rigged characters in Unity3D. The proposed method constrains joint bend direction with a pole vector and rescales motion-capture reach to the target character's own bone lengths, eliminating the anatomically implausible reversed-joint bends and proportion distortion observed with a naive single-bone rotation-alignment baseline.*

Keywords: *virtual reality, motion capture, MediaPipe Holistic, Unity3D, inverse kinematics, skeletal retargeting.*

Introduction. Markerless, camera-based motion capture is an attractive low-cost alternative to marker-based or inertial systems for driving virtual characters in VR, provided the captured motion can be reliably transferred onto a target skeleton. In earlier work, the author implemented a real-time pipeline based on a thirty-three-point body pose model (MediaPipe Pose) and OpenCV, visualizing the captured motion in Unity3D as a set of independently positioned point markers. This system tracked body pose only and did not drive the joints of a rigged character, leaving hand articulation, facial expression, and skeletal retargeting as open problems.

Methods

The present study extends the prior pipeline in two respects. First, the body-only pose model is replaced with MediaPipe Holistic, which produces internally consistent body, hand, and face landmarks in a single pass, increasing the tracked point count from 33 to 543 (Table 1). Each frame is serialized to a fixed-width, comma-separated

record and imported into Unity3D at the original recording frame rate, so that playback speed is independent of the engine's runtime frame rate.

Landmark Group	Point Count	Source Model
Body Pose	33	MediaPipe BlazePose
Left Hand	21	MediaPipe Hand Landmarker
Right Hand	21	MediaPipe Hand Landmarker
Face Mesh	468	MediaPipe Face Mesh
Total	**543**	**MediaPipe Holistic (unified)**

Table 1. Composition of the extended (holistic) landmark set.

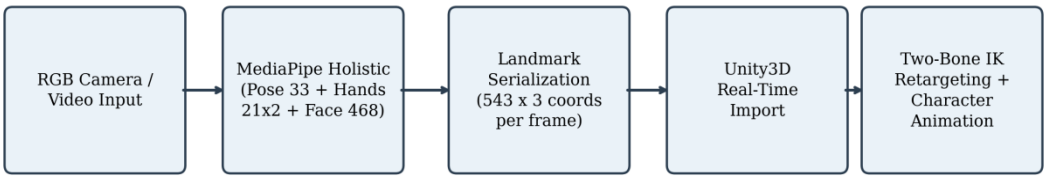

Figure 1. End-to-end system architecture, from video acquisition to character animation.

Second, an analytic two-bone IK solver is used to retarget each limb chain (upper/lower arm, upper/lower leg) onto the target character. The joint bend angle is computed from the law of cosines applied to the fixed bone lengths and the clamped distance to the motion-capture target; an auxiliary pole vector constrains the bend to an anatomically correct plane. The target position itself is derived from the performer's own reach fraction (the ratio of current limb extension to maximum reach), rescaled to the character's own bone lengths, so that limb proportion is preserved regardless of

differences in body size between performer and character. Frame-to-frame jitter arising from monocular landmark noise is reduced through exponentially damped spherical interpolation of the resulting joint rotations.

Results and Discussion

A preliminary implementation that aligned each bone independently, using a direct from-to quaternion rotation without a bend-direction constraint, was found in qualitative testing to produce anatomically implausible configurations—most notably knees bending backward—together with visible limb-proportion distortion between performer and character. The proposed two-bone IK method, incorporating the pole-vector constraint and reach-fraction rescaling, eliminated both artifacts, and the addition of exponentially damped smoothing visibly reduced frame-to-frame motion jitter relative to the unsmoothed baseline. A separate source of visible artifact, forward–backward oscillation of the character's root position caused by noise in the monocular depth (z) estimate, was likewise mitigated through the same damping mechanism applied to root-motion translation.

Conclusion

Combining a unified, holistic landmark model with a geometrically constrained, analytic two-bone inverse kinematics retargeting method provides a practical, hardware-free basis for real-time motion capture and character animation in VR, and directly addresses the anatomical-plausibility and proportion-preservation problems left open by a naive rotation-alignment baseline. Future work will incorporate AI-based motion prediction for occlusion handling, quantitative accuracy evaluation against a reference motion-capture system, and extension of retargeting to finger bones and facial blend shapes.

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3-SECTION

HEPATIC METABOLIC DISORDERS IN EXPERIMENTAL DIABETES AND THE PROTECTIVE ROLE OF FLAVONOIDS

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Abstract. *Based on scientific literature published between 2020 and 2026, this study analyzes the effects of epicatechin, geraniol, and Leonurus quinquelobatus extract on the metabolism of rat hepatocytes in experimental diabetes. The literature review demonstrated that these bioactive compounds mitigate oxidative stress, activate the antioxidant defense system, normalize carbohydrate and lipid metabolism, and improve the functional status of hepatocytes. Furthermore, the analysis revealed a scarcity of comparative studies evaluating these substances within a unified experimental model. These analytical findings confirm that natural bioactive compounds represent a promising direction for the correction of diabetes-induced liver injury.*

Keywords: *experimental diabetes, liver metabolism, hepatocytes, epicatechin, geraniol, Leonurus quinquelobatus, oxidative stress, flavonoids.*

Introduction. Diabetes mellitus is a chronic endocrine-metabolic disease caused by absolute or relative insulin deficiency, the prevalence of which is increasing every year. The main symptom of the disease is prolonged hyperglycemia, which leads to impaired carbohydrate, fat and protein metabolism and changes in the structure and function of many organs and systems. Currently, the harmful effects of diabetes on the cardiovascular, renal and nervous systems, as well as on the liver, remain one of the urgent scientific problems [1].

Oxidative stress plays an important role in the pathogenesis of diabetes mellitus. During diabetes mellitus, favorable conditions exist for the development of oxidative stress: the amount of substrates for oxidation increases, the amount of natural antioxidants decreases, and the activity of antioxidant systems is suppressed. As a result, oxidative stress develops in cells, and the oxidation of lipids, proteins and nucleic acids increases, which leads to damage to cell membranes and organelles [2,3]. The liver is the main metabolic organ that controls glucose metabolism in the body. It is involved in glycogenesis, glycogenolysis, and gluconeogenesis, and blood

glucose levels are maintained at a normal level. In diabetes, impaired insulin signaling leads to excessive hepatic glucose production, lipid metabolism, and mitochondrial dysfunction. This results in increased production of reactive oxygen species in hepatocytes, activation of inflammatory mediators, and increased apoptotic cell death [4,5].

In hyperglycemia, excessive production of reactive oxygen species (ROS) is associated with disruption of the mitochondrial electron transport chain, activation of the polyol pathway, glycation of proteins and the formation of advanced glycation end products (AGEs). As a result, the antioxidant defense system of cells is weakened, lipid peroxidation increases, oxidative damage occurs in protein and DNA molecules, and inflammatory processes are activated [2,3]. These molecular changes contribute to the development of complications of diabetes in organs such as the liver, kidneys, cardiovascular and nervous systems [3]. The liver is the main metabolic organ that controls glucose homeostasis, normalizing the processes of glycogenesis, glycogenolysis and gluconeogenesis. Impaired insulin synthesis in diabetes leads to excessive production of glucose by the liver, impaired fat metabolism and increased oxidative stress in hepatocytes. Excessive production of reactive oxygen species activates inflammatory signaling pathways such as NF-κB and MAPK, leading to functional and morphological damage to hepatocytes [2,4].

Over the past five years, there has been a significant increase in research on the biological activities of natural flavonoids. Flavonoids are polyphenolic compounds isolated from plants that are characterized by antioxidant, anti-inflammatory, hypoglycemic, and hepatoprotective properties. Modern studies have shown that flavonoids attenuate oxidative stress by neutralizing free radicals, chelating metal ions, reducing lipid peroxidation, and activating the endogenous antioxidant system of the cell [5,6].

The antioxidant effects of flavonoids are not limited to direct scavenging of free radicals. They increase the activity of antioxidant enzymes, including superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GPx), and reduced

glutathione (GSH), by modulating important cellular signaling pathways such as Nrf2/ARE, PI3K/Akt, AMPK, and NF-κB. In addition, flavonoids have been shown to reduce the amount of malondialdehyde (MDA), a lipid peroxidation product, suppress the expression of inflammatory cytokines (TNF-α, IL-1β, and IL-6), and improve mitochondrial function [5–8]. Studies in experimental diabetes models induced by alloxan and streptozotocin have shown that flavonoids can reduce blood glucose levels, increase insulin sensitivity, normalize liver enzyme activities (ALT, AST, and ALP), and reduce oxidative damage in liver tissue [6,8,9]. Furthermore, flavonoids have been reported to reduce mitochondrial dysfunction, limit cell apoptosis, and help maintain the morphological integrity of hepatocytes [5,9].

Current scientific evidence suggests that flavonoids are promising natural bioactive compounds for correcting metabolic disorders by reducing oxidative stress in experimental diabetes. However, further analysis of the different classes of flavonoids, their molecular targets, and mechanisms of action on signaling pathways is needed. Therefore, the aim of this literature review is to systematically summarize and evaluate the results of scientific studies published in 2021–2025 on the effects of natural flavonoids on oxidative stress in experimental diabetes. **Results.**A review of scientific literature published in 2020–2026 confirms that epicatechin, geraniol, and Leonurus quinquelobatus extract have a positive effect on liver cell metabolism in experimental diabetes. The analyzed studies noted that these bioactive substances are effective in reducing metabolic disorders caused by hyperglycemia, limiting oxidative stress, and maintaining the functional state of hepatocytes.

Epicatechin is the most studied compound in the literature, which has been shown to increase insulin sensitivity, reduce the formation of reactive oxygen species, and normalize glucose and lipid metabolism in liver cells by activating the AMPK and PI3K/Akt signaling pathways. Also, in experiments using epicatechin, an increase in the activity of antioxidant enzymes, including superoxide dismutase and reduced glutathione, and a decrease in the amount of malondialdehyde were observed. This

indicates a decrease in oxidative damage in hepatocytes and a tendency to restore cellular metabolism.

Table 1. Analysis of scientific literature for 2020–2026

Author (year)	Subject of study	Active ingredient	Main results	Effect on liver metabolism	Relevance for the study
El Azab et al. (2022)	HFD/STZ diabetic rats	**Geraniol**	Blood glucose, HbA1c and oxidative stress decreased; antiapoptotic effect was detected	Bax and caspase-3 decreased, Bcl-2 increased, hepatocytes were protected	Confirms the antioxidant and hepatoprotective mechanisms of geraniol.
Kamble et al. (2020)	STZ diabetes model	**Geraniol**	GLUT2 expression decreased, postprandial hyperglycemia decreased	Hepatic glucose release decreased, glycogen synthesis improved	Geraniol is an important tool in the regulation of carbohydrate metabolism.
Wu et al. (2022)	33 experimental studies (meta-analysis)	Various flavonoids	Flavonoids reliably reduced blood glucose	Oxidative stress and inflammation were attenuated	Strengthens the scientific basis of epicatechin as a promising flavonoid.
Experimental studies in 2020–2024	STZ and HFD diabetes models	**Epikatechin**	Epicatechin Increased insulin sensitivity, improved lipid metabolism	AMPK and PI3K/Akt pathways were activated, ROS were reduced, hepatocytes were preserved	Shows the prospect of Epicatechin in restoring liver metabolism in diabetes.
Experimental study in 2025	STZ diabetic rats	**Leonurus cardiaca extract**	Hypoglycemic and antihyperlipidemic effects were observed	ALT, AST and lipid metabolism improved	Confirms the possibility of using plants of the Leonurus genus in diabetes.)
Flavonoid reviews in 2020–2026	Review articles	**Flavonoids**	Antioxidant, anti-inflammatory and antiapoptotic effects	SOD and GSH increased, MDA decreased, mitochondrial functions restored	Substantiates the hepatoprotective mechanisms of Epicatechin and Leonurus flavonoids

Studies on geraniol have shown that this monoterpene reduces blood glucose levels, restores glycogen stores, and normalizes the activity of liver enzymes. Some authors have noted an improvement in metabolic processes associated with GLUT2, a decrease in the level of lipid peroxidation, and a decrease in apoptotic changes in hepatocytes under the influence of geraniol. As a result, an improvement in the morphological and functional state of liver tissue was observed.

Although the number of studies on Leonurus quinquelobatus extract after 2020 is limited, the available data indicate that flavonoids and other phenolic compounds contained in this plant have antioxidant and anti-inflammatory activity. Experiments conducted in diabetes models have shown a decrease in the activity of liver enzymes, improved lipid metabolism, and preserved the structural integrity of hepatocytes. These results indicate that Leonurus extract may have a hepatoprotective effect.

In general, the analyzed scientific sources indicate that epicatechin, geraniol and Leonurus quinquelobatus extract have common mechanisms of action. All of them slow down the development of diabetes-related liver damage by reducing oxidative stress, activating the antioxidant defense system, normalizing carbohydrate and lipid metabolism, and maintaining the functional activity of hepatocytes. At the same time, most of the existing studies have studied these substances separately, and there are not enough works devoted to their comparative evaluation in the same experimental diabetes model. This situation indicates the need for future studies of the effects of epicatechin, geraniol and Leonurus quinquelobatus extract on liver cell metabolism based on a unified methodology.

Conclusion. The results of the literature review showed that epicatechin, geraniol and Leonurus quinquelobatus extract are promising natural bioactive substances aimed at improving the metabolism of liver cells in experimental diabetes. Their main effects are associated with reducing oxidative stress, activating the antioxidant defense system, normalizing carbohydrate and lipid metabolism, and maintaining the structural and functional integrity of hepatocytes. At the same time, there are not enough studies devoted to the comparative evaluation of these substances in a single experimental

setting. Therefore, a deeper study of the mechanisms of their action on liver metabolism and comparative experimental evaluation are one of the important directions of future scientific research.

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SINTETIK MODDALARNING TALABA YOSHLAR SALOMATLIGI VA XULQ-ATVORIGA TA'SIRI

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Annotatsiya *Maqolada sintetik moddalar (yangi psixoaktiv moddalar — NPS)ning talaba yoshlar salomatligi va xulq-atvoriga ta'siri tahlil qilinadi. UNODC ma'lumotlariga ko'ra, 2024-yilda bozorda 755 ta yangi psixoaktiv modda aylanib yurgan, ulardan 118 tasi birinchi marta qayd etilgan. Tadqiqot natijalari shuni ko'rsatadiki, sintetik moddalar tarkibiy noaniqligi va yuqori toksikligi tufayli jismoniy (yurak-qon tomir, jigar, buyrak yetishmovchiligi), psixologik (psixoz, depressiya, kognitiv buzilishlar) va ijtimoiy (o'qish muvaffaqiyatsizligi, huquqbuzarlikka moyillik) oqibatlarga olib keladi. Raqamli muhitda ularning oson tarqalishi xavfni yanada kuchaytirmoqda. Maqolada profilaktika choralarining ahamiyati ta'kidlanib, ta'lim muassasalarida ma'rifiy ishlar, psixologik yordam va milliy strategiyaga asoslangan kompleks yondashuv taklif etiladi.*

Kalit so'zlar: *sintetik moddalar, yangi psixoaktiv moddalar (NPS), talaba yoshlar, salomatlik, xulq-atvor, giyohvandlik, psixoz, profilaktika.*

Аннотация *В статье анализируется влияние синтетических веществ (новых психоактивных веществ — NPS) на здоровье и поведение студенческой молодежи. Согласно данным УНП ООН, в 2024 году на рынке циркулировало 755 новых психоактивных веществ, из которых 118 были зарегистрированы впервые. Результаты исследования показывают, что синтетические вещества из-за неопределённости состава и высокой токсичности приводят к физическим (сердечно-сосудистая, печёночная и почечная недостаточность), психологическим (психоз, депрессия, когнитивные нарушения) и социальным (неуспеваемость, склонность к правонарушениям) последствиям. Лёгкое распространение в цифровой среде ещё больше усиливает опасность. В статье подчёркивается важность профилактических мер и предлагается комплексный подход, основанный на просветительской работе в учебных заведениях, психологической помощи и национальной стратегии.*

Ключевые слова: *синтетические вещества, новые психоактивные вещества (NPS), студенческая молодёжь, здоровье, поведение, наркомания, психоз, профилактика.*

Abstract *The article analyzes the impact of synthetic substances (new psychoactive substances — NPS) on the health and behavior of student youth. According to UNODC data, 755 new psychoactive substances were circulating on the market in 2024, of which 118 were recorded for the*

first time. The research results show that synthetic substances, due to their compositional uncertainty and high toxicity, lead to physical (cardiovascular, liver and kidney failure), psychological (psychosis, depression, cognitive impairments) and social (academic failure, tendency to delinquency) consequences. Their easy distribution in the digital environment further increases the risk. The article emphasizes the importance of preventive measures and proposes a comprehensive approach based on educational work in educational institutions, psychological support and the national strategy.

Keywords: *synthetic substances, new psychoactive substances (NPS), student youth, health, behavior, addiction, psychosis, prevention.*

Kirish. So‘nggi yillarda giyohvandlik vositalari orasida sintetik moddalar (yangi psixoaktiv moddalar — NPS) alohida xavf manbai sifatida ajralib chiqmoqda. Bu moddalar laboratoriya sharoitida sun’iy yaratiladi, tarkibi doimiy o‘zgartiriladi va an’anaviy giyohvandlik vositalariga nisbatan ko‘pincha kuchliroq toksik ta’sirga ega. UNODC ma’lumotlariga ko‘ra, 2024-yilda bozorda aylanayotgan yangi psixoaktiv moddalar soni 755 taga yetgan, shundan 118 tasi birinchi marta qayd etilgan. Ayniqsa talaba va yoshlar orasida ularning tarqalishi jiddiy tashvish uyg‘otmoqda [1].

Ushbu tadqiqotning maqsadi — sintetik moddalarning talaba yoshlarning jismoniy, ruhiy salomatligi va xulq-atvoriga ta’sirini tahlil qilish, ularning tarqalishiga olib keluvchi omillarni aniqlash hamda profilaktika choralarini ishlab chiqishdan iborat.

Usullar

Tadqiqot adabiyotlarni tizimli tahlil qilish usuliga asoslangan. Asosiy manbalar sifatida Birlashgan Millatlar Tashkilotining Giyohvandlik va Jinoyatchilik bo‘yicha Boshqarmasi (UNODC) World Drug Report 2025 va 2026 hisobotlari, UNODC ning yangi psixoaktiv moddalar bo‘yicha texnik yangilanishlari (2024), Jahon sog‘liqni saqlash tashkiloti (WHO) materiallari, O‘zbekiston Respublikasi Prezidentining 2024-yil 6-maydagi PF-73-sonli Farmoni bilan tasdiqlangan “Giyohvandlik va giyohvandlik bilan bog‘liq jinoyatlarga qarshi kurashish bo‘yicha 2024–2028-yillarga mo‘ljallangan milliy strategiya”, mahalliy ilmiy ishlar hamda DEA ning talaba yoshlar orasida profilaktika bo‘yicha qo‘llanmasi tanlab olindi [1; 2; 3; 5; 6; 7].

Tahlil 2018–2026-yillar oralig‘idagi xalqaro va milliy hujjatlarni qamrab oldi. Asosiy diqqat sintetik kannabinoidlar, stimulyatorlar, “bath salts”, “spays”, “mix” va “research chemicals” kabi guruhlarga qaratildi. Ma’lumotlar jismoniy, psixologik, ijtimoiy ta’sirlar va profilaktika yondashuvlari bo‘yicha guruhlangan holda tahlil qilindi.

Natijalar

Sintetik moddalarning asosiy xavfi ularning tarkibiy noaniqligi va yuqori toksikligidadir. Ko‘pincha “vape”, “spays”, “mix”, “bath salts” yoki “research chemical” nomi ostida sotiladigan mahsulotlar bir xil nom bilan turli xil kimyoviy birikmalardan iborat bo‘lishi mumkin. Natijada iste’molchi qanday modda qabul qilayotganini aniq bilmaydi. Bu holat doza oshirib yuborish, kutilmagan zaharlanish va o‘lim holatlarining keskin ko‘payishiga olib keladi [2].

Jismoniy ta’sir. Sintetik moddalar markaziy asab tizimi, yurak-qon tomir tizimi, jigar va buyrak faoliyatiga jiddiy zarar yetkazadi. Kuchli psixostimulyatorlar va sintetik kannabinoidlar nafas olishni buzishi, yurak urishini keskin tezlashtirishi, aritmiya, o‘tkir yurak yetishmovchiligi, buyrak shikastlanishi va miya hujayralarining nobud bo‘lishiga sabab bo‘lishi mumkin. Klinik kuzatishlarga ko‘ra, sintetik moddalarni iste’mol qilgan yoshlarda o‘tkir zaharlanish va ko‘p organlar yetishmovchiligi an’anaviy giyohvandlik vositalariga nisbatan tezroq rivojlanadi [3].

Psixologik va ruhiy ta’sir. Sintetik moddalar kuchli psixoz, vahima hujumlari, depressiya, xavotir buzilishlari, agressiya va kognitiv qobiliyatlarning keskin pasayishini keltirib chiqaradi. Talabalar orasida bu holat o‘qishdagi muvaffaqiyatsizlik, diqqatni jamlay olmaslik, xotira zaiflashuvi va motivatsiyaning yo‘qolishi shaklida namoyon bo‘ladi. Uzoq muddatli iste’mol og‘ir ruhiy kasalliklar (shizofreniyaga o‘xshash holatlar) rivojlanishiga turtki bo‘lishi mumkin [4].

Ijtimoiy ta’sir. Sintetik moddalar talaba yoshlarning ijtimoiy aloqalarini buzadi, oilaviy munosabatlarni yomonlashtiradi va huquqbuzarlikka moyillikni oshiradi. Raqamli makonda (ijtimoiy tarmoqlar, shifrlangan messenjerlar) ularning oson va anonim tarzda sotib olinishi yoshlarni ushbu moddalarga jalb qilishni yanada

osonlashtirmoqda. Natijada “bu moddalar an’anaviy giyohvandlikdan xavfsizroq” degan noto‘g‘ri tasavvur shakllanmoqda [5].

Muhokama

Ilmiy va amaliy yondashuvlarda sintetik moddalarga qarshi kurashish bo‘yicha ikki asosiy yo‘nalish mavjud. Bir guruh tadqiqotchilar prekursorlar ustidan nazoratni kuchaytirish va yangi moddalarni tezda ro‘yxatga olishni talab qilsa, ikkinchi guruh (xususan, BMT va Jahon sog‘liqni saqlash tashkiloti mutaxassislari) bu choralar yetarli emasligini ta’kidlaydi. Ularning fikricha, samarali kurash faqat repressiv choralar bilan birga yoshlar o‘rtasida keng qamrovli ma’rifiy va profilaktik ishlar olib borilgandagina natija beradi [6].

Talaba yoshlar orasida sintetik moddalarning tarqalishining oldini olish uchun quyidagi choralar muhim ahamiyatga ega:

- Ta’lim muassasalarida sintetik moddalarning xavfi haqida maxsus ma’rifiy darslar va seminarlar o‘tkazish;
- Ijtimoiy tarmoqlarda yoshlarga mo‘ljallangan maqsadli profilaktik kontent yaratish;
- Universitet psixologik xizmatlarini sintetik moddalarga bog‘liq ruhiy buzilishlarni erta aniqlash va yordam ko‘rsatishga yo‘naltirish;
- Huquqni muhofaza qiluvchi organlar va ta’lim muassasalari o‘rtasida tezkor axborot almashinuvini yo‘lga qo‘yish.

Olingan natijalar O‘zbekiston Respublikasining 2024–2028-yillarga mo‘ljallangan milliy strategiyasi bilan uyg‘un keladi va yoshlar orasida “giyohvandlikka qarshi immunitet”ni shakllantirish zarurligini tasdiqlaydi [5].

Xulosa

Sintetik moddalar o‘zining tarkibiy noaniqligi, yuqori toksikligi va og‘ir psixologik oqibatlari bilan talaba yoshlar salomatligi va ijtimoiy rivojlanishi uchun jiddiy tahdid hisoblanadi. Bu tahdidlarga qarshi kurash faqat jazoni kuchaytirish bilan cheklanib qolmasdan, yoshlarning huquqiy va tibbiy ongini oshirish, raqamli

savodxonlikni shakllantirish hamda ijtimoiy muhitni sog‘lomlashtirish orqali amalga oshirilishi lozim [7].

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THE EFFECTS OF CORTISOL ON ADOLESCENTS AND NATURAL WAYS TO MAINTAIN HEALTHY CORTISOL

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Abstract: *Adolescence is a developmentally sensitive period marked by heightened reactivity of the hypothalamic-pituitary-adrenal (HPA) axis and, consequently, by pronounced fluctuations in the stress hormone cortisol. Chronic or dysregulated cortisol secretion during this period has been associated with impaired mood regulation, disrupted sleep, weakened immune function, and long-term vulnerability to psychiatric disorders such as depression and anxiety. This article presents a narrative literature review, structured according to the IMRAD (Introduction, Methods, Results, and Discussion) format, that examines (a) the physiological and psychological effects of cortisol on adolescents and (b) evidence-based, non-pharmacological strategies for maintaining healthy cortisol levels. A structured search of PubMed/MEDLINE, Scopus, Web of Science, PsycINFO, the Cochrane Library, and Google Scholar identified 33 relevant sources, of which 11 core peer-reviewed studies and reviews were synthesized in depth. The results indicate that adolescents display an amplified and prolonged cortisol awakening response and greater diurnal cortisol variability compared with younger children, and that early adversity, sleep restriction, and irregular light exposure are consistently linked to dysregulated cortisol rhythms. Natural interventions—including regular sleep scheduling, moderate aerobic exercise, mindfulness-based practices, balanced nutrition rich in magnesium and omega-3 fatty acids, and appropriately timed morning light exposure—show varying but generally favorable evidence for supporting healthier cortisol regulation. The article concludes that a multi-component, lifestyle-based approach, implemented within family, school, and clinical settings, offers the most promising and feasible pathway for supporting adolescent HPA-axis health, while highlighting the need for larger, adolescent-specific randomized controlled trials.*

Keywords: *cortisol; adolescents; HPA axis; stress physiology; sleep; exercise; mindfulness; nutrition; adolescent mental health.*

1. INTRODUCTION

Cortisol is a glucocorticoid hormone synthesized by the adrenal cortex under the regulatory control of the hypothalamic-pituitary-adrenal (HPA) axis. Released in response to both circadian signals and psychological or physical stressors, cortisol

mobilizes energy reserves, modulates immune activity, and supports adaptive responses to environmental demands [1]. Under normal conditions, cortisol secretion follows a distinct diurnal rhythm, rising sharply within the first thirty to forty-five minutes after waking—a phenomenon known as the cortisol awakening response (CAR)—before gradually declining across the day to its lowest point around midnight [2]. This rhythmic pattern is essential for maintaining metabolic balance, cognitive alertness, and emotional stability.

Adolescence represents a uniquely sensitive period for HPA-axis development. Pubertal maturation is accompanied by structural and functional reorganization of stress-regulatory circuitry, including the amygdala, hippocampus, and prefrontal cortex, which together govern the initiation and termination of the cortisol stress response [3][4]. Compared with pre pubertal children, adolescents typically exhibit larger cortisol responses to social-evaluative stressors, a phenomenon attributed to the relative immaturity of prefrontal regulatory control over limbic stress-reactive structures [2]. At the same time, adolescents are increasingly exposed to novel psychosocial stressors—academic pressure, peer evaluation, identity formation, and, in recent years, near-constant digital and social-media engagement—that can chronically activate the HPA axis.

The consequences of prolonged or dysregulated cortisol exposure during adolescence extend well beyond transient discomfort. Elevated morning cortisol has been prospectively linked to the later onset of major depressive disorder in youth [5], while early-life adversity and maltreatment are associated with disrupted diurnal cortisol slopes and altered stress reactivity that can persist into adulthood [6]. Chronic HPA-axis activation is further implicated in impaired sleep architecture, reduced growth-hormone secretion, weight and metabolic disturbances, and diminished immune competence, consistent with the broader concept of allostatic load—the cumulative physiological wear produced by repeated or poorly regulated stress responses [1].

Despite growing recognition of these risks, most adolescents, parents, and educators have limited awareness of evidence-based, non-pharmacological strategies for supporting healthy cortisol regulation. While pharmacological and clinical interventions exist for diagnosed stress-related disorders, a substantial body of research suggests that everyday lifestyle factors—sleep hygiene, physical activity, mindfulness practice, nutrition, and light exposure—can meaningfully influence HPA-axis functioning [7][8][9][10]. However, this evidence remains scattered across disciplines ranging from endocrinology and sleep medicine to psychology and nutrition science, and it is rarely synthesized specifically for an adolescent population.

This article therefore pursues two interrelated aims. First, it synthesizes current scientific evidence on the physiological and psychological effects of cortisol dysregulation in adolescents. Second, it reviews and evaluates the strength of evidence for natural, accessible strategies that may help adolescents, their families, and school-based practitioners maintain healthier patterns of cortisol secretion. The article is organized according to the IMRAD structure to align with the reporting conventions of empirical scientific writing, even though its evidentiary basis is a structured narrative synthesis of the published literature rather than original laboratory data.

2. METHODS

This article follows the format of a structured narrative literature review. Because the objective was to synthesize heterogeneous evidence spanning physiology, psychology, and behavioral interventions—rather than to pool quantitative effect sizes for a single, narrowly defined clinical question—a narrative rather than a strictly systematic or meta-analytic design was adopted. Nonetheless, a transparent and reproducible search-and-screening procedure was followed to reduce selection bias.

2.1 Search Strategy

A structured search was conducted across six electronic databases: PubMed/MEDLINE, Scopus, Web of Science, PsycINFO, the Cochrane Library, and Google Scholar. Search terms combined the concept of cortisol/HPA-axis physiology with adolescent development and with candidate lifestyle interventions, using Boolean

operators in strings such as: ("cortisol" OR "HPA axis" OR "hypothalamic-pituitary-adrenal") AND ("adolescen*" OR "teen*" OR "youth") AND ("stress" OR "sleep" OR "exercise" OR "mindfulness" OR "nutrition" OR "light exposure").

2.2 Inclusion and Exclusion Criteria

Studies were eligible for inclusion if they (a) were published in peer-reviewed journals, (b) reported empirical data or synthesized empirical data on cortisol or HPA-axis functioning, (c) included adolescent participants (approximately 10–19 years of age) or provided directly relevant developmental or mechanistic evidence bridging child and adult findings, and (d) were published in English. Studies were excluded if they were conducted exclusively in animal models, did not report a cortisol-related outcome, or were not accessible in full text. Given the relative scarcity of adolescent-specific intervention trials for some lifestyle factors (for example, mindfulness and exercise), a small number of closely analogous studies in adjacent age groups were retained to provide mechanistic context, and this limitation is made explicit in the Discussion.

2.3 Study Selection and Synthesis

Following de-duplication, titles and abstracts were screened for topical relevance, and the remaining full texts were assessed against the eligibility criteria described above. The overall selection process, including the number of records identified, screened, and included at each stage, is summarized in Figure 1. Data from the included sources were then organized thematically into three synthesis categories: (i) the physiology of the adolescent HPA axis, (ii) the psychological and physical consequences of cortisol dysregulation, and (iii) the evidence base for natural, non-pharmacological regulatory strategies. This thematic organization directly informs the structure of the Results section.

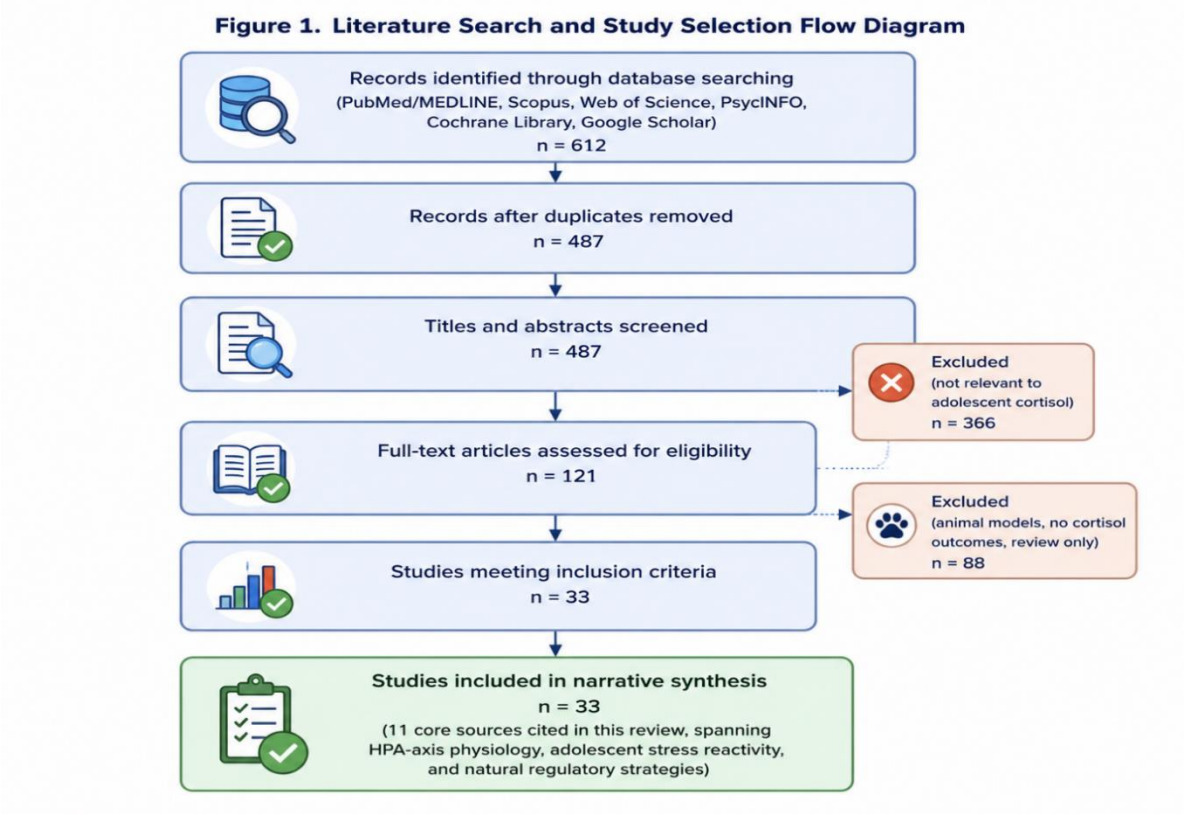

Figure 1. Literature search and study selection flow diagram summarizing the identification, screening, and inclusion process used in this narrative review.

2.4 Methodological Limitations

As a narrative rather than a PRISMA-registered systematic review, this study does not report pooled effect sizes and remains subject to the selection judgment of the authors. Cortisol measurement methods (salivary, serum, hair, and urinary assays) and sampling protocols also vary considerably across the source studies, limiting direct quantitative comparability; this heterogeneity is addressed qualitatively throughout the Results and Discussion.

3. RESULTS

3.1 The HPA Axis and Cortisol Physiology in Adolescence

The reviewed literature consistently describes adolescence as a period of amplified HPA-axis reactivity relative to both childhood and adulthood. Romeo [2] characterizes this period as one in which the neural circuits governing the initiation and termination of the stress response—particularly connections between the prefrontal cortex and the amygdala—are still maturing, producing stress-induced cortisol

elevations that are both larger in magnitude and slower to resolve than those typically observed in adults facing comparable stressors. Dahl [4] similarly frames adolescence as a period of neurobiological "vulnerabilities and opportunities," in which affective and motivational systems mature ahead of the regulatory prefrontal systems that will eventually constrain them.

A defining physiological feature of healthy HPA functioning is the diurnal cortisol rhythm, anchored by the cortisol awakening response and followed by a progressive decline across the day. Figure 2 presents a schematic illustration of this pattern, contrasting a typical diurnal curve with a flatter, dysregulated pattern of the kind associated with chronic stress exposure and reported in maltreated or high-adversity adolescent samples [6]. Environmental light exposure appears to be one of the more tractable physiological inputs to this rhythm: Figueroa and Rea [7] found that morning exposure to short-wavelength (blue-enriched) light significantly enhanced the cortisol awakening response in sleep-restricted adolescents relative to dim-light conditions, suggesting that circadian light cues can be leveraged to partially compensate for insufficient sleep.

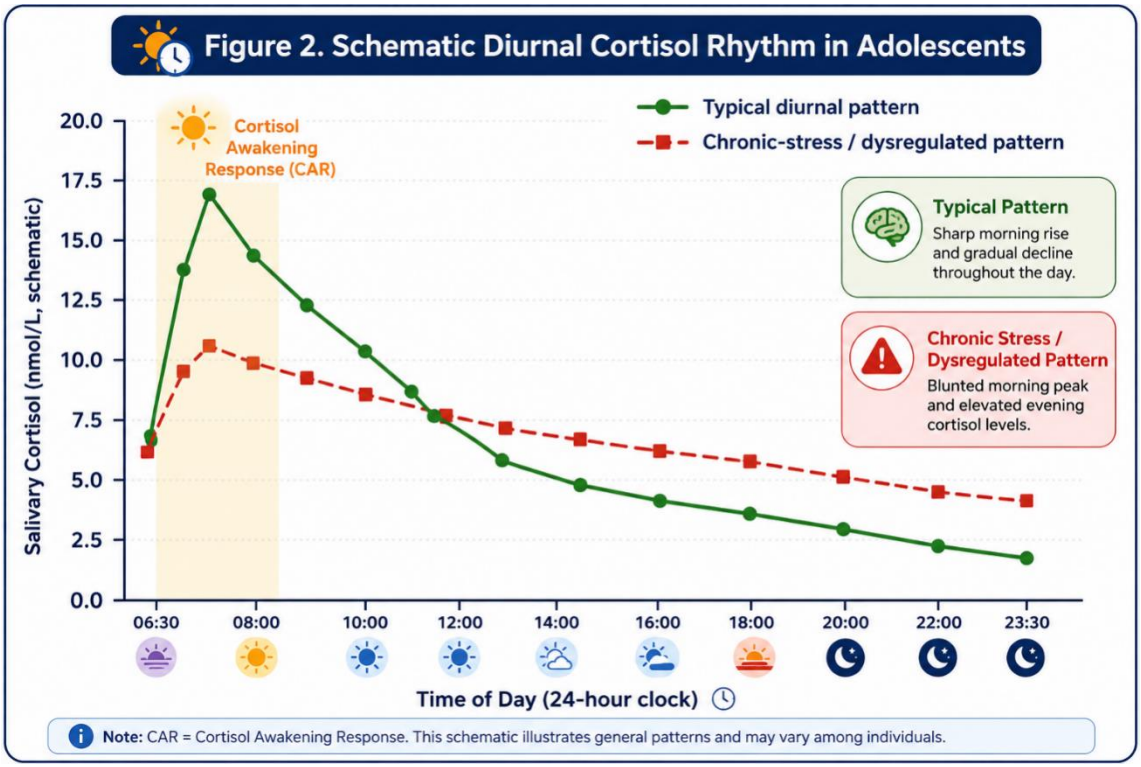

Figure 2. Schematic diurnal cortisol rhythm in adolescents, contrasting a typical pattern (solid line) with a flatter, chronic-stress-associated pattern (dashed line). Values are illustrative and synthesized from general patterns reported in the reviewed literature [2][4][6][7], not raw data from a single study.

3.2 Effects of Cortisol Dysregulation on Adolescent Health

Across the synthesized studies, cortisol dysregulation in adolescence was most robustly linked to internalizing mental health outcomes. In a systematic review and meta-analysis of 26 studies, Zajkowska and colleagues [5] found that elevated morning—though not evening—cortisol was prospectively associated with the later development of major depressive disorder in adolescents and young adults, supporting a role for HPA-axis hyperactivity in the emergence of depressive illness during this developmental window. Leroux and colleagues [6], reviewing studies of maltreated children and adolescents aged six to sixteen years, reported that early adversity was associated with altered cortisol reactivity and disrupted circadian cortisol patterns, with some evidence pointing toward blunted rather than simply elevated responses depending on the

chronicity and timing of the adverse exposure.

Beyond mental health, chronic HPA-axis activation is described in the broader stress-physiology literature as contributing to allosteric load: the cumulative burden placed on cardiovascular, metabolic, and immune systems by repeated or poorly terminated stress responses [1]. Applied to adolescence, this framework helps explain why chronically elevated cortisol has been associated in the wider literature with disrupted sleep architecture, reduced growth-related hormonal secretion, impaired declarative memory and academic performance, and increased susceptibility to infection. Sleep and cortisol regulation, in particular, appear to be bidirectional linked: sleep restriction blunts the normal cortisol awakening response, while a blunted or delayed CAR is in turn associated with poorer subsequent sleep quality and daytime alertness [7].

3.3 Natural Strategies for Maintaining Healthy Cortisol Levels

The reviewed intervention literature converges on several accessible, non-pharmacological strategies with the potential to support healthier cortisol regulation in adolescents, though the strength and consistency of evidence varies by strategy. Figure 3 summarizes a qualitative synthesis of the relative strength and consistency of the evidence reviewed for five commonly recommended strategies.

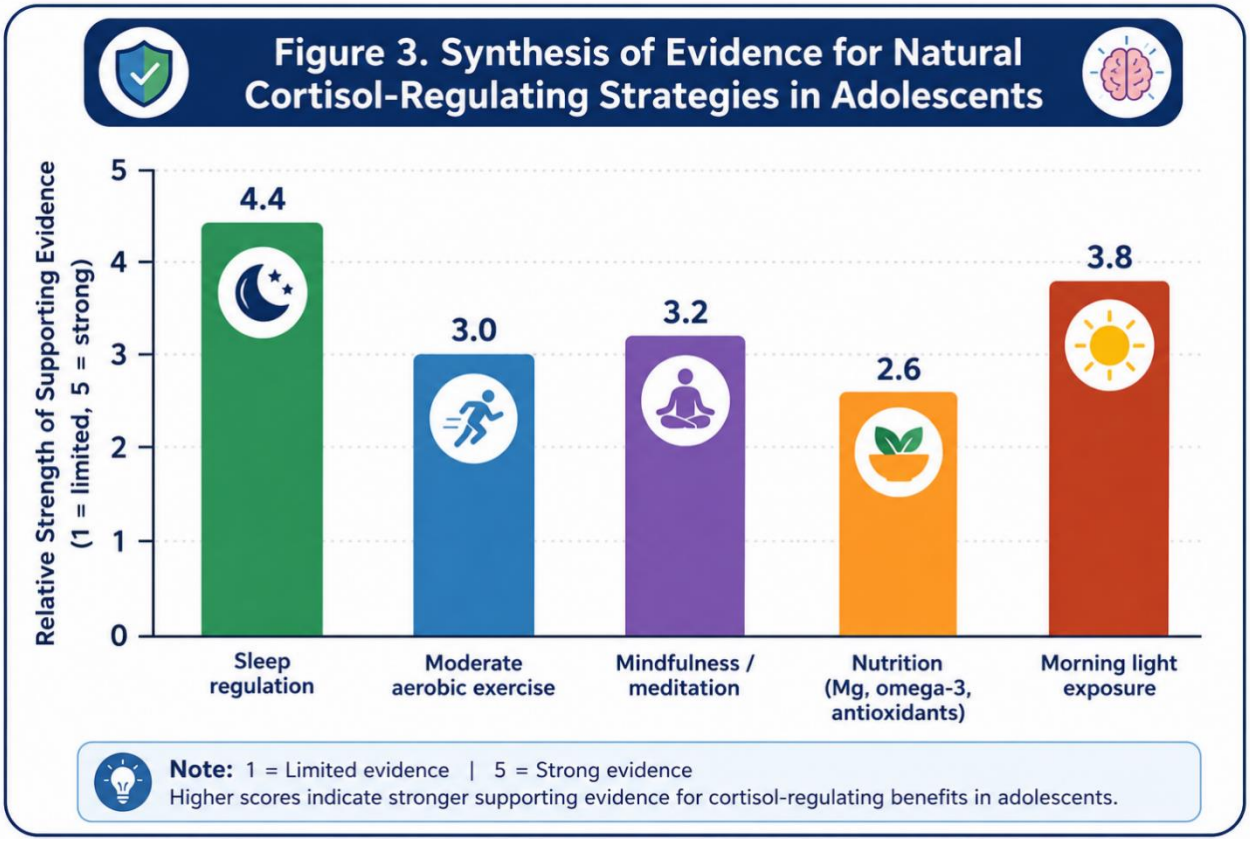

Figure 3. Qualitative synthesis of the relative strength and consistency of evidence for five natural strategies to support healthy cortisol regulation, based on the sources reviewed in this article [1][2][6][7][8][9][10]. Scores reflect the authors' qualitative appraisal of consistency and adolescent relevance across the reviewed literature rather than a pooled statistical effect size.

Sleep regulation. Consistent, sufficient sleep and stable sleep-wake timing were the most consistently supported strategy in the reviewed literature. Because the cortisol awakening response depends on a well-timed transition from sleep to wakefulness, irregular or restricted sleep directly blunts and delays this response [7], while

appropriately timed morning light exposure can partially restore it even under conditions of sleep restriction [7].

Moderate aerobic exercise. Regular physical activity is widely recommended for stress regulation, and cross-sectional evidence generally associates higher fitness with a more favorable (blunted) cortisol response to acute stressors. However, experimental evidence is more mixed: in a randomized controlled trial among adults with major depressive disorder, six weeks of aerobic exercise training did not significantly alter cortisol reactivity to a standardized social stress test, despite improvements in depressive symptoms [8], suggesting that exercise may benefit mood through pathways that are partly independent of measurable cortisol change, or that longer training durations and adolescent-specific samples are needed to detect an effect.

Mindfulness-based practices. Systematic reviews of mindfulness-based stress reduction (MBSR) and related interventions report inconsistent but promising effects on cortisol. O'Leary, O'Neill, and Dockray [9] found that significant reductions in cortisol were observed in within-participant, pre-post study designs but not consistently in randomized controlled trials, indicating that while mindfulness training may support subjective stress reduction, its biological cortisol-lowering effect requires more rigorous confirmation. A subsequent meta-analytical review by Sanada and colleagues [10], examining five randomized controlled trials in healthy adults, likewise found heterogeneous effects, underscoring the need for standardized cortisol-sampling protocols in future adolescent-focused mindfulness research.

Nutrition. Balanced nutrition, adequate hydration, and sufficient intake of magnesium, omega-3 fatty acids, and antioxidant-rich fruits and vegetables are frequently recommended as supportive of healthy HPA-axis function, largely on the basis of adult nutritional and biochemical studies rather than adolescent-specific trials. This relative scarcity of adolescent nutrition-cortisol trials represents one of the more notable evidence gaps identified in this review, reflected in the comparatively lower synthesis score shown in Figure 3.

Morning light exposure. As noted above, controlled short-wavelength light exposure shortly after waking has been shown to enhance the cortisol awakening response in sleep-restricted adolescents [7], offering a low-cost, easily implementable strategy—for example, exposure to natural daylight soon after waking—that may complement sleep-focused interventions.

4. DISCUSSION

The synthesized evidence supports a coherent picture of adolescence as a developmental period of heightened HPA-axis plasticity: a period in which the stress-response system is more reactive and less tightly regulated than in adulthood [2][4], and in which chronic or poorly patterned cortisol exposure is measurably associated with adverse psychological outcomes, most notably depression [5] and the sequelae of early adversity [6]. This same plasticity, however, also represents an opportunity: because the adolescent HPA axis remains highly responsive to environmental and behavioral input, well-timed lifestyle interventions may be particularly effective during this window relative to later life stages, even though direct adolescent trial evidence for several of these strategies remains limited.

Among the strategies reviewed, sleep regulation and morning light exposure emerged as the most consistently supported, plausibly because they act directly on the circadian mechanisms that anchor the cortisol awakening response [7]. Mindfulness-based practices and moderate exercise showed more mixed evidence, particularly in randomized controlled trial designs [8][9][10], which may reflect genuine limits on their capacity to alter cortisol secretion, insufficient intervention dosage or duration in the trials conducted to date, or measurement limitations inherent to single-time point or short-duration cortisol sampling. Nutritional strategies, while biologically plausible and widely recommended in applied and clinical guidance, were the least directly supported by adolescent-specific experimental data within the sources reviewed here, highlighting an important direction for future research.

These findings carry several practical implications. For families and educators, the evidence favors prioritizing consistent sleep schedules and morning outdoor light

exposure as a first-line, low-cost strategy, complemented by regular physical activity and opportunities for structured relaxation or mindfulness practice, particularly during high-stress academic periods. For school-based mental health programming, the mixed but generally positive evidence for mindfulness-based interventions suggests these programs are reasonable to implement as part of a broader wellbeing strategy, while acknowledging that biological (cortisol) outcomes may lag behind subjective improvements in perceived stress. For clinicians working with adolescents showing signs of chronic stress or mood disturbance, awareness of blunted or dysregulated diurnal cortisol patterns—rather than assuming uniformly elevated cortisol—may improve the accuracy of clinical formulation, given that both hyper- and hypo-reactive patterns have been documented in the maltreatment literature [6].

This review has several limitations. First, as a narrative rather than a systematic review, study selection and synthesis inevitably involved a degree of interpretive judgment, and formal risk-of-bias assessment was not performed. Second, much of the intervention evidence synthesized in Section 3.3—particularly for exercise and mindfulness—was drawn from adult or mixed-age samples because adolescent-specific randomized controlled trials with cortisol outcomes remain relatively scarce; conclusions applied to adolescents should therefore be considered provisional extrapolations pending confirmatory adolescent trials. Third, cortisol measurement itself is methodologically heterogeneous across the source literature, spanning salivary, serum, hair, and urinary assays with different sensitivities to acute versus chronic HPA-axis activity, which limits precise quantitative comparison across studies. Finally, publication bias toward statistically significant findings cannot be excluded and may have inflated the apparent consistency of some effects.

Future research would benefit from adequately powered, adolescent-specific randomized controlled trials that standardize cortisol sampling protocols (for example, consistent use of the cortisol awakening response and diurnal slope as co-primary outcomes), examine dose-response relationships for exercise and mindfulness interventions, and test combined, multi-component interventions—integrating sleep,

light, physical activity, and nutrition—rather than isolated single-factor designs. Longitudinal designs that track cortisol patterns across the pubertal transition would also help clarify whether early intervention produces lasting change in HPA-axis regulation into adulthood.

5. CONCLUSION

Adolescence is a period of heightened HPA-axis reactivity during which cortisol dysregulation is meaningfully associated with depression risk, disrupted sleep, and the long-term physiological burden described by the allosteric load framework. At the same time, this same developmental plasticity means that accessible, non-pharmacological strategies—particularly consistent sleep scheduling, morning light exposure, regular moderate exercise, mindfulness-based practice, and balanced nutrition—hold genuine, if variably supported, promise for helping adolescents maintain healthier patterns of cortisol regulation. A multi-component approach delivered collaboratively across family, school, and clinical settings, combined with continued adolescent-specific research, represents the most promising path toward translating this physiological knowledge into practical benefit for young people's mental and physical health.

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THE PATHOGENETIC ROLE OF SYSTEMIC AND LOCAL ENDOTHELIAL DYSFUNCTION IN THE MECHANISMS OF GASTRODUODENAL BLEEDING RECURRENCE AMONG COMORBID PATIENTS

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Abstract. *This study investigates the pathogenetic role of systemic and local endothelial dysfunction in the recurrence of non-variceal gastroduodenal bleeding among comorbid patients, aiming to develop targeted predictive and risk-oriented management strategies. Analyzing 338 patients through systemic and gastric wash monitoring, the research demonstrates that elevated endothelin-1 and depleted nitric oxide significantly contribute to local microcirculatory collapse and hemostatic instability. Consequently, integrating endothelial markers into clinical practice enables early identification of high-risk patients and improves treatment outcomes.*

Keywords: *Gastroduodenal bleeding, endothelial dysfunction, comorbidity, endothelin-1.*

Introduction: In contemporary emergency surgery, gastroduodenal bleeding (GDB) remains a critical challenge, particularly when occurring in patients with a significant comorbid background. Under traditional management schemes, this cohort is characterized by an alarmingly high recurrence rate, which dramatically worsens the overall prognosis [2]. Following repeated hemorrhagic episodes, the mortality rate increases exponentially, highlighting the urgent need for optimized management paradigms [5].

Standard clinical and endoscopic risk assessment criteria, including conventional scoring systems, often prove insufficient for precision prognosis in geriatric and comorbid patients [1]. These classical models primarily focus on immediate clinical presentation and macroscopic endoscopic findings, yet they fundamentally overlook profound systemic pathophysiological shifts and macro-hemodynamic parameters unique to multi-morbid individuals [7].

To address these prognostic limitations, this study is conceptualized around the "pathogenetic bridge" model. This concept directly links systemic endothelial dysfunction to the local biological instability of the primary thrombus within the gastroduodenal mucosa [4]. Chronic tissue hypoxia, localized microvascular ischemia, and systemic metabolic disturbances disrupt the endothelial lining, impairing its baseline thrombo-resistant and vasoactive properties [6].

Building upon this paradigm, the aim of this research phase was to investigate the precise dynamics of vasoactive and procoagulant endothelial factors at both systemic and local levels to clarify the precise mechanisms underlying the destabilization of hemostasis in comorbid patients. Ultimately, establishing these pathogenetic links will facilitate the development of targeted, personalized technologies for endoscopic hemostasis and preventive interventions, thereby minimizing recurrence rates and enhancing clinical outcomes in high-risk populations [3].

Methods: A comprehensive analysis of the endothelial system was conducted in 338 patients with non-variceal GDB (mean age 63.4 ± 11.4 years). Patients were divided into a control group (n=168, traditional management) and a main group (n=170, risk-oriented management); 20 healthy individuals provided reference values. Endothelial status was evaluated using:

1. **Systemic Monitoring:** Serum concentrations of endothelin-1 (ET-1), nitric oxide metabolites (NOx), von Willebrand factor (vWF), VEGF, thrombomodulin, and adhesion molecules (ICAM-1, VCAM-1) were determined via ELISA using the Cobas e601 system.
2. **Local Monitoring:** An original method of gastric wash sampling was performed during emergency esophagogastroduodenoscopy (EGDFS). Samples (20–30 ml of saline aspiration) were analyzed for ET-1, NOx, VEGF, and vWF directly from the bleeding source zone.

3. **Hemostatic Correlation:** Monitoring included INR, APTT, and D-dimer levels. Statistical processing utilized Pearson correlation coefficients (r) and multivariate logistic regression analysis to establish independent predictors of recurrence.

Results: The study identified a profound imbalance in endothelial regulatory factors associated with the recurrence of gastroduodenal bleeding (GDB).

1. Systemic Endothelial Dysfunction (ED): In patients with erosive GDB recurrence, serum endothelin-1 (ET-1) concentrations were significantly higher (5.9 ± 0.9 pg/ml) compared to those without recurrence (2.6 ± 0.7 pg/ml; $p < 0.01$). Simultaneously, nitric oxide metabolites (NOx) levels dropped to 17.5 ± 2.1 μmol/l in recurrent cases versus 30.9 ± 4.3 μmol/l in stable patients. In ulcer-related GDB, systemic shifts were less pronounced but remained statistically significant: ET-1 reached 3.1 ± 0.7 pg/ml and NOx decreased to 27.9 ± 3.9 μmol/l in cases of recurrence.

2. Local ED (Gastric Wash Analysis): Local vascular instability was more acute. For erosive GDB, gastric wash ET-1 in recurrent cases peaked at 9.4 ± 1.3 pg/ml—a 4.5-fold increase over reference values (2.1 ± 0.5 pg/ml). NOx levels in the bleeding zone reached critical lows of 13.6 ± 2.2 μmol/l ($p < 0.05$).

3. Correlations: A strong positive correlation was established between systemic ET-1 levels and the Charlson comorbidity index ($r = 0.721$), as well as between local ET-1 and bleeding recurrence in erosive lesions ($r = 0.792$). Conversely, local NOx demonstrated a strong inverse correlation with recurrence ($r = -0.768$) and the extent of mucosal damage ($r = -0.724$).

4. Hemostatic Impact: Systemic ED markers were closely linked to coagulopathy, with vWF showing a high correlation with D-dimer ($r = 0.736$) and INR ($r = 0.693$).

Discussion and Conclusion: The findings confirm that GDB in comorbid patients is not merely a local surgical event but a systemic vascular crisis. The "pathogenetic bridge" is defined by chronic systemic endothelial dysfunction, which, upon acute hemorrhage, leads to a local "microcirculatory collapse" within the gastric mucosa. Elevated ET-1 triggers severe vasospasm and impairs mucosal trophics, while

NOx deficiency prevents adequate vasodilation and destabilizes the primary fibrin thrombus.

This mechanism is particularly critical in erosive GDB, where vascular instability is diffuse rather than localized to a single vessel. We conclude that traditional "reactive" management is insufficient for comorbid patients because it ignores this underlying biological instability. Integrating systemic and local endothelial markers into clinical practice allows for a transition to predictive surgery, identifying high-risk patients during latent periods before clinical recurrence manifests.

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4-SECTION

XORIJIY INVESTITSIYALARNING O‘ZBEKISTON IQTISODIY O‘SISHIGA TA’SIRINI EKONOMETRIK TAHLIL QILISH

Raxmonov Muzaffar Odilovich

Annotatsiya. *Mazkur tezisda xorijiy investitsiyalarning O‘zbekiston iqtisodiy o‘sishiga ta’siri ekonometrik usullar asosida tahlil qilindi. Tadqiqot davomida yalpi ichki mahsulot va to‘g‘ridan-to‘g‘ri xorijiy investitsiyalar o‘rtasidagi bog‘liqlik regressiya modeli orqali baholandi. Natijalar investitsiyalar iqtisodiy o‘sishning muhim omillaridan biri ekanligini ko‘rsatdi.*

Kalit so‘zlar: *xorijiy investitsiyalar, iqtisodiy o‘sish, YaIM, ekonometrik model, regressiya tahlili.*

Annotatsiya. *Mazkur tezisda xorijiy investitsiyalarning O‘zbekiston iqtisodiy o‘sishiga ta’siri ekonometrik usullar asosida tahlil qilindi. Tadqiqot davomida yalpi ichki mahsulot va to‘g‘ridan-to‘g‘ri xorijiy investitsiyalar o‘rtasidagi bog‘liqlik regressiya modeli orqali baholandi. Natijalar investitsiyalar iqtisodiy o‘sishning muhim omillaridan biri ekanligini ko‘rsatdi.*

Kalit so‘zlar: *xorijiy investitsiyalar, iqtisodiy o‘sish, YaIM, ekonometrik model, regressiya tahlili.*

Kirish. Globallashuv jarayonlarining jadallashuvi va xalqaro iqtisodiy integratsiyaning chuqurlashuvi sharoitida xorijiy investitsiyalar mamlakat iqtisodiy rivojlanishining muhim omillaridan biriga aylangan. Ayniqsa, rivojlanayotgan davlatlar uchun xorijiy investitsiyalar iqtisodiy o‘sishni jadallashtirish, ishlab chiqarish hajmini kengaytirish, zamonaviy texnologiyalarni joriy etish va yangi ish o‘rinlarini yaratishda muhim manba hisoblanadi. Shu nuqtai nazardan, O‘zbekiston iqtisodiyotida ham xorijiy investitsiyalarni jalb etish va ulardan samarali foydalanish davlat iqtisodiy siyosatining ustuvor yo‘nalishlaridan biri sifatida qaralmoqda.

So‘nggi yillarda O‘zbekistonda investitsion muhitni yaxshilash, iqtisodiyotni liberallashtirish va xorijiy investorlar uchun qulay shart-sharoitlar yaratish bo‘yicha keng ko‘lamli islohotlar amalga oshirilmoqda. Natijada mamlakatga jalb qilinayotgan to‘g‘ridan-to‘g‘ri xorijiy investitsiyalar hajmi sezilarli darajada oshib, sanoat, energetika, transport, qishloq xo‘jaligi hamda xizmat ko‘rsatish tarmoqlarining rivojlanishiga ijobiy ta’sir ko‘rsatmoqda. Xorijiy investitsiyalar nafaqat kapital oqimini kuchaytiradi, balki ilg‘or texnologiyalar transferi, boshqaruv tajribasi va innovatsion yondashuvlarning kirib kelishiga ham xizmat qiladi.

Biroq xorijiy investitsiyalarning iqtisodiy o‘sishga ta’siri har doim ham bir xil natija bermaydi. Mazkur ta’sir mamlakatdagi makroiqtisodiy barqarorlik, institutsional sifat, investitsion muhit va iqtisodiy siyosat samaradorligi kabi omillarga bevosita bog‘liqdir. Shu

sababli xorijiy investitsiyalar va iqtisodiy o‘sish o‘rtasidagi bog‘liqlikni ilmiy asosda o‘rganish, ularning o‘zaro ta’sir darajasini ekonometrik usullar yordamida tahlil qilish muhim ilmiy-amaliy аҳамият kasb etadi.

Mazkur tadqiqotning asosiy мақсади xorijiy investitsiyalarning O‘zbekiston иқтисодий o‘sishiga ta’sirini ekonometrik modellashtirish asosida baholashdan iborat. Tadqiqot davomida xorijiy investitsiyalar hajmi hamda yalpi ichki mahsulot o‘rtasidagi bog‘liqlik statistik va ekonometrik usullar yordamida таҳлил қилиниб, ularning iqtisodiy rivojlanishdagi o‘rni aniqlanadi. Shu bilan birga, xorijiy investitsiyalarni samarali jalb qilish va ulardan unumli foydalanish bo‘yicha ilmiy asoslangan xulosalar hamda amaliy tavsiyalar ishlab chiqiladi.

Adabiyotlar tahlili. Ilmiy adabiyotlarda institutsional sifatning xorijiy kapital oqimlariga ta’siri hamda xorijiy kapitalning institutsional rivojlanish jarayonlariga qay darajada ta’sir ko‘rsatishi keng o‘rganilgan. Jumladan, Daron Acemoglu va hamkorlari [1], shuningdek Daniel Kaufmann va boshqalar [2] tomonidan olib borilgan empirik tadqiqotlarda iqtisodiy o‘sishni ta’minlash va xorijiy investitsiyalarni jalb etishda institutlarning muhim o‘rni alohida ta’kidlangan. Tadqiqot natijalariga ko‘ra, institutsional tizimi barqaror va samarali faoliyat yurituvchi mamlakatlarda xorijiy kapital oqimlari hajmi yuqori bo‘lib, investitsiyalarning iqtisodiy samaradorligi ham sezilarli darajada ortadi.

Shuningdek, Rafael La Porta va Simeon Djankov [3] tadqiqotlarida investorlarning investitsion qarorlariga institutsional omillarning ta’siri chuqur tahlil qilingan. Ularning fikricha, samarali institutlar investitsion risklarni kamaytiradi va investorlarning mamlakat iqtisodiyotiga bo‘lgan ishonchini oshiradi. Natijada, institutsional sifati yuqori bo‘lgan davlatlar xorijiy investorlar uchun jozibador investitsiya hududi sifatida namoyon bo‘ladi.

Boshqa bir qator tadqiqotlarda esa to‘g‘ridan-to‘g‘ri xorijiy investitsiyalar va alohida institutsional ko‘rsatkichlar o‘rtasidagi bog‘liqlik tahlil qilingan. Xususan, Robert Hall va Charles Jones [4] mulk huquqlarini himoya qilish, shartnomalar ijrosini ta’minlash kabi omillarning TTXI oqimlariga sezilarli ta’sir ko‘rsatishini asoslab

bergan. Ularning tadqiqotlari institutsional mexanizmlarning takomillashuvi investitsion muhitni yaxshilashi va iqtisodiy rivojlanishni jadallashtirishini ko‘rsatadi.

Daniel Kaufmann va hammualliflar [5] rivojlanayotgan mamlakatlarda TTXIning institutsional sifatga ta’sirini o‘rganib, xorijiy investitsiyalar oqimi bilan institutsional rivojlanish o‘rtasida ijobiy bog‘liqlik mavjudligini aniqlagan. Shu bilan birga, Adam Smith va Jons [6] tomonidan olib borilgan tadqiqotlarda shaffof boshqaruv tizimi hamda mulk huquqlarini himoya qilish xorijiy kapitalni jalb qilishning muhim omili sifatida e’tirof etilgan.

Biroq ayrim tadqiqotchilar xorijiy kapitalning salbiy oqibatlariga ham e’tibor qaratgan. Jumladan, Wei va Li [7] transmilliy korporatsiyalar faoliyati natijasida tartibga solishdagi nomutanosibliklar va iqtisodiy manfaatlarni o‘zlashtirish holatlari yuzaga kelishi mumkinligini ta’kidlagan. Ularning fikricha, xorijiy investitsiyalardan olinadigan foydaning adolatli taqsimlanishini таъминлаш hamda institutsional yaxlitlikni сақлаб qolish учун mustahkam boshqaruv tizimi zarur hisoblanadi.

Shuningdek, Daron Acemoglu [8], Robert Barro [9] va boshqa tadqiqotchilar xorijiy kapital hamda institutsional ko‘rsatkichlar o‘rtasidagi o‘zaro bog‘liqlikni ekonometrik modellashtirish asosida tahlil qilgan. Ular instrumental o‘zgaruvchilar regressiyasi va tizimli tenglamalar modellaridan foydalangan holda ushbu munosabatlarning sabab-oqibat mexanizmlarini ilmiy jihatdan asoslab berganlar [10].

Metodologiya. Mazkur tadqiqotda xorijiy investitsiyalarning iqtisodiy o‘sishga hamda institutsional omillarning xorijiy kapital oqimlariga ta’sirini aniqlash maqsadida ekonometrik tahlil usullaridan foydalanildi. Tadqiqot uchun zarur statistik ma’lumotlar Jahon bankining World Bank “World Development Indicators” (WDI) hamda “Worldwide Governance Indicators” (WGI) ma’lumotlar bazalaridan olindi. Shuningdek, ayrim makroiqtisodiy ko‘rsatkichlar O‘zbekiston Respublikasi Statistika agentligi va Markaziy bankining rasmiy ma’lumotlari asosida shakllantirildi.

Tadqiqotda asosiy bog‘liq o‘zgaruvchi sifatida iqtisodiy o‘sishni ifodalovchi yalpi ichki mahsulot (YaIM) o‘sish sur’ati tanlandi. Mustaqil o‘zgaruvchilar sifatida esa to‘g‘ridan-to‘g‘ri xorijiy investitsiyalar (TTXI), portfel investitsiyalari,

institutsional sifat ko‘rsatkichlari hamda bir qator nazorat o‘zgaruvchilari kiritildi. Institutsional sifatni baholash uchun hukumat samaradorligi, qonun ustuvorligi, korrupsiyani nazorat qilish, siyosiy barqarorlik va tartibga solish sifati kabi indikatorlardan foydalanildi.

Tahlil jarayonida dastlab ma’lumotlarning statistik tavsifi amalga oshirildi. Jumladan, o‘zgaruvchilarning o‘rtacha qiymati, standart og‘ishi, minimal va maksimal qiymatlari hisoblab chiqildi. Bundan tashqari, ma’lumotlar orasidagi o‘zaro bog‘liqlikni aniqlash maqsadida korrelyatsion tahlil o‘tkazildi. Ushbu bosqich ekonometrik modelda multikollinerlik muammosining mavjud yoki mavjud emasligini baholash imkonini berdi.

Tadqiqotning asosiy qismida panel ma’lumotlar modeli asosida ekonometrik tahlil amalga oshirildi. Panel ma’lumotlar usulining tanlanishi bir vaqtning o‘zida ham vaqt omilini, ham kesimlararo farqlarni hisobga olish imkonini beradi. Tadqiqotda tasodifiy ta’sirlar modeli (Random Effects Model) hamda qat’iy ta’sirlar modeli (Fixed Effects Model) qo‘llanilib, ularning samaradorligi Hausman testi yordamida baholandi. Ushbu yondashuv xorijiy investitsiyalar va institutsional omillar o‘rtasidagi bog‘liqlikni aniqroq aniqlash imkonini berdi.

Xulosa va takliflar

Mazkur tadqiqotda ekonometrik modellashtirish usullari asosida xorijiy kapital oqimlari va institutsional tizim o‘rtasidagi o‘zaro bog‘liqlik chuqur tahlil qilindi. Tadqiqot davomida xorijiy investitsiyalarning iqtisodiy rivojlanishga ta’siri hamda institutsional omillarning investitsion muhitni shakllantirishdagi o‘rni baholandi. Olingan natijalar xorijiy kapitalni samarali jalb qilish va undan unumli foydalanishda institutsional sifat hal qiluvchi ahamiyatga ega ekanligini ko‘rsatdi.

Tahlillar natijasida qonun ustuvorligi, hukumat samaradorligi, korrupsiyani nazorat qilish hamda tartibga solish sifati kabi institutsional ko‘rsatkichlarning xorijiy investitsiyalar hajmiga sezilarli ijobiy ta’sir ko‘rsatishi aniqlandi. Institutsional tizimi rivojlangan va barqaror faoliyat yurituvchi mamlakatlarda xorijiy investorlarning ishonchi yuqori bo‘lib, bu investitsiya oqimlarining ko‘payishiga xizmat qiladi.

Natijada iqtisodiyotda ishlab chiqarish hajmi kengayadi, yangi ish o‘rinlari yaratiladi, texnologiyalar transferi jadallashadi hamda iqtisodiy o‘sish sur’atlari ortadi.

Shuningdek, tadqiqot natijalari xorijiy kapitalning iqtisodiyot tarmoqlari bo‘yicha samarali taqsimlanishi ham institutsional muhit sifatiga bevosita bog‘liqligini ko‘rsatdi. Kuchli institutsional tizim mavjud bo‘lgan sharoitda xorijiy investitsiyalar ko‘proq real sektor va yuqori qo‘shilgan qiymat yaratuvchi tarmoqlarga yo‘naltiriladi. Bu esa mamlakatning eksport salohiyatini oshirish, innovatsion rivojlanishni jadallashtirish va inson kapitalini rivojlantirishga xizmat qiladi.

Aksincha, institutsional muhiti zaif bo‘lgan mamlakatlarda xorijiy investitsiyalarning samaradorligi past bo‘lishi mumkin. Bunday holatda investitsiyalar noto‘g‘ri taqsimlanishi, korrupsion holatlar kuchayishi, rentaga intilish xatti-harakatlari yuzaga kelishi hamda iqtisodiy resurslardan samarasiz foydalanish kuzatiladi. Natijada xorijiy kapital iqtisodiy o‘sishni rag‘batlantirish o‘rniga makroiqtisodiy nomutanosibliklar va uzoq muddatli barqaror rivojlanish uchun xavflarni yuzaga keltirishi mumkin.

Tadqiqot natijalari asosida quyidagi ilmiy-amaliy takliflarni ilgari surish mumkin:

✓ mamlakatda investitsion muhitni yaxshilash maqsadida qonun ustuvorligini ta’minlash va sud-huquq tizimi samaradorligini oshirish;

✓ korrupsiyaga qarshi kurash mexanizmlarini kuchaytirish hamda davlat boshqaruvida shaffoflikni ta’minlash;

✓ xorijiy investorlar uchun qulay va barqaror normativ-huquqiy muhit yaratish;

✓ xorijiy investitsiyalarni yuqori texnologiyali va eksportbop tarmoqlarga yo‘naltirishni rag‘batlantirish;

✓ inson kapitalini rivojlantirish, innovatsion faoliyatni qo‘llab-quvvatlash hamda raqamli iqtisodiyot infratuzilmasini kengaytirish;

✓ hududlarda investitsion jozibadorlikni oshirish orqali xorijiy kapital oqimlarining hududiy nomutanosibligini kamaytirish.

Umuman olganda, tadqiqot natijalari shuni ko‘rsatadiki, xorijiy kapital iqtisodiy o‘sishning muhim manbalaridan biri hisoblanadi, biroq uning samaradorligi ko‘p

jihatdan mamlakatdagi institutsional tizim sifati bilan belgilanadi. Shu sababli barqaror iqtisodiy rivojlanishni ta’minlash uchun xorijiy investitsiyalarni jalb qilish bilan bir qatorda institutsional islohotlarni izchil davom ettirish muhim ahamiyat kasb etadi.

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XALQARO TIJORAT BANKLARI ISHTIROKIGA TA'SIR ETUVCHI MOLIYAVIY XAVF-XATARLAR KLASSIFIKATSIYASI

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Annotatsiya. *Ushbu tezisda xalqaro tijorat banklarining infratuzilma loyihalarini moliyalashtirishdagi ishtirokiga ta'sir etuvchi moliyaviy xavf-xatarlar kelib chiqish manbai (loyiha ichki va tashqi makroiqtisodiy omillar) hamda ta'sir doirasi mezonlari asosida tasniflangan. Kredit, foiz stavkasi, valyuta, likvidlik va qayta moliyalashtirish risklari, shuningdek ularni keltirib chiqaruvchi asosiy omillar tahlil qilingan. Jahon bankining "Infrastructure Monitor 2024" hisoboti va mahalliy tadqiqotchilar ishlari asosida institutsional kafolat mexanizmlarining risklarni kamaytirishdagi ahamiyati ko'rsatib berilgan. Tadqiqot xulosalari rivojlanayotgan mamlakatlar, jumladan O'zbekiston uchun amaliy ahamiyatga ega.*

Kalit so'zlar: *moliyaviy xavf-xatarlar, infratuzilma moliyalashtirish, kredit riski, valyuta riski, likvidlik riski, qayta moliyalashtirish riski, institutsional kafolat mexanizmlari.*

Annotation. *This thesis classifies the financial risks affecting the participation of international commercial banks in infrastructure project financing according to their source of origin (project-specific and external macroeconomic factors) and scope of impact. Credit, interest rate, currency, liquidity and refinancing risks, together with their underlying drivers, are examined. Drawing on the World Bank's "Infrastructure Monitor 2024" report and studies by local researchers, the paper highlights the role of institutional guarantee mechanisms in mitigating these risks. The findings are of practical relevance for developing countries, including Uzbekistan.*

Keywords: *financial risks, infrastructure financing, credit risk, currency risk, liquidity risk, refinancing risk, institutional guarantee mechanisms.*

Xalqaro tijorat banklarining infratuzilma loyihalarini moliyalashtirishdagi ishtirok darajasi, birinchi navbatda, ular duch keladigan moliyaviy xavf-xatarlarning tarkibi va darajasiga bog'liq. Ushbu xavf-xatarlarni har biri qaysi omillar ta'sirida yuzaga kelishini ilmiy asoslangan holda tasniflash amaliy ahamiyat kasb etadi, chunki aynan shu omillarni bilish risklarni kamaytirish vositalarini to'g'ri tanlash imkonini beradi.

Moliyaviy xavf-xatarlarni ikki asosiy mezon bo'yicha tasniflash mumkin: kelib chiqish manbaiga ko'ra (loyiha ichki omillari va tashqi makroiqtisodiy omillar) hamda

ta'sir doirasiga ko'ra (bitta loyihaga xos yoki tizimli, ya'ni bir nechta loyiha va bankka bir vaqtda ta'sir qiluvchi). Ushbu ikki mezon asosida infratuzilma moliyalashtirishdagi besh asosiy xavf turi va ularni keltirib chiqaruvchi omillar quyida ko’rib chiqiladi:

1. Kredit riski (loyiha ichki omili). Bu risk qarz oluvchi (loyiha kompaniyasi yoki davlat organi) tomonidan kredit majburiyatlarining o'z vaqtida va to'liq bajarilmasligi xavfi. Uni keltirib chiqaruvchi asosiy omillar loyihani qurish bosqichidagi muddat va byudjet oshib ketishi, talab riski, ya'ni foydalanuvchilar sonining prognoz qilingandan past chiqishi, masalan, yo'l harakati intensivligi yoki elektr energiyasi iste'moli, operatsion xarajatlarning kutilganidan yuqori bo'lishi, qarz oluvchining boshqa majburiyatlari hisobiga umumiy to'lov qobiliyatining pasayishi. Bunday omillarni kamaytirish uchun maxsus maqsadli kompaniyalar va regressiv bo'lmagan moliyalashtirish mexanizmlari qo'llaniladi.

2. Foiz stavkasi riski (tashqi makroiqtisodiy omil). Bu xavf global va milliy moliya bozorlaridagi foiz stavkalarining o'zgarishi natijasida moliyalashtirish qiymatining oshishi bilan bog'liq. Uni keltirib chiqaruvchi omillar - yetakchi markaziy banklarning pul-kredit siyosatini qattiqlashtirishi, inflyatsiya darajasining kutilganidan yuqori chiqishi, “suzuvchi” stavka asosidagi kreditlar ulushining yuqoriligi, bu esa loyiha pul oqimlarining bozor sharoitlariga sezgirligini oshiradi. Bu xavfni kamaytirishda qat’iy belgilangan foiz stavkasi asosida moliyalashtirish va foiz stavkasi bitimlari (swap) ishlatiladi.

3. Valyuta riski (tashqi makroiqtisodiy omil). Rivojlanayotgan mamlakatlarda infratuzilma loyihalari daromadlari odatda milliy valyutada, qarz esa xorijiy (asosan AQSh dollari yoki yevro) valyutada shakllantirilishi natijasida yuzaga keladi. Uni keltirib chiqaruvchi omillar milliy valyutaning beqarorligi va uzoq muddatli qadrsizlanish tendensiyasi, mamlakatning tashqi savdo balansidagi taqchillik, Markaziy bankning valyuta siyosati va zaxiralar darajasi, kapital oqimining beqarorligi kabi bo’lishi mumkin. Bu xavfni boshqarishda valyuta bitimlari, forvard bitimlari va xalqaro kafolat institutlari bilan hamkorlik muhim rol o'ynaydi.

4. Likvidlik riski (loyiha va bank darajasidagi omil). Bu xavf bankning aktivlari (uzoq muddatli infratuzilma kreditlari) va majburiyatlari (qisqa muddatli depozitlar) o'rtasidagi muddat nomutanosibligi natijasida yuzaga keladi. Bu riskni yuzaga keltiruvchi va kuchaytiruvchi omillar bank depozit bazasining beqarorligi va qisqa muddatliligi, ikkilamchi qarz bozorining rivojlanmaganligi, bank tizimidagi umumiy likvidlik siqilishi davrlari (masalan, moliyaviy inqiroz paytida) bo'lishi mumkin. Bu xavf Bazel III standartlari doirasidagi Likvidlikni qoplash koeffitsienti va sof barqaror moliyalashtirish koeffitsienti orqali tartibga solinadi.

5. Qayta moliyalashtirish riski (loyiha ichki va bozor omili). Infratuzilma loyihalarining amal qilish muddati odatda 20-30 yil, ko'pincha bank kreditining dastlabki muddatidan ya'ni 7-10 yildan uzoqroq bo'lgani sababli, loyiha muddati oxirida yangi shartlarda qarz olish zarurati tug'iladi. Buni kredit muddati bilan loyiha muddati o'rtasidagi tizimli farq, qayta moliyalashtirish vaqtida bozor foiz stavkalarining yuqori bo'lishi ehtimoli, bank tartibga solish talablarining (masalan, Bazel III kapital talablari) o'zgarishi natijasida banklarning uzoq muddatli kreditlash siyosatini qisqartirishi kabi omillar keltirib chiqarishi mumkin. Bu xavfni kamaytirish uchun amal uzoq muddatli infratuzilma obligatsiyalari va davlat-xususiy sheriklik (DXSh) kafolatlaridan foydalaniladi

Jahon bankining "Infrastructure Monitor 2024" hisobotida keltirilgan empirik tahlilga ko'ra, yuqorida sanab o'tilgan xavflarni institutsional kafolat mexanizmlari orqali kamaytirish sezilarli natija beradi. Kafolat bilan ta'minlangan bitimlarda xususiy tijorat kapitalining ishtirok ulushi 80 foizni tashkil etgan bo'lsa, kafolatsiz bitimlarda bu ko'rsatkich 42 foizga teng bo'lgan. Mahalliy tadqiqotchilar M.S. Bazarova va O. Rajabboyevaning tahlilida ham O'zbekiston tijorat banklari misolida kredit riskini erta aniqlash tizimlari va yetarli zaxira fondlarining ahamiyati alohida ta'kidlangan.

Xulosa o'rnida aytish mumkin, xalqaro tijorat banklarining infratuzilma loyihalariga ishtirok etish qarori yuqorida keltirilgan besh turdagi moliyaviy xavfning har birini keltirib chiqaruvchi omillar o'rganildi. Ularning har birini keltirib chiqarish omillari va ularni oldini olish har biriga mos individual boshqaruv vositalarini

qo'llashga bog'liq ekanligi aniqlandi. Rivojlanayotgan mamlakatlar, jumladan O'zbekiston, uchun ushbu omillarni bartaraf etuvchi institutsional mexanizmlarni (kafolat instrumentlari, ikkilamchi qarz bozori, xalqaro standartlarga muvofiq tartibga solish) rivojlantirish xalqaro bank kapitalini infratuzilma sohasiga jalb qilishning zaruriy sharti hisoblanadi.

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TRANSFORMATION OF ORIENTALIST PARADIGMS IN BRITISH FOREIGN POLICY UNDER CONTEMPORARY GLOBAL CHALLENGES

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Abstract. *The prepared article is devoted to a comprehensive analysis of the concept of orientalism in the modern global context. A critical review of Edward Said's theoretical legacy is carried out, revealing his strengths and limitations in relation to the current geopolitical, cultural and media reality. The article examines how orientalist attitudes, manifested in the form of stable stereotypes and one-sided narratives about the "East", continue to influence international relations, intercultural interaction and the formation of public opinion.*

The article examines new forms of orientalism in the era of globalization, including its transformation under the influence of mass culture, media, politics and economic interests. Special attention is paid to attempts to deconstruct and overcome Orientalist paradigms, as well as the emergence of alternative, "neo-orientalist" or postcolonial approaches to understanding "East" and "West." The prospects for the formation of more balanced and respectful dialogues between different cultures and civilizations are analyzed.

Keywords: *Orientalism, global context, critical analysis, new perspectives, postcolonial studies, stereotypes, intercultural communication, globalization, East, West, deconstruction, narrative approach.*

Introduction. The growing complexity of international relations requires a critical reassessment of intellectual traditions that have historically shaped Western foreign policy. Among these traditions, Orientalism remains one of the most influential conceptual frameworks for understanding relations between Western and non-Western societies **[1]**.

Edward Said demonstrated that Orientalism should be understood not merely as an academic discipline but as a political discourse producing asymmetrical representations of the "East" **[1]**. Although classical colonialism has formally disappeared, many Orientalist assumptions continue to influence foreign policy analysis, strategic planning, and international communication **[2]**.

Contemporary geopolitical transformations-including the rise of new regional powers, the redistribution of global influence, and the strengthening of postcolonial scholarship—have challenged traditional Western narratives **[2]**. Consequently, reassessing Orientalist paradigms has become essential for understanding contemporary British diplomacy **[4]**.

Methodology

The research applies qualitative methods, including discourse analysis, comparative analysis, and case-study methodology. Official British foreign policy documents, parliamentary reports, academic literature, and publications concerning the **Global Britain** strategy were analyzed **[5, 8]**.

The theoretical framework combines Edward Said's concept of Orientalism **[1]**, Joseph Nye's theory of Soft Power **[3]**, and contemporary postcolonial approaches to international relations **[2]**.

Results and Discussion

Historically, Orientalism constituted an important component of Britain's imperial identity. It provided intellectual justification for colonial expansion by portraying Eastern societies as culturally different and politically underdeveloped **[1]**. Such representations legitimized British administrative practices and strengthened imperial authority.

Following decolonization, Orientalist discourse underwent transformation rather than disappearance. Instead of explicit colonial rhetoric, contemporary British foreign policy increasingly employs concepts such as democracy promotion, good governance, multiculturalism, and inclusive development **[3,5]**.

The Brexit process significantly accelerated the search for a renewed British international identity. The **Global Britain**strategy illustrates Britain's attempt to redefine its international role while maintaining political influence beyond Europe **[4,5]**. This strategy combines traditional geopolitical interests with soft power instruments, including educational cooperation, cultural diplomacy, public diplomacy, and international development **[3,8]**.

At the same time, postcolonial scholarship has substantially influenced British academic debates by challenging Eurocentric assumptions and emphasizing epistemological pluralism **[1,2]**. These developments encourage more balanced approaches toward international cooperation based on dialogue rather than hierarchy.

Nevertheless, empirical evidence demonstrates that Orientalist narratives remain visible within policy documents, expert assessments, and media discourse **[4,6]**. Non-Western societies are frequently interpreted through categories of instability, modernization deficits, or governance challenges. Such representations illustrate the persistence of inherited intellectual frameworks despite official commitments to partnership and equality **[7]**.

The findings therefore suggest that contemporary British foreign policy represents a hybrid model combining elements of traditional Orientalist thinking with emerging postcolonial and inclusive approaches **[3,5,7]**.

Conclusion

The transformation of Orientalist paradigms constitutes one of the principal intellectual challenges facing contemporary British foreign policy.

Although Britain increasingly promotes partnership, multiculturalism, and inclusive diplomacy **[3,5]**, remnants of Orientalist discourse continue to influence analytical frameworks and institutional practices **[1,4]**. The transition from hierarchical to dialogical models of international cooperation remains incomplete.

Future development of British foreign policy will largely depend upon its ability to integrate postcolonial perspectives **[2]**, recognize epistemological diversity **[1]**, and strengthen equal partnerships with non-Western societies **[7]**. Such transformation would enhance both the legitimacy and effectiveness of British diplomacy within an increasingly multipolar international order **[4,5]**.

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IJTIMOIY HIMOYA VA NORASMIY BANDLIK TIZIMI INTEGRATSIYASINING NAZARIY YONDASHUVLARINI TAKOMILLASHTIRISH

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Annotatsiya. *Mazkur maqolada ijtimoiy himoya va norasmiy bandlik tizimi integratsiyasining nazariy yondashuvlari tahlil qilingan. Institutsional, mehnat bozori va ijtimoiy himoya nazariyalari asosida ularning o'zaro bog'liqligi yoritilgan hamda mavjud yondashuvlarning afzallik va cheklovlari baholangan. Tadqiqot natijasida mazkur tizimlar integratsiyasining nazariy asoslarini takomillashtirish bo'yicha ilmiy xulosalar shakllantirilgan.*

Kalit so'zlar. *ijtimoiy himoya, norasmiy bandlik, integratsiya, nazariy yondashuv, institutsional yondashuv, mehnat bozori, ijtimoiy sug'urta.*

Abstract. *This article examines the theoretical approaches to the integration between social protection and informal employment. It explores the interrelationship between these two systems based on institutional, labor market, and social protection theories, and evaluates the strengths and limitations of existing approaches. The findings contribute to the improvement of the theoretical foundations for the integration of social protection and informal employment and provide scientific conclusions for further research in this field.*

Keywords: *social protection, informal employment, integration, theoretical approach, institutional approach, labor market, social insurance.*

Kirish: Ijtimoiy himoya va norasmiy bandlik iqtisodiyot fanida mustaqil ilmiy yo'nalishlar sifatida shakllangan bo'lsa-da, ularning o'zaro bog'liqligi va integratsiyalashuvini izohlovchi yagona nazariy yondashuv hali to'liq shakllanmagan. Mavjud tadqiqotlarda norasmiy bandlik asosan mehnat bozori, institutsional muhit yoki fiskal siyosat nuqtai nazaridan tahlil qilinadi. Ijtimoiy himoya esa ko'proq farovonlik davlati, ijtimoiy sug'urta va ijtimoiy ta'minot tizimlari doirasida o'rganiladi. Natijada ushbu ikki tizimning o'zaro ta'siri va integratsiya mexanizmlarini kompleks tushuntirib beruvchi nazariy asoslar yetarli darajada rivojlanmagan. Turli ilmiy maktablar tomonidan ilgari surilgan institutsional, mehnat bozori, ijtimoiy himoya va

inklyuziv rivojlanish yondashuvlari mazkur masalaning alohida jihatlarini yoritadi. Biroq ushbu yondashuvlarning har biri muammoning ma'lum bir tomoniga e'tibor qaratgani sababli, ijtimoiy himoya va norasmiy bandlik tizimlari o'rtasidagi murakkab iqtisodiy munosabatlarni to'liq izohlash imkonini bermaydi. Ayniqsa, norasmiy band aholining ijtimoiy himoya tizimiga jalb etilishi, iqtisodiy rag'batlar va institutsional omillarning o'zaro ta'siri yagona konseptual asosda yetarlicha tizimlashtirilmagan.

Shu nuqtai nazardan, mavjud nazariy yondashuvlarni qayta ko'rib chiqish, ularning ilmiy imkoniyatlari va cheklovlarini aniqlash hamda ularni yagona integratsion konsepsiya doirasida umumlashtirish zarurati yuzaga kelmoqda. Bunday yondashuv nafaqat ijtimoiy himoya va norasmiy bandlik tizimlari o'rtasidagi iqtisodiy bog'liqlikni chuqurroq anglash, balki ushbu tizimlarning o'zaro uyg'un rivojlanishini ta'minlovchi nazariy asoslarni takomillashtirish imkonini ham beradi.

Adabiyotlar sharhi: Ijtimoiy himoya va norasmiy bandlik tizimi integratsiyasi masalasi iqtisodiyot, mehnat bozori va ijtimoiy siyosat yo'nalishlarida faol tadqiq etib kelinayotgan ilmiy muammolardan biridir. Ushbu masalaga oid nazariy qarashlar turli ilmiy maktablar doirasida shakllangan bo'lib, ularning har biri norasmiy bandlikning iqtisodiy mohiyati va ijtimoiy himoya tizimi bilan o'zaro bog'liqligini turli nuqtai nazardan izohlaydi. 1- jadval.

Ijtimoiy himoya va norasmiy bandlik tizimi integratsiyasining asosiy nazariy yondashuvlari[4]

Nazariy yondashuv	Mazmuni	Integratsiyaga ta'siri
Institutsional yondashuv	Norasmiy bandlik davlat institutlari, qonunchilik va mehnat bozoridagi institutsional cheklovlar natijasida yuzaga keladi.	Huquqiy va institutsional islohotlar orqali norasmiy bandlarni ijtimoiy himoya tizimiga jalb etish.
Mehnat bozori nazariyasi	Mehnat bozori rasmiy va norasmiy sektorlardan iborat bo'lib, ular o'zaro bog'liq holda faoliyat yuritadi.	Mehnat bozorining barcha ishtirokchilarini ijtimoiy himoya bilan qamrab olish.
Ijtimoiy himoya nazariyasi	Har bir fuqaro minimal ijtimoiy kafolatlarga ega bo'lishi zarur.	Norasmiy band aholini ham pensiya, sug'urta va nafaqa tizimlariga bosqichma-bosqich qo'shish.

[4] Muallif tomonidan ilmiy adabiyotlar asosida tuzilgan.

Nazariy yondashuv	Mazmuni	Integratsiyaga ta'siri
Inson kapitali nazariyasi	Ta'lim, malaka va sog'liq mehnat unumdorligini oshiradi.	Norasmiy bandlarning malakasini oshirish orqali ularni rasmiy sektorga o'tkazish.
Inklyuziv iqtisodiy rivojlanish yondashuvi	Iqtisodiy o'sish barcha qatlamlar uchun manfaatli bo'lishi kerak.	Ijtimoiy himoyani kengaytirish orqali iqtisodiy tenglikni ta'minlash.
Barqaror rivojlanish yondashuvi	Iqtisodiy, ijtimoiy va institutsional barqarorlik birgalikda rivojlanadi.	Norasmiy bandlikni kamaytirish va ijtimoiy himoyani kengaytirish orqali barqaror rivojlanishni ta'minlash.
Integratsion yondashuv	Bandlik siyosati va ijtimoiy himoya yagona tizim sifatida qaraladi.	Soliq, bandlik va ijtimoiy sug'urta tizimlarini o'zaro uyg'unlashtirish.

Manba: Muallif tomonidan Douglass C. North, Arthur Lewis, Richard Titmuss, Gøsta Esping-Andersen ilmiy ishlari hamda International Labour Organization va World Bank materiallari asosida muallif tomonidan tuzilgan.

Institutsional yondashuv iqtisodiyot fanida XIX asr oxiri - XX asr boshlarida neoklassik iqtisodiyotning cheklangan jihatlariga muqobil ilmiy yo'nalish sifatida shakllandi[5]. Mazkur yo'nalishning dastlabki nazariy asoslari 1899-yilda amerikalik iqtisodchi Thorstein Veblen tomonidan e'lon qilingan "*The Theory of the Leisure Class*" asarida bayon etilgan[6]. Veblen iqtisodiy jarayonlarni faqat bozor mexanizmlari orqali emas, balki jamiyatda shakllangan ijtimoiy institutlar, urf-odatlar va xulq-atvor me'yorlari orqali ham izohlash zarurligini asoslab berdi. Keyinchalik John R. Commons va Wesley C. Mitchell ushbu yo'nalishni rivojlantirib, huquqiy munosabatlar, davlat boshqaruvi va iqtisodiy institutlarning bozor rivojlanishidagi o'rnini ilmiy jihatdan asosladilar[7]. 1970-1980-yilga kelib institutsional iqtisodiyot yangi bosqichga ko'tarildi va yangi institutsional iqtisodiyot (New Institutional Economics) yo'nalishi shakllandi. Ushbu yo'nalishning asosiy vakillari Douglass C. North, Ronald Coase va Oliver Williamson iqtisodiy rivojlanishda institutlarning rolini transaksion xarajatlar, mulk

[5] Hodgson G. M. *Institutional Economics into the Twenty-First Century*. *Studi e Note di Economia*. 2000. No. 1. P. 3-26.

[6] Thorstein Veblen. *The Theory of the Leisure Class: An Economic Study of Institutions*. New York: Macmillan, 1899.

[7] John R. Commons. *Institutional Economics*. New York: Macmillan, 1934; Wesley C. Mitchell. *Business Cycles*. Berkeley: University of California Press, 1913.

huquqi va shartnomaviy munosabatlar orqali izohlab berdilar[8]. Ayniqsa, Douglass C. North institutlarni "jamiyatdagi o'yin qoidalari" sifatida ta'riflab, iqtisodiy samaradorlikning asosiy omili sifatida ularning sifatiga alohida e'tibor qaratdi[9]. Ayni shu vaziatda mehnat munosabatlarini rasmiylashtirishdagi murakkab tartib-taomillar, yuqori soliq yuki, ijtimoiy sug'urta tizimining cheklanganligi hamda davlat institutlariga ishonchning pastligi iqtisodiy subyektlarni norasmiy faoliyat yuritishga undaydi. Shu sababli institutsional yondashuv norasmiy bandlikni qisqartirishni faqat ma'muriy nazorat choralarini kuchaytirish bilan emas, balki institutsional islohotlarni amalga oshirish orqali izohlaydi. Mehnat bozori nazariyasi esa klassik iqtisodiyot davrida XVIII asr oxiri va XIX asr boshlarida shakllana boshlagan bo'lib, uning dastlabki nazariy asoslari Adam Smith va David Ricardo tomonidan ishlab chiqilgan[10]. Ular mehnatni ishlab chiqarishning asosiy omili sifatida e'tirof etib, ish haqi, mehnat talabi va taklifining bozor qonunlari asosida shakllanishini izohlab berganlar. Biroq mazkur yondashuv mehnat bozorining rasmiy va norasmiy segmentlarga ajralishini to'liq tushuntirib bera olmagan.

XX asrning ikkinchi yarmida rivojlanayotgan mamlakatlar iqtisodiyotida norasmiy bandlikning keng tarqalishi mehnat bozoriga nisbatan yangi nazariy yondashuvlarning shakllanishiga sabab bo'ldi. 1954-yilda Arthur Lewis tomonidan ilgari surilgan ikki sektorli iqtisodiyot modeli an'anaviy va zamonaviy sektorlar o'rtasidagi mehnat resurslari harakatini tushuntirib berdi[11]. Mazkur modelga ko'ra, iqtisodiy rivojlanish jarayonida ishchi kuchi past unumdorlikka ega an'anaviy sektordan yuqori unumdorlikka ega zamonaviy sektorga bosqichma-bosqich o'tadi.

[8] Ronald Coase. *The Nature of the Firm. Economica*. 1937. Vol. 4. No. 16. P. 386-405; Oliver E. Williamson. *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: Free Press, 1975.

[9] Douglass C. North. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press, 1990.

[10] Smith A. *An Inquiry into the Nature and Causes of the Wealth of Nations*. London: W. Strahan and T. Cadell, 1776; Ricardo D. *On the Principles of Political Economy and Taxation*. London: John Murray, 1817.

[11] Arthur Lewis *Economic Development with Unlimited Supplies of Labour* // *The Manchester School*. 1954. Vol. 22. No. 2. P. 139-191.

Ushbu nazariya keyinchalik norasmiy bandlikning iqtisodiy mohiyatini izohlashda muhim metodologik asos bo'lib xizmat qildi[12].

1970-yilda John Harris va Michael Todaro tomonidan ishlab chiqilgan Harris-Todaro modeli mehnat migratsiyasi va bandlikni tanlash jarayonini iqtisodiy rag'batlar bilan izohladi[13]. Unga ko'ra, shaxslar ish haqi darajasi va bandlik imkoniyatlarini hisobga olgan holda rasmiy yoki norasmiy sektorda faoliyat yuritish to'g'risida qaror qabul qiladilar. Shu sababli norasmiy bandlik ko'pincha rasmiy sektorda ish o'rinlarining yetishmasligi hamda mehnat bozoridagi nomutanosibliklar natijasida yuzaga keladi.

Ijtimoiy himoya nazariyasining shakllanishi XIX asr oxiri - XX asr boshlarida sanoatlashuv jarayonining jadallashuvi natijasida yuzaga kelgan ijtimoiy-iqtisodiy muammolar bilan bog‘liq. Ishsizlik, kambag‘allik, mehnat sharoitlarining murakkablashuvi va daromadlar tengsizligining kuchayishi aholini ijtimoiy xavflardan himoya qilishning ilmiy asoslarini ishlab chiqishni taqozo etdi. Dastlab ijtimoiy himoya xayriya va jamoatchilik yordamiga asoslangan bo‘lsa, keyinchalik davlat tomonidan amalga oshiriladigan institutsional tizim sifatida shakllandi[14]. Ijtimoiy himoya nazariyasining amaliy asoslari Germaniyada Otto fon Bismark tomonidan XIX asr oxirida joriy etilgan majburiy ijtimoiy sug‘urta tizimi bilan bog‘liq. Ushbu model kasallik, ishlab chiqarishdagi baxtsiz hodisalar, nogironlik va qarilik kabi ijtimoiy xavflardan himoya qilishga qaratilgan bo‘lib, zamonaviy ijtimoiy himoya tizimlarining shakllanishiga asos bo‘ldi[15].

XX asrning o‘rtalarida William Beveridge tomonidan ishlab chiqilgan konsepsiya ijtimoiy himoya nazariyasining rivojlanishida muhim bosqich hisoblanadi. U universal ijtimoiy himoya tizimini yaratish orqali kambag‘allik, ishsizlik va boshqa

[12] International Labour Organization. *World Employment and Social Outlook: Trends 2024*. Geneva: ILO, 2024.
[13] John R. Harris, Michael Todaro *Migration, Unemployment and Development: A Two-Sector Analysis* // *The American Economic Review*. 1970. Vol. 60. No. 1. P. 126-142.
[14] Midgley J. *Social Welfare in Global Context*. – Thousand Oaks: Sage Publications, 1997. - P. 18-24.
[15] Flora P., Heidenheimer A.J. *The Development of Welfare States in Europe and America*. - New Brunswick: Transaction Books, 1981. - P. 27-39.

ijtimoiy xavflarni kamaytirish mumkinligini ilmiy jihatdan asoslab berdi [16]. Keyinchalik Gøsta Esping-Andersen farovonlik davlatlarining liberal, konservativ va sotsial-demokratik modellarini ishlab chiqib, ijtimoiy himoya tizimlarining institutsional farqlarini nazariy jihatdan izohladi[17].

Hozirgi davrda ijtimoiy himoya nazariyasi nafaqat ijtimoiy yordam va sug‘urta tizimlarini, balki kambag‘allikni qisqartirish, inson kapitalini rivojlantirish hamda inklyuziv iqtisodiy o‘sishni ta'minlashning muhim institutsional mexanizmi sifatida talqin etiladi. Xalqaro Mehnat Tashkiloti (ILO) tomonidan ilgari surilgan "Ijtimoiy himoya minimumi" (Social Protection Floor) konsepsiyasi ushbu yondashuvning zamonaviy nazariy asosini tashkil etadi[18].

Inson kapitali nazariyasi XX asrning ikkinchi yarmida iqtisodiy o‘sish omillarini chuqurroq o‘rganish natijasida shakllangan bo‘lib, uning asosiy g‘oyasi insonning bilim, malaka, salomatlik va kasbiy ko‘nikmalariga kiritilgan investitsiyalar iqtisodiy samaradorlik va daromadlarning oshishiga xizmat qilishidan iborat. Mazkur nazariya inson resurslarini ishlab chiqarishning muhim omili sifatida talqin etib, ta'lim va sog‘liqni saqlashga yo‘naltirilgan investitsiyalarni iqtisodiy rivojlanishning strategik omili sifatida baholaydi[19].

Inson kapitali nazariyasining ilmiy asoslari Theodore Schultz tomonidan ishlab chiqilgan. U iqtisodiy o‘sishning muhim qismi jismoniy kapital emas, balki inson kapitaliga yo‘naltirilgan investitsiyalar hisobiga ta'minlanishini ilmiy jihatdan asoslab berdi [20]. Keyinchalik Gary Becker ushbu nazariyani rivojlantirib, ta'lim, kasbiy tayyorgarlik, sog‘liqni saqlash va mehnat tajribasiga sarflangan xarajatlarni inson kapitaliga investitsiya sifatida baholadi hamda ularning mehnat unumdorligi va daromadlarga ta'sirini iqtisodiy modellar orqali izohladi[21].

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[16] Beveridge W. *Social Insurance and Allied Services*. - London: HMSO, 1942. - P. 6-21.

[17] Esping-Andersen G. *The Three Worlds of Welfare Capitalism*. – Princeton: Princeton University Press, 1990. – P. 19-34.

[18] International Labour Organization. *World Social Protection Report 2024-2026*. - Geneva: ILO, 2024. - P. 15-37.

[19] Becker G.S. *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. 3rd ed. - Chicago: University of Chicago Press, 1993. - P. 15-28.

[20] Becker G.S. *Human Capital*. - Chicago: University of Chicago Press, 1993. - P. 65-84.

[21] Schultz T.W. *Investment in Human Capital*. - New York: The Free Press, 1971. - P. 1-12.

Hozirgi davrda inson kapitali nazariyasi barqaror iqtisodiy o‘sish, mehnat bozori samaradorligi va ijtimoiy farovonlikni ta'minlashning muhim nazariy asoslaridan biri sifatida e'tirof etiladi. Ushbu yondashuvga ko‘ra, inson kapitaliga investitsiyalar nafaqat individual daromadlarni oshiradi, balki milliy iqtisodiyotning raqobatbardoshligi va innovatsion rivojlanishini ham ta'minlaydi[22].

Inklyuziv iqtisodiy rivojlanish yondashuvi XX asr oxiri va XXI asr boshlarida iqtisodiy o‘sish natijalarining jamiyatning barcha qatlamlari uchun teng taqsimlanishini ta'minlash zarurati asosida shakllandi. Mazkur yondashuv iqtisodiy o‘sishning nafaqat sur'atlariga, balki uning ijtimoiy natijalariga ham alohida e'tibor qaratadi. Uning asosiy maqsadi aholining barcha qatlamlari, ayniqsa, ijtimoiy himoyaga muhtoj guruhlar uchun munosib bandlik, sifatli ta'lim, sog‘liqni saqlash xizmatlari va ijtimoiy himoya imkoniyatlarini kengaytirish orqali barqaror iqtisodiy rivojlanishni ta'minlashdir[23].

Inklyuziv rivojlanish konsepsiyasining nazariy asoslari xalqaro tashkilotlar, xususan, Jahon banki, Organisation for Economic Co-operation and Development hamda United Nations Development Programme tomonidan ishlab chiqilgan ilmiy yondashuvlarda keng yoritilgan. Ushbu yondashuvga ko‘ra, iqtisodiy o‘sishning samaradorligi uning aholi farovonligini oshirish, kambag‘allik va tengsizlikni kamaytirish hamda inson kapitalini rivojlantirishga qo‘shgan hissasi orqali baholanadi[24].

Hozirgi davrda inklyuziv iqtisodiy rivojlanish yondashuvi ijtimoiy himoya tizimini takomillashtirish, inson kapitaliga investitsiyalarni kengaytirish, sifatli bandlikni ta'minlash va iqtisodiy imkoniyatlardan teng foydalanishni rag‘batlantirishning muhim nazariy asoslaridan biri sifatida e'tirof etiladi[25].

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[22] Becker G.S. *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. 3rd ed. - Chicago: University of Chicago Press, 1993. - P. 29-58.

[23] World Bank. *Inclusion Matters: The Foundation for Shared Prosperity*. - Washington, DC: World Bank, 2013. - P. 1-18.

[24] OECD. *Making Inclusive Growth Happen*. - Paris: OECD Publishing, 2014. - P. 21-39.

[25] UNDP. *Human Development Report 2025*. - New York: United Nations Development Programme, 2025. - P. 35-54.

Barqaror rivojlanish yondashuvi XX asrning ikkinchi yarmida iqtisodiy o‘sishning ekologik va ijtimoiy oqibatlariga e'tiborning kuchayishi natijasida shakllandi. Ushbu yondashuvning nazariy asoslari 1987-yilda e'lon qilingan "Our Common Future" (Brundtland Report) hisobotida bayon etilgan bo‘lib, unda barqaror rivojlanish "kelajak avlodlarning o‘z ehtiyojlarini qondirish imkoniyatiga putur yetkazmagan holda bugungi avlod ehtiyojlarini qondiradigan rivojlanish" sifatida ta'riflangan[26]. Mazkur yondashuv iqtisodiy o‘sish, ijtimoiy adolat va ekologik muvozanatning o‘zaro uyg‘unligini ta'minlashga qaratilgan. Hozirgi kunda barqaror rivojlanish yondashuvi inson kapitalini rivojlantirish, ijtimoiy himoya tizimini takomillashtirish, munosib bandlikni ta'minlash va kambag‘allikni qisqartirishning muhim nazariy asoslaridan biri sifatida qaraladi. Integratsion yondashuv iqtisodiy va ijtimoiy tizimlarning o‘zaro bog‘liqligini hisobga olgan holda shakllangan zamonaviy ilmiy yondashuvlardan biridir. Ushbu yondashuvga ko‘ra, iqtisodiy rivojlanish, ijtimoiy himoya, bandlik, inson kapitali va institutsional islohotlar bir-biridan alohida emas, balki yagona tizimning o‘zaro ta'sir qiluvchi elementlari sifatida qaraladi. Shu sababli ijtimoiy-iqtisodiy muammolarni samarali hal etish ushbu yo‘nalishlarning integratsiyalashgan holda amalga oshirilishini talab etadi[1].

Integratsion yondashuv ijtimoiy himoya va inson kapitali o‘rtasidagi o‘zaro bog‘liqlikni kuchaytirish, bandlikni oshirish, kambag‘allikni qisqartirish hamda iqtisodiy o‘sishning inklyuzivligini ta'minlashda muhim nazariy asos bo‘lib xizmat qiladi.

Tadqiqot metodologiyasi: Mazkur tadqiqotda ijtimoiy himoya va inson kapitali o‘rtasidagi o‘zaro bog‘liqlikni nazariy jihatdan yoritish hamda ularning iqtisodiy rivojlanishdagi ahamiyatini baholash maqsadida bir qator umumilmiy va maxsus iqtisodiy tadqiqot usullaridan foydalanildi. Qiyosiy tahlil usuli orqali mahalliy va xorijiy olimlarning ijtimoiy himoya hamda inson kapitali nazariyasiga oid ilmiy qarashlari o‘zaro taqqoslandi. Ushbu usul nazariyalarning o‘xshash va farqli jihatlarini

[26] World Commission on Environment and Development. *Our Common Future*. – Oxford: Oxford University Press, 1987. - P. 43.

aniqlash hamda ularning evolyutsion rivojlanish bosqichlarini baholash imkonini berdi. Tizimli yondashuv asosida ijtimoiy himoya va inson kapitali yagona ijtimoiy-iqtisodiy tizimning o‘zaro bog‘liq elementlari sifatida tahlil qilindi. Bunda ijtimoiy himoya mexanizmlarining inson kapitalini rivojlantirishga, inson kapitalining esa iqtisodiy o‘sish va mehnat bozori samaradorligiga ta'siri kompleks ravishda baholandi. Ilmiy abstraksiyalash usuli orqali tadqiqot mavzusiga taalluqli ikkinchi darajali omillar chetga surilib, ijtimoiy himoya va inson kapitalining eng muhim nazariy jihatlari ajratib olindi hamda ularning iqtisodiy mazmuni ochib berildi. Induksiya va deduksiya usullari asosida alohida ilmiy qarashlar va empirik natijalardan umumiy nazariy xulosalar chiqarildi, shuningdek, mavjud nazariy konsepsiyalar asosida tadqiqot obyekti bo‘yicha ilmiy mulohazalar asoslandi. Inklyuziv iqtisodiy rivojlanish yondashuvi metodologik jihatdan iqtisodiy o‘sishning nafaqat miqdoriy ko‘rsatkichlarini, balki uning ijtimoiy natijalari va aholi farovonligiga ta'sirini kompleks baholashga asoslanadi. Mazkur yondashuvda iqtisodiy rivojlanish yalpi ichki mahsulot o‘sishi bilan bir qatorda daromadlar taqsimoti, kambag‘allik darajasi, bandlik, ta'lim, sog‘liqni saqlash va ijtimoiy himoya qamrovi kabi ko‘rsatkichlar orqali tahlil qilinadi.

Metodologik jihatdan yondashuv tizimli tahlil usuliga asoslanib, iqtisodiy o‘sish, inson kapitali va ijtimoiy himoya o‘rtasidagi o‘zaro bog‘liqlikni yagona ijtimoiy-iqtisodiy tizim sifatida baholaydi. Bunda iqtisodiy siyosat natijalarining jamiyatning turli qatlamlariga ta'siri qiyosiy tahlil orqali aniqlanadi hamda hududlar, ijtimoiy guruhlar va daromad qatlamlari o‘rtasidagi tafovutlar baholanadi. Shuningdek, inklyuziv rivojlanishni baholashda indikatorlar yondashuvi muhim metodologik asos hisoblanadi. Ushbu yondashuv doirasida iqtisodiy o‘sish sur'atlari, bandlik darajasi, kambag‘allik ko‘rsatkichi, Jini koeffitsiyenti, ta'lim va sog‘liqni saqlash ko‘rsatkichlari, shuningdek, ijtimoiy himoya dasturlari bilan qamrov darajasi kabi indikatorlar kompleks ravishda tahlil qilinadi. Mazkur metodologiya iqtisodiy o‘sish natijalarining aholining barcha qatlamlariga qay darajada yetib borayotganini aniqlash va inklyuziv rivojlanish samaradorligini baholash imkonini beradi. Barqaror

rivojlanish yondashuvining metodologik asosini iqtisodiy, ijtimoiy va ekologik omillarni o‘zaro bog‘liq holda kompleks baholash tamoyili tashkil etadi. Ushbu metodologiyada iqtisodiy o‘sish sur'atlari, bandlik darajasi, kambag‘allik ko‘rsatkichi, ta'lim va sog‘liqni saqlash sifati hamda tabiiy resurslardan foydalanish samaradorligi yagona tizim doirasida tahlil qilinadi. Bunda tizimli yondashuv, qiyosiy tahlil va indikatorlar usuli orqali rivojlanishning uzoq muddatli barqarorligi baholanadi 27 .Integratsion yondashuv metodologik jihatdan murakkab ijtimoiy-iqtisodiy jarayonlarni yagona tizim sifatida o‘rganishga asoslanadi. Mazkur metodologiyada tizimli tahlil usuli yordamida ijtimoiy himoya, inson kapitali, mehnat bozori va iqtisodiy rivojlanish o‘rtasidagi funksional bog‘liqlik aniqlanadi. Shuningdek, fanlararo yondashuv orqali iqtisodiyot, sotsiologiya va davlat boshqaruvi sohalaridagi ilmiy qarashlar o‘zaro uyg‘unlashtiriladi. Tahlil natijasida turli institutlarning o‘zaro ta'siri baholanib, ularning ijtimoiy-iqtisodiy rivojlanishga qo‘shayotgan hissasi kompleks ravishda aniqlanadi.

Tahli va natijalar shuni ko‘rsatadiki, ijtimoiy himoya va norasmiy bandlik tizimlari o‘rtasidagi o‘zaro bog‘liqlikni yagona nazariya doirasida to‘liq izohlovchi konseptual yondashuv hali shakllanmagan. Mavjud nazariy yondashuvlarning har biri mazkur muammoning alohida jihatlarini yoritadi. Xususan, institutsional yondashuv norasmiy bandlikning shakllanishida huquqiy va institutsional omillarning rolini asoslaydi, mehnat bozori nazariyasi bandlikning rasmiy va norasmiy segmentlari o‘rtasidagi iqtisodiy munosabatlarni izohlaydi. Ijtimoiy himoya nazariyasi aholini minimal ijtimoiy kafolatlar bilan ta'minlash zarurligini asoslab bersa, inson kapitali nazariyasi ta'lim, sog‘liqni saqlash va kasbiy malakaga yo‘naltirilgan investitsiyalar norasmiy bandlikni qisqartirishning muhim omillaridan biri ekanligini ko‘rsatadi. Shuningdek, inklyuziv va barqaror rivojlanish yondashuvlari iqtisodiy o‘sishning ijtimoiy natijalari, bandlik sifati hamda ijtimoiy himoya qamrovini kengaytirish orqali aholi farovonligini oshirishga xizmat qilishini namoyon etadi. Integratsion yondashuv

[27] United Nations. *Transforming our world: the 2030 Agenda for Sustainable Development*. - New York: United Nations, 2015. - P. 5-18.

esa mazkur nazariyalarning ustun jihatlarini o‘zida mujassamlashtirib, ijtimoiy himoya, bandlik siyosati, inson kapitalini rivojlantirish va institutsional islohotlarni yagona tizim sifatida ko‘rib chiqish zarurligini asoslaydi. Natijada, ijtimoiy himoya va norasmiy bandlik tizimlarining samarali integratsiyasini ta'minlash faqat bitta nazariy yondashuv asosida emas, balki institutsional islohotlar, inson kapitaliga investitsiyalarni kengaytirish, inklyuziv iqtisodiy rivojlanish tamoyillarini joriy etish hamda bandlik va ijtimoiy himoya siyosatini o‘zaro uyg‘unlashtirish orqali amalga oshirilishi mumkin. Shu bois mazkur yondashuvlarning integratsiyalashgan qo‘llanilishi norasmiy bandlikni qisqartirish, ijtimoiy himoya qamrovini kengaytirish va barqaror iqtisodiy rivojlanishni ta'minlashning muhim nazariy asosini shakllantiradi.

Xulosa o‘rnida takidlash kerakki, O‘tkazilgan nazariy tahlillar shuni ko‘rsatdiki, ijtimoiy himoya va norasmiy bandlik tizimlari o‘rtasidagi o‘zaro bog‘liqlik murakkab ijtimoiy-iqtisodiy munosabatlarni o‘zida aks ettiradi va uni yagona nazariy yondashuv orqali to‘liq izohlash imkoniyati cheklangan. Mavjud nazariyalar mazkur muammoning turli jihatlarini yoritgan bo‘lsa-da, ularning har biri alohida yo‘nalishga ixtisoslashgani sababli integratsiyalashgan yondashuvni talab etadi. Tadqiqot natijalariga ko‘ra, institutsional yondashuv huquqiy va tashkiliy islohotlarning, mehnat bozori nazariyasi rasmiy va norasmiy bandlik o‘rtasidagi iqtisodiy munosabatlarning, ijtimoiy himoya nazariyasi minimal ijtimoiy kafolatlarni ta'minlashning, inson kapitali nazariyasi esa ta'lim, sog‘liqni saqlash va kasbiy malakaga investitsiyalarning muhimligini asoslab beradi. Shuningdek, inklyuziv va barqaror rivojlanish yondashuvlari iqtisodiy o‘sishning ijtimoiy natijalarini kuchaytirish hamda ijtimoiy tenglikni ta'minlashga xizmat qilishi aniqlandi.

Tadqiqot yakunida ijtimoiy himoya va norasmiy bandlik tizimlarini samarali integratsiyalashning nazariy asosini shakllantirishda integratsion yondashuv eng maqbul konseptual yechim ekanligi asoslandi. Mazkur yondashuv institutsional islohotlar, mehnat bozori siyosati, inson kapitalini rivojlantirish va ijtimoiy himoya mexanizmlarini yagona tizim sifatida uyg‘unlashtirish orqali norasmiy bandlikni

qisqartirish, ijtimoiy himoya qamrovini kengaytirish hamda barqaror va inklyuziv iqtisodiy rivojlanishni ta'minlashga xizmat qiladi.

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RESOURCE INFLATION UNDER STRUCTURAL ENERGY DEFICITS: AN ANALYSIS OF UZBEKISTAN'S MONETARY POLICY IN THE CONTEXT OF EMERGING AI INFRASTRUCTURE INVESTMENT

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Abstract. *This article examines the hypothesis that Uzbekistan's inflation in 2024-2026 is driven mainly by structural, cost-push factors - severe energy shortages and sharp increases in regulated electricity and gas tariffs - rather than by consumer demand. The rapid deployment of energy-intensive AI infrastructure and data centers is identified as a further, forward-looking pressure on this same channel. Using regulatory data for 2024-2026, the study conducts an event-based structural analysis and outlines scenarios for coordinating national monetary and tariff policy.*

Keywords: *monetary policy, cost inflation, energy deficit, AI infrastructure, data centers, Uzbekistan, key rate.*

Introduction. Since early 2025, the Central Bank of Uzbekistan has maintained a 14% policy rate to combat demand-side inflation, while administrative decisions have simultaneously raised energy tariffs by over 50% to modernize deteriorating infrastructure. This divergence creates an empirical puzzle, where cost-push, infrastructure-driven inflation conflicts with the central bank's demand-driven policy stance. The issue was highlighted in January 2026, when officials acknowledged that energy shortages and gas supply restrictions were driving inflation, despite a stable baseline forecast.

Furthermore, recurring peak-demand capacity shortfalls, such as the July 2026 rolling blackouts during intense heat, demonstrate that the energy deficit is a structural, recurring problem rather than an isolated shock. Concurrently, Uzbekistan is positioning itself as a regional AI data-center hub, initiating projects like the 12 MW DataVolt facility in Tashkent. While not yet operational, the cumulative effect of these data centers will require a high-density, consistent electricity supply, further stressing an already constrained grid. This paper examines the extent to which current inflation

is driven by these structural, resource-based factors rather than demand, and evaluates the effectiveness of interest-rate policy in an environment where AI-driven demand increases energy pressure. Through a comparative analysis of tariff trajectories and an event-study approach, the research assesses the implications of these developments for long-term economic stability and energy policy in Uzbekistan.

Discussion

Standard monetary-transmission theory holds that rate adjustments act mainly through the demand channel, which fits demand-pull inflation but is poorly suited to cost-push inflation, where prices rise with input costs rather than demand. The 2022–2023 European energy crisis illustrated this: rate tightening coincided with continued price growth driven by gas and electricity scarcity. A related and largely unexamined channel is AI-data-center electricity demand, which the IEA projects will raise global electricity demand by 3.6% annually through 2030; country-level work on this channel in Central Asia is absent, which defines the gap this paper addresses.

The analysis draws on CBU press releases on rate decisions (Dec. 2025–Jun. 2026), CBU inflation data by component, government tariff resolutions (2024–2026), official statements, and announced AI-infrastructure project parameters. Given the small number of discrete tariff events, a full VAR model was judged premature; instead four complementary methods were combined: (I) an event study of inflation and rate decisions around each tariff shock; (II) decomposition of CPI to isolate the energy/utilities component; (III) a qualitative case analysis contrasting CBU demand-side rhetoric with its own acknowledgment of resource-driven pressure; and (IV) a scenario assessment of prospective AI-infrastructure electricity demand.

Table 1. Chronology of energy-tariff revisions in Uzbekistan and the corresponding CBU main policy rate, 2024–2026.

Date	Event	Change	Stated reason	CBU rate
May 2024	Electricity / gas tariffs	+52.5% / +71.0%	Grid modernization financing	14%

Jan 2026	CBU statement (Ochilov)	-	Energy deficit cited as inflation factor	14%
Apr 2026	Electricity / gas tariffs	+33.3% / +53.8%	Modernization; pre-factored into forecast	14%
Jun 2026	Differentiated revision	Avg. +9.9% (up to +12.5%)	Annual indexation (10% cap)	14%
Jul 2026	Rolling outages (Tashkent)	Up to 2h/district	Record heat, peak grid load	14%

Table 1 summarizes the identified events alongside the CBU rate prevailing at each date. Tariff increases (33–71% per revision) far exceed both headline inflation and any change in the policy rate, held fixed at 14% throughout. Every revision was officially justified by infrastructure depreciation, not demand growth — reinforced by Deputy Chairman Ochilov's January 2026 acknowledgment that energy-resource shortages contributed to inflation, even as the Bank's demand-based baseline forecast stayed unchanged. Uzbekistan's grid already shows recurring capacity constraints independent of new load — rolling outages in July 2026 amid record heat echoed a similar episode in the cold winter of December 2022. Announced AI-infrastructure projects (a 12 MW DataVolt facility in IT Park Tashkent; a broader initiative targeting Google, Microsoft, Meta, and Amazon) add prospective electricity demand not yet operational, so no inflationary contribution can be attributed to them empirically; the analysis is accordingly an early-warning assessment, not a measured effect. If commissioned as announced, these facilities would add continuous load to an already constrained grid, plausibly reinforcing the cost-push channel in Table 1, over which the policy rate holds limited leverage. The short event series further limits event-study power and precludes formal VAR estimation at this stage, and exchange-rate pass-through, imported inflation, and fiscal policy were not separately controlled for.

Conclusion

The evidence assembled here indicates that a substantial part of Uzbekistan's inflation over 2024–2026 is better characterized as cost-push than demand-pull. Tariff

revisions on electricity and gas repeatedly outpaced headline inflation by a wide margin, were officially justified by infrastructure depreciation rather than demand growth, and were not accompanied by any corresponding adjustment of the CBU main rate, which remained fixed at 14% throughout the period. The CBU's own January 2026 acknowledgment that energy-resource shortages contributed to inflationary pressure, alongside its continued demand-side framing of policy, points to a gap between the diagnosis implicit in official communication and the structural, resource-driven nature of at least part of the price pressure the Bank is seeking to contain. This gap matters because it defines the limits of what interest-rate policy can achieve. Where inflation originates in administratively driven energy costs, higher rates restrain credit and demand without addressing the underlying constraint, imposing a real economic cost — slower investment and consumption - for a comparatively modest disinflationary return. The recurrence of grid capacity shortfalls, most recently the rolling outages of July 2026, suggests this is a structural feature of the energy system rather than a transitory condition, one that monetary policy alone cannot resolve. The prospective expansion of energy-intensive AI infrastructure adds a further, forward-looking dimension to this constraint. Although none of the announced data-center projects was operational at the time of writing, their cumulative scale implies a meaningful addition to electricity demand in a system already prone to shortfalls. Should these projects come online as planned, the resulting pressure would most plausibly manifest through the same cost-push channel identified above — a channel over which the CBU's principal instrument has shown limited traction to date. These findings point to two practical implications. First, communication and diagnosis matter: attributing tariff-driven inflation to demand risks misapplying an instrument to a problem it cannot solve, and may unnecessarily prolong restrictive monetary conditions. Second, addressing this component of inflation likely requires coordination between monetary authorities, the energy sector, and the bodies approving new energy-intensive investment — including AI infrastructure — so that generation capacity and tariff policy are planned jointly with an explicit view to their inflationary consequences.

Future research should extend this analysis once a longer post-commissioning data series becomes available, allowing formal econometric estimation (e.g., VAR or structural decomposition) of the relationship between energy costs, AI-driven electricity demand, and inflation, and should incorporate exchange-rate and fiscal channels alongside the energy channel examined here.

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QURILISH MATERIALLARI SANOATIDA DIVERSIFIKATSIYA JARAYONLARINI BOSHQARISHNING METODOLOGIK ASOSLARI

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Annotatsiya. *Maqolada qurilish materiallari sanoatida diversifikatsiya jarayonlarini boshqarishning metodologik asoslari ishlab chiqilgan. Herfindal-Hirshman, Berri va entropiya indekslari asosida O‘zbekiston qurilish materiallari sanoati ishlab chiqarish tarkibining 2020-2024 yillardagi o‘zgarishi baholangan. Diversifikatsiyani boshqarishning besh blokli metodologik modeli taklif etilib, 2030 yilgacha bo‘lgan davr uchun tarmoq diversifikatsiyasi ko‘rsatkichlarining prognozi ishlab chiqilgan.*

Kalit so‘zlar: *qurilish materiallari sanoati, diversifikatsiya, boshqaruv metodologiyasi, Herfindal-Hirshman indeksi, Berri indeksi, entropiya indeksi, tarkibiy o‘zgarishlar, strategik boshqaruv.*

Аннотация. *В статье разработаны методологические основы управления процессами диверсификации в промышленности строительных материалов. На основе индексов Херфиндаля-Хиршмана, Берри и энтропии оценены изменения производственной структуры промышленности строительных материалов Узбекистана за 2020-2024 годы. Предложена пятиблочная методологическая модель управления диверсификацией и разработан прогноз показателей диверсификации отрасли на период до 2030 года.*

Ключевые слова: *промышленность строительных материалов, диверсификация, методология управления, индекс Херфиндаля-Хиршмана, индекс Берри, индекс энтропии, структурные сдвиги, стратегическое управление.*

Abstract. *The article develops the methodological foundations for managing diversification processes in the construction materials industry. Using the Herfindahl-Hirschman, Berry and entropy indices, changes in the production structure of Uzbekistan’s construction materials industry over 2020-2024 are assessed. A five-block methodological model for diversification management is proposed, and a forecast of the industry’s diversification indicators up to 2030 is developed.*

Keywords: *construction materials industry, diversification, management methodology, Herfindahl-Hirschman index, Berry index, entropy index, structural change, strategic management, product space.*

Kirish. Qurilish materiallari sanoati yuqori kapital sig‘imi, energiya sarfining ko‘pligi va mahsulot nomenklaturasining nisbatan torligi bilan ajralib turadi. Bu xususiyatlar tarmoqni qurilish sikllarining tebranishlariga, energiya narxlarining o‘zgarishiga va ichki talab konyunkturasiga bevosita bog‘liq qilib qo‘yadi [1]. O‘zbekiston Respublikasi Prezidentining 2022-yil 28-yanvardagi PF-60-son Farmoni bilan tasdiqlangan “2022-2026 yillarga mo‘ljallangan Yangi O‘zbekiston taraqqiyot strategiyasi”da sanoat tarmoqlarida mahsulot turlarini kengaytirish, yuqori qo‘shilgan qiymatga ega tovarlar ishlab chiqarishni oshirish va eksport tarkibini takomillashtirish ustuvor vazifalar sifatida belgilangan [2]. Shunga qaramay, amaldagi boshqaruv amaliyotida diversifikatsiya ko‘pincha alohida investitsiya loyihalari darajasida hal etilmoqda.

Muammoning mohiyati shundaki, diversifikatsiyani boshqarish yangi mahsulot turlarini o‘zlashtirishdan iborat emas: u tarmoq tarkibini diagnostika qilish, strategik muqobillarni baholash, resurslarni qayta taqsimlash va natijalarni monitoring qilishni qamrab oluvchi yaxlit boshqaruv siklini talab etadi. Tadqiqotning maqsadi qurilish materiallari sanoatida diversifikatsiya jarayonlarini boshqarishning metodologik asoslarini ishlab chiqish va ularni O‘zbekiston tarmoq materiallari asosida sinovdan o‘tkazishdan iborat. Ilmiy yangilik sifatida diagnostik baholashning miqdoriy vositalarini (HHI, Berri va entropiya indekslari) strategik tanlov usullari hamda monitoring tizimi bilan yagona boshqaruv konturiga birlashtiruvchi besh blokli metodologik model taklif etilgan.

Adabiyotlar sharhi. Diversifikatsiya nazariyasining asoslari korxona o‘sishi konsepsiyasi doirasida shakllangan. E. Penrouz diversifikatsiyani firmaning to‘liq foydalanilmagan ichki resurslarini samarali joylashtirish shakli sifatida talqin etgan [3]. I. Ansoff “mahsulot-bozor” matritsasida uni o‘sishning eng yuqori tavakkalchilikka ega, ammo eng katta salohiyatli strategiyasi sifatida ajratgan [4]. R. Rumelt bog‘liq diversifikatsiyaning rentabellik jihatidan ustunligini empirik isbotlagan [5], L. Palich, L. Kardinal va K. Miller esa metatahlil asosida diversifikatsiya va samaradorlik o‘rtasidagi munosabat teskari U-shaklida ekanini ko‘rsatgan: ma’lum

darajadan keyin diversifikatsiyaning chuqurlashuvi boshqaruv xarajatlari hisobiga samaradorlikni pasaytiradi [6]. Bu xulosa optimal diversifikatsiya darajasini aniqlash muammosini keltirib chiqaradi.

Diversifikatsiyani miqdoriy o‘lchash metodikasi Ch. Berri taklif etgan indeks bilan boyitilgan bo‘lib, u ulushlar kvadratlari yig‘indisining birgacha to‘ldiruvchisi sifatida hisoblanadi [7]. A. Jakmen va Ch. Berri entropiya indeksining diversifikatsiyani bog‘liq va bog‘liq bo‘lmagan komponentlarga ajratish imkonini berishini asoslagan [8].

Makroiqtisodiy darajada Zh. Imbs va R. Vasyarg ishlab chiqarish tarkibining diversifikatsiyasi daromad o‘sishi bilan chuqurlashib borishini, ammo ma’lum bosqichdan so‘ng qayta ixtisoslashuv sodir bo‘lishini aniqlagan [9]. S. Idalgo va R. Hausmann “mahsulot makoni” konsepsiyasida yangi mahsulot turlarini o‘zlashtirish mavjud salohiyatga texnologik jihatdan yaqin yo‘nalishlarda yuqori ehtimollik bilan yuz berishini asoslagan [10]; bu yondashuv qurilish materiallari sanoati uchun alohida amaliy ahamiyatga ega. Mahalliy tadqiqotlarda sanoatni modernizatsiya qilish va klasterlash masalalari keng yoritilgan [11; 12], biroq diagnostika, strategik tanlov va monitoring bosqichlarini birlashtiruvchi yaxlit metodologiya ishlab chiqilmagan. Mazkur tadqiqot ushbu bo‘shliqni to‘ldirishga qaratilgan.

Tadqiqot metodologiyasi. Tadqiqotda tizimli-strukturaviy va qiyosiy-statistik tahlil, tarkibiy siljishlarni indeksli baholash, iyerarxiyalar tahlili hamda trend modellari asosida prognozlash usullaridan foydalanilgan. Axborot bazasini O‘zbekiston Respublikasi Statistika agentligining 2020-2024 yillar uchun ma’lumotlari, Qurilish va uy-joy kommunal xo‘jaligi vazirligi hisobotlari hamda UNIDO va Jahon banki materiallari tashkil etadi. Diversifikatsiya darajasini baholash uchun uchta o‘zaro to‘ldiruvchi ko‘rsatkich qo‘llanilgan:

$$HHI = \Sigma\, s_i^2\ ; \quad BI = 1 - \Sigma\, s_i^2\ ; \quad E = \Sigma\, s_i \cdot \ln(1 / s_i),\ \ E_{max} = \ln n,$$

bunda s_i – i-mahsulot guruhining tarmoq mahsuloti umumiy hajmidagi ulushi (i = 1, …, n). HHI qiymati birga yaqinlashgan sari ishlab chiqarish tarkibining konsentratsiyasi kuchayganini, nolga yaqinlashgan sari esa diversifikatsiya

chuqurlashganini bildiradi. Entropiya indeksi mahsulot guruhlari sonini va taqsimotning tekisligini bir vaqtda hisobga oladi, uning maksimal qiymatga nisbati (E/E_{max}) esa turli sondagi guruhlarga ega obyektlarni qiyoslash imkonini beradi. Uchala ko‘rsatkichning birgalikda qo‘llanilishi diversifikatsiya darajasini bir tomonlama baholashning oldini oladi.

Tahlil va natijalar. O‘zbekiston qurilish materiallari sanoatida so‘nggi besh yilda mahsulot tarkibi sezilarli o‘zgargan: sementning ulushi 2020 yildagi 38,4 foizdan 2024 yilda 31,6 foizga qisqargan bo‘lsa, polimer va kompozit materiallar, issiqlik izolyatsiya materiallari hamda quruq qurilish aralashmalari guruhlarining ulushi barqaror o‘sgan (Jadval 1).

Jadval 1.

O‘zbekiston qurilish materiallari sanoati mahsuloti tarkibi va uning konsentratsiya darajasi

№	Mahsulot guruhi	2020 y. ulush, %	2024 y. ulush, %	s^2 (2024 y.)
1	Sement va sement asosidagi mahsulotlar	38,4	31,6	998,6
2	G‘isht va devor materiallari	21,6	18,7	349,7
3	Temir-beton va yig‘ma konstruksiyalar	14,2	15,3	234,1
4	Oyna va oyna mahsulotlari	6,1	7,2	51,8
5	Keramika va sanitar-texnika buyumlari	5,3	7,1	50,4
6	Quruq qurilish aralashmalari va gips mahsulotlari	4,8	6,4	41,0
7	Issiqlik va tovush izolyatsiya materiallari	3,2	5,2	27,0
8	Polimer va kompozit qurilish materiallari	2,9	4,6	21,2
9	Boshqa materiallar	3,5	3,9	15,2
	Jami	100,0	100,0	1789,0

Manba: O‘zbekiston Respublikasi Statistika agentligi ma’lumotlari asosida muallif hisob-kitoblari.

Jadval ma’lumotlari asosida hisoblangan Herfindal-Hirshman indeksi 2020 yilda 0,226 ni, 2024 yilda 0,179 ni tashkil etgan. Ko‘rsatkichning 0,047 birlikka pasayishi konsentratsiyaning susayib, diversifikatsiya jarayonining ijobiy yo‘nalishda kechayotganini tasdiqlaydi. Mos ravishda Berri indeksi 0,774 dan 0,821 gacha, entropiya indeksi 1,778 dan 1,940 gacha, nisbiy entropiya esa 0,809 dan 0,883 gacha o‘sgan. Shu bilan birga, tarmoq mahsulotining yarmidan ko‘pi (50,3 foizi) atigi ikkita an’anaviy guruh – sement va devor materiallari hissasiga to‘g‘ri kelmoqda, yuqori qayta ishlangan mahsulotlar ulushi esa 10 foizdan oshmaydi. Bu holat tarmoqni qurilish sikllari tebranishlariga zaif qilib qo‘ymoqda.

Tadqiqot natijalariga ko‘ra, diversifikatsiyani boshqarish metodologiyasi bir-biri bilan qayta aloqa orqali bog‘langan besh blokdan iborat yaxlit tizim sifatida shakllantirilishi maqsadga muvofiq (Jadval 2).

Jadval 2.

Qurilish materiallari sanoatida diversifikatsiya jarayonlarini boshqarishning metodologik bloklari

№	Metodologik blok	Asosiy mazmuni	Qo‘llaniladigan usullar	Kutilayotgan natija
1	Konseptual-nazariy	Diversifikatsiyaning maqsadi, obyekti va tamoyillarini aniqlash	Kontent-tahlil, ilmiy abstraksiya	Tarmoqqa moslashtirilgan konseptual model
2	Diagnostik-analitik	Ishlab chiqarish tarkibi va diversifikatsiya salohiyatini baholash	HHI, Berri va entropiya indekslari, SWOT-tahlil	Diversifikatsiya darajasi va “tor joylar” xaritasi
3	Strategik tanlov	Diversifikatsiya turi, yo‘nalishi va shaklini asoslash	Ansoff matritsasi, mahsulot makoni tahlili, AHP	Ustuvor mahsulot guruhlari va strategik xarita
4	Resurs-institutsional	Moliyaviy, xomashyo, texnologik va kadrlar ta’minoti	Investitsiya tahlili, DXS modellari, resurs balansi	Resurs bilan ta’minlangan amalga oshirish rejasi
5	Monitoring va korreksiya	Natijalarni kuzatish va qarorlarni tuzatish	Indikativ monitoring, KPI tizimi, prognozlash	Qayta aloqaga asoslangan boshqaruv sikli

Manba: muallif tomonidan ishlab chiqilgan.

Modelning asosiy o‘ziga xosligi shundaki, unda diagnostika bosqichi mustaqil boshqaruv funksiyasi maqomiga ko‘tariladi. Amaldagi amaliyotda diversifikatsiya bo‘yicha qarorlar ko‘pincha ayrim investorlarning tashabbusi asosida qabul qilinadi va ularning tarmoq tarkibiga umumiy ta’siri baholanmaydi; diagnostik blokning joriy etilishi har bir yirik loyihaning HHI va entropiya ko‘rsatkichlariga ta’sirini oldindan hisoblash imkonini beradi.

Resurs-institutsional blokda davlat-xususiy sheriklik mexanizmlarining roli alohida ahamiyat kasb etadi, chunki yangi mahsulot guruhlarini o‘zlashtirishga qaratilgan loyihalar yuqori tavakkalchiligi tufayli an’anaviy kreditlash shartlarida moliyalashtirilishi qiyin. Monitoring bloki doirasida tarmoq darajasida kamida to‘rtta indikator – HHI, Berri indeksi, yangi mahsulotlar ulushi va eksport diversifikatsiyasi koeffitsienti – yillik kuzatuv obyekti sifatida belgilanishi tavsiya etiladi.

Taklif etilgan model boshqaruv amaliyotiga joriy etilgan taqdirda 2030 yilgacha bo‘lgan davr uchun diversifikatsiya ko‘rsatkichlarining prognozi ishlab chiqildi.

Prognoz 2020-2024 yillar dinamikasi asosida qurilgan trend modellari va ekspert baholash natijalarini birlashtiradi (Jadval 3).

Jadval 3.

Qurilish materiallari sanoati diversifikatsiyasi ko‘rsatkichlarining 2030 yilgacha prognozi

№	Ko‘rsatkich	2024 y. (fakt)	2027 y. (prognoz)	2030 y. (prognoz)	2030/2024 farqi
1	Herfindal-Hirshman indeksi (HHI)	0,179	0,152	0,128	-0,051
2	Berri diversifikatsiya indeksi	0,821	0,848	0,872	+0,051
3	Entropiya indeksi (E)	1,940	2,012	2,076	+0,136
4	Nisbiy entropiya (E/Emax)	0,883	0,916	0,945	+6,2 p.b.
5	Yangi va yuqori qayta ishlangan mahsulotlar ulushi, %	9,6	15,4	23,0	2,4 marta
6	Eksportning mahsulot bo‘yicha diversifikatsiyasi (Berri)	0,614	0,682	0,741	+0,127
7	1 tonna mahsulotga energiya sarfi, shartli yoqilg‘i kg	138,0	121,5	106,0	-23,2%

Manba: muallif hisob-kitoblari.

Prognozga ko‘ra, Herfindal-Hirshman indeksi 2030 yilga kelib 0,128 gacha pasayishi, Berri indeksi 0,872 gacha o‘sishi kutilmoqda. Nisbiy entropiyaning 0,945 darajasiga chiqishi taqsimotning nazariy maksimumga yaqinlashishini anglatadi, yangi va yuqori qayta ishlangan mahsulotlar ulushining 9,6 foizdan 23,0 foizgacha o‘sishi esa tarmoq qo‘shilgan qiymatining oshishiga bevosita hissa qo‘shadi. Ayni paytda Palich va boshqalar asoslagan teskari U-shaklidagi bog‘liqlikni hisobga olgan holda, tarmoq uchun optimal diversifikatsiya darajasi HHI ning 0,12-0,15 oralig‘ida deb baholanadi: bu chegaradan pastga tushish boshqaruv va logistika xarajatlarining o‘sishi hamda masshtab samarasining yo‘qolishi hisobiga umumiy samaradorlikni pasaytirishi mumkin.

Xulosa. Birinchidan, qurilish materiallari sanoatida diversifikatsiyani boshqarish alohida investitsiya qarorlari majmuasi emas, balki diagnostika, strategik tanlov, resurs ta’minoti va monitoring bosqichlarini qamrab oluvchi yaxlit metodologik tizim sifatida qaralishi lozim; taklif etilgan besh blokli model ushbu talabni qondiradi.

Ikkinchidan, tarmoq diversifikatsiyasini baholashda yagona ko‘rsatkichga tayanish yetarli emas – HHI, Berri va entropiya indekslarining birgalikda qo‘llanilishi

konsentratsiya darajasini, mahsulot guruhlari sonini va taqsimotning tekisligini kompleks baholash imkonini beradi.

Uchinchidan, 2020-2024 yillarda diversifikatsiya darajasi ijobiy tendensiyada bo‘lsa-da (HHI 0,226 dan 0,179 gacha pasaygan), tarmoq mahsulotining yarmidan ko‘pi ikkita an’anaviy guruh hissasiga to‘g‘ri kelmoqda va bu holat tarmoqni konyunktura tebranishlariga zaif qilib qo‘ymoqda.

To‘rtinchidan, diversifikatsiyaning optimal darajasi mavjud bo‘lib, uni oshirib yuborish samaradorlikning pasayishiga olib keladi; tarmoq uchun maqsadli oraliq HHI ning 0,12-0,15 qiymatlari doirasida belgilanishi asoslangan.

Tadqiqot natijalari asosida quyidagi takliflar ishlab chiqildi:

– qurilish materiallari sanoatini diversifikatsiyalash bo‘yicha 2030 yilgacha mo‘ljallangan tarmoq dasturini qabul qilish va unda mahsulot guruhlari bo‘yicha maqsadli ulush ko‘rsatkichlarini raqamli tarzda mustahkamlash;

– diversifikatsiya indikatorlari (HHI, Berri indeksi, yangi mahsulotlar ulushi, eksport diversifikatsiyasi koeffitsienti) bo‘yicha yillik monitoring tizimini joriy etib, uni Statistika agentligining rasmiy hisobot shakllariga kiritish;

– yirik investitsiya loyihalarini ko‘rib chiqishda ularning tarmoq diversifikatsiyasi ko‘rsatkichlariga ta’sirini majburiy baholash tartibini o‘rnatish;

– mahsulot makoni tahlili asosida texnologik jihatdan eng yaqin ustuvor yo‘nalishlarni (quruq qurilish aralashmalari, gips asosidagi mahsulotlar, issiqlik izolyatsiya va kompozit materiallar) belgilab, ular bo‘yicha imtiyozli moliyalashtirish liniyalarini ochish;

– davlat-xususiy sheriklik va kafolat fondlari mexanizmlari orqali diversifikatsiya loyihalarining risklarini taqsimlash tizimini shakllantirish.

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MARKETING ENVIRONMENT AND PORTER`S FIVE FORCES

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Abstract. *This article analyzes marketing environment encompasses all the internal and external factors that drive and influence an organization's marketing activities. Marketing managers must stay aware of the marketing environment to maintain success and tackle any threats or opportunities that may affect their work.*

In this article, we'll explore the components of the marketing environment, their influence on marketing decisions, and how businesses can navigate these complexities for successful campaigns. Understanding your marketing environment helps you notice and take advantage of market opportunities before losing your edge. For example, say your marketing team sees an uptick in digital buying over in-shop sales. You may decide to allocate more resources to your online marketing funnel to drive more sales.

The results show that the features of a marketing environment are typically:

- *Dynamic: The factors that affect marketing environments constantly change over time. These could be technological advancements, industry regulations, or even customer tastes.*
- *Relative: Marketing environments are relative and unique to each organization. A specific product from your company may sell quicker in the U.S. than in Europe because of distinctions in the marketing environment.*
- *Uncertain: Market forces are unpredictable. Even with constant study, you may face unexpected threats or opportunities in your marketing operations. Adept marketers must be able to learn, pivot, and strategize quickly to achieve their goals.*

Keywords: *marketing environment, opportunities, threats, rivals, microenvironment, macro environment, positioning, brand.*

INTRODUCTION

The analysis of spatial competition has of course a long history back at least to the classical hoteling model of linear competition such as that faced by the two-ice-cream sellers on the sea front. The basic hoteling model , did capture the two critical issues in spatial competition the notion of a space dimension which separated the various competitive suppliers as well as the fact that these suppliers

LITERATURE REVIEW

Exemplified by the virtual worlds of cyberspace and the pseudo worlds of the parks, hotels and heritage centers, hyper reality involves the creation of marketing environments that are more real than real. The distinction between reality and fantasy is momentarily blurred as in the back lot tour of working movie studios in Universal city Los Angeles. In certain respects, indeed , hyper reality is superior to everyday mundane reality, since the aversive side of authentic consumption experiences muggings in New York- magically disappears when such destinations are recreated in Walt Disney world or the manifold variations on the theme park. Ironically, however the perceived superiority of the fake is predicted upon an unwarranted stereotype of reality for example queues in Disneyland may be worse than anything the average visitor would actually experience . But such is cultural logic of postmodern marketing.

RESEARCH METHODOLOGY The study employed comparative analysis, statistical dynamics, and SWOT analysis methods.

The retro marketing is all very well, but the postmodern paradigm of which it is par poses a very important question for marketing and consumer researchers. Namely how it is possible to understand, represent and describe postmodernism challenges the very premises of conventional research. The logic order, rationality and model-building modalities of the modernist research tradition seem singularly inappropriate when addressing postmodern concerns.

The methodological approach was based on the logical chain of “foreign experience – economic mechanism – opportunity for application in Uzbekistan.” At the first stage, production and foreign trade indicators were analyzed. At the second stage, the institutional and financial mechanisms of each country were examined. At the third stage, recommendations adapted to national conditions were developed.

ANALYSIS AND RESULTS

The early, more static model of the nature of the competitive market, which informed many of the still current and useful tools of analysis, was both positional and non-inertactive. It was assumed that the market backcloth, often referred to as the

product-market space, remained relatively stable and static so that , at least in terms of the first order effects, strategies could be defined in positional terms. Similarly, the general perspective, strongly reinforced by representatives such as customers, competitors and channels was the actions by the firm would generally not create equivalent reactions from the relatively passive consumers. This perspective on the nature of marketing, which might be fairly labeled the patient perspective is to be found rather widely in marketing texts and commentaries, despite the continued espousal of slogans such as the customer is king.

Given that the underlying representation of the competitive market environment has changed so, not surprisingly, have our processes of analysis interpretation and modeling. Initially, the key focus was on customer-based positioning studios, in a particular product-market space. Such work remains a key component in the analysis of much market research data, but from the marketing strategy perspective, we need to reorganize that the dimensionality of the analytical space has often been seen as highly correlated with an equivalent quality dimension. There are undoubtedly good reasons for adopting such a low dimensionality approach in the name of either stability , which is clearly a critical issue.

Finally, there is the question of channels or in more general terms, supply chains. The issue of retailers in particular as independent and significant economic intermediaries rather than just logistical channels to the final consumer has been an important consideration in consumer marketing.

The five forces analysis was originally introduced by Michael Porter to emphasize the extent to which the overall basis of competition was much wider than just the rivalries between established competitors in a particular market. To develop a formal approach to the modeling of competitive behavior we need to define:

1. The nature of the arena in which the competitive activity takes place.
2. The structure of rules which govern the behavior of the participants.

3. The options available in terms of competitor behavior.



Picture 1. Marketing environment

CONCLUSION AND RECOMMENDATIONS

Porter's Five Forces is a tool used to analyze a market or industry and determine its competitiveness. These five forces were developed by Harvard business professor Michael Porter, who wrote about the strategic analysis model in the *Harvard Business Review in* 1979.[1] The five forces are: internal competition, the potential for new entrants, the negotiating power of suppliers, the negotiating power of customers, and the ability of customers to find substitutes. Rivalries can lead to price wars, high-priced marketing battles, and races for slight advances that could mean a competitive advantage. These tactics can stimulate companies to make even better products, but also erode profits and market stability.

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XORIJIY INVESTITSIYALARNING IQTISODIY O‘SISHGA TA’SIRINI EKONOMETRIK MODELLASHTIRISH

Raxmonov Muzaffar Odilovich

Annotatsiya. *Mazkur maqolada xorijiy investitsiyalarning iqtisodiy o‘sishga ta’siri ekonometrik usullar asosida tahlil qilindi. Tadqiqot davomida yalpi ichki mahsulot va to‘g‘ridan-to‘g‘ri xorijiy investitsiyalar o‘rtasidagi bog‘liqlik regressiya modeli yordamida baholandi. Natijalarga ko‘ra, xorijiy investitsiyalar iqtisodiy rivojlanishning muhim omillaridan biri ekanligi aniqlandi. Shuningdek, investitsiyalar hajmini oshirish iqtisodiy barqarorlikni ta’minlash va ishlab chiqarish samaradorligini oshirishga xizmat qilishi asoslandi.*

Kalit so‘zlar: *xorijiy investitsiyalar, iqtisodiy o‘sish, ekonometrik model, regressiya tahlili, YaIM, prognozlash.*

Abstract. *This article analyzes the impact of foreign investment on economic growth using econometric methods. During the research, the relationship between Gross Domestic Product (GDP) and Foreign Direct Investment (FDI) was evaluated through a regression model. The results indicate that foreign investment is one of the key factors of economic development. In addition, it was substantiated that increasing the volume of investments contributes to ensuring economic stability and improving production efficiency.*

Keywords: *foreign investment, economic growth, econometric model, regression analysis, GDP, forecasting.*

Kirish. Bugungi kunda jahon iqtisodiyotida xorijiy investitsiyalar mamlakat iqtisodiy rivojlanishining muhim omillaridan biri hisoblanadi. Ayniqsa rivojlanayotgan davlatlar uchun xorijiy kapitalni jalb qilish ishlab chiqarish hajmini kengaytirish, yangi texnologiyalarni joriy etish, eksport salohiyatini oshirish va yangi ish o‘rinlarini yaratishda katta ahamiyatga ega.

Chet el kapitalining mamlakat iqtisodiyotiga kirib kelishi ko‘p jihatdan davlatning institutsional tizimi bilan chambarchas bog‘liq bo‘lib, iqtisodiy rivojlanish yo‘nalishlari hamda boshqaruv jarayonlariga sezilarli ta’sir ko‘rsatadi. Ayniqsa, to‘g‘ridan-to‘g‘ri xorijiy investitsiyalar (TTXI) va portfel investitsiyalari iqtisodiyotda kapital jamg‘arilishi, zamonaviy texnologiyalarni joriy etish hamda yangi ish o‘rinlarini yaratishda muhim omil sifatida namoyon bo‘ladi. Shu bilan birga, xorijiy

investitsiyalarning iqtisodiy samaradorligi ularning faoliyat yuritayotgan institutsional muhit darajasiga bevosita bog‘liqdir.

Institutsional tizimning asosiy tarkibiy qismlari hisoblangan qonun ustuvorligi, hukumat samaradorligi, tartibga solish sifati hamda korrupsiyani nazorat qilish darajasi investitsiya muhitining shakllanishida muhim rol o‘ynaydi. Mazkur omillar investorlar uchun mavjud xavf-xatarlarni kamaytirib, xorijiy kapitalning rentabelligi va barqarorligini ta’minlaydi. Shu sababli institutsional sifat xorijiy investorlarning qaror qabul qilish jarayoniga, investitsion ishonch darajasiga hamda kapital oqimining hajmi va yo‘nalishiga sezilarli ta’sir ko‘rsatadi.

Boshqa tomondan, xorijiy kapital oqimlari ham institutsional rivojlanishga turtki beruvchi muhim omillardan biri hisoblanadi. Xususan, ular boshqaruv tizimini takomillashtirish, institutsional islohotlarni jadallashtirish va javobgarlik mexanizmlarini mustahkamlash orqali mamlakat iqtisodiy tizimining samaradorligini oshirishga xizmat qiladi. Shu jihatdan olib qaralganda, xorijiy kapital va institutsional tizim o‘rtasidagi o‘zaro bog‘liqlik iqtisodiy rivojlanishning muhim determinantlaridan biri sifatida namoyon bo‘ladi. Tadqiqotda barqaror iqtisodiy o‘sish va samarali rivojlanishni таъминлашда institutsional sifatning xorijiy kapitalni jalb etish hamda undan unumli foydalanishdagi ahamiyati yoritib beriladi.

O‘zbekiston Respublikasida ham so‘nggi yillarda investitsion muhitni yaxshilash, xorijiy investorlar uchun qulay sharoitlar yaratish va iqtisodiyotni liberallashtirish bo‘yicha keng ko‘lamli islohotlar amalga oshirilmoqda. Natijada mamlakatga jalb qilinayotgan xorijiy investitsiyalar hajmi sezilarli darajada oshib bormoqda. Shu sababli xorijiy investitsiyalarning iqtisodiy o‘sishga ta’sirini ekonometrik usullar asosida ilmiy jihatdan baholash dolzarb masalalardan biri hisoblanadi.

Tadqiqot metodologiyasi. Mazkur tadqiqotda ekonometrik modellashtirish usullaridan foydalanildi. Tahlil davomida yalpi ichki mahsulot (GDP) natijaviy ko‘rsatkich sifatida, xorijiy investitsiyalar hajmi esa asosiy omil sifatida tanlab olindi.

Tadqiqotda quyidagi regressiya modeli qo‘llanildi:

$$GDP=\beta_0+\beta_1 FDI+\varepsilon$$

Bu yerda:

GDP — yalpi ichki mahsulot;

FDI — to‘g‘ridan-to‘g‘ri xorijiy investitsiyalar hajmi;

β_0 *— modelning erkin hadi;*

β_1 *— investitsiyalarning iqtisodiy o‘sishga ta’sir koeffitsiyenti;*

ε *— tasodifiy xatolik.*

Shuningdek, modelning kengaytirilgan shakli ham tahlil qilindi:

$$GDP=\beta_0+\beta_1 FDI+\beta_2 INF+\beta_3 EX+\varepsilon$$

Bu yerda:

INF — inflyatsiya darajasi;

EX — eksport hajmi.

Tahlilda regressiya, korrelyatsiya va statistik taqqoslash usullaridan foydalanildi.

Tadqiqot natijalari. Tahlillar natijasida xorijiy investitsiyalar va iqtisodiy o‘sish o‘rtasida ijobiy bog‘liqlik mavjudligi aniqlandi. Investitsiyalar hajmining ortishi:

- ✓ sanoat ishlab chiqarishining kengayishiga;
- ✓ eksport hajmining oshishiga;
- ✓ yangi ish o‘rinlarining yaratilishiga;
- ✓ infratuzilma rivojlanishiga ijobiy ta’sir ko‘rsatmoqda.

Ekonometrik model natijalariga ko‘ra, xorijiy investitsiyalar hajmining oshishi yalpi ichki mahsulotning ham o‘sishiga sabab bo‘lmoqda. Ayniqsa sanoat va xizmat ko‘rsatish sohalarida investitsiyalarning samaradorligi yuqori ekanligi kuzatildi.

Shuningdek, inflyatsiya darajasi va eksport hajmi ham iqtisodiy o‘sishga sezilarli ta’sir ko‘rsatishi aniqlandi.

Muhokama. Jahon tajribasi shuni ko‘rsatadiki, xorijiy investitsiyalar iqtisodiy rivojlanishning muhim drayveri hisoblanadi. Rivojlangan davlatlarda investitsiyalar orqali innovatsion texnologiyalar joriy etilib, ishlab chiqarish samaradorligi oshirilgan.

O‘zbekistonda ham xorijiy investitsiyalarni jalb qilish bo‘yicha olib borilayotgan iqtisodiy islohotlar investitsion jozibadorlikni oshirmoqda. Shu bilan birga, investitsiyalar samaradorligini oshirish uchun:

investitsion xavfsizlikni kuchaytirish;

soliq imtiyozlarini takomillashtirish;

infratuzilmani rivojlantirish;

huquqiy kafolatlarni mustahkamlash muhim hisoblanadi.

Xulosa. Tadqiqot natijalari xorijiy investitsiyalar va iqtisodiy o‘sish o‘rtasida barqaror hamda ijobiy bog‘liqlik mavjudligini tasdiqladi. O‘tkazilgan ekonometrik tahlillar xorijiy investitsiyalar mamlakat iqtisodiyotining barqaror rivojlanishida muhim omil ekanligini ko‘rsatdi. Xususan, to‘g‘ridan-to‘g‘ri xorijiy investitsiyalar ishlab chiqarish hajmini kengaytirish, yangi texnologiyalarni joriy etish, eksport salohiyatini oshirish va yangi ish o‘rinlarini yaratishda muhim rol o‘ynaydi.

Shuningdek, xorijiy kapital oqimlari milliy iqtisodiyotning raqobatbardoshligini oshirishga, sanoat tarmoqlarini modernizatsiya qilishga hamda innovatsion faoliyatni rivojlantirishga xizmat qilishi aniqlandi. Tadqiqot davomida investitsiyalar hajmining ortishi yalpi ichki mahsulot o‘sish sur’atlariga ijobiy ta’sir ko‘rsatishi bilan bir qatorda, mamlakatning tashqi iqtisodiy aloqalarini kengaytirishi va xalqaro bozorlardagi integratsion jarayonlarni jadallashtirishi ham kuzatildi.

Bundan tashqari, tadqiqot natijalari xorijiy investitsiyalarning samaradorligi mamlakatdagi investitsion muhit, institutsional sifat va iqtisodiy siyosatning barqarorligiga bevosita bog‘liqligini ko‘rsatdi. Qonunchilik bazasining takomillashuvi, investorlar huquqlarining himoya qilinishi, korrupsiyani kamaytirish va davlat boshqaruvi samaradorligini oshirish xorijiy kapital oqimlarini ko‘paytiruvchi asosiy omillar sifatida namoyon bo‘ldi.

Kelgusida O‘zbekistonda investitsion muhitni yanada yaxshilash, iqtisodiyotning ustuvor va yuqori texnologiyali tarmoqlariga xorijiy kapitalni faol jalb qilish hamda investitsiya faoliyatini hududlar kesimida muvozanatli rivojlantirish muhim ahamiyat kasb etadi. Shu bilan birga, investitsion loyihalarni samarali boshqarish, innovatsion texnologiyalar transferini qo‘llab-quvvatlash va inson kapitalini rivojlantirish orqali xorijiy investitsiyalarning iqtisodiy samaradorligini oshirish mumkin.

Umuman olganda, xorijiy investitsiyalar mamlakat iqtisodiy barqarorligini ta’minlash, iqtisodiy o‘sish sur’atlarini jadallashtirish va milliy iqtisodiyotning xalqaro raqobatbardoshligini oshirishning muhim manbalaridan biri hisoblanadi. Shu sababli xorijiy kapitalni jalb qilishga qaratilgan institutsional va iqtisodiy islohotlarni izchil davom ettirish mamlakatning uzoq muddatli barqaror rivojlanishida muhim strategik yo‘nalish bo‘lib qoladi.

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IS THE OUTPUT GAP A RELIABLE POLICY INDICATOR? EVIDENCE ON MEASUREMENT UNCERTAINTY IN EMERGING AND DEVELOPING ECONOMIES

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Abstract. *The output gap the deviation of actual from potential output is a foundational input into monetary and fiscal policy. Yet in emerging and developing economies (EMDEs) the underlying object is often poorly identified: trend growth is unstable, informal activity escapes national accounts, commodity terms of trade move potential output almost as much as actual output, and credit cycles distort conventional filters. This paper synthesizes evidence from seventeen empirical and methodological studies to assess how reliable the output gap is as a policy indicator once these structural features are considered. The review finds substantial, and at points contradictory, evidence: studies disagree on whether trend or cyclical shocks dominate output fluctuations in emerging markets; nine widely used potential-growth measures diverge systematically across methods; and informality, commodity dependence, and credit cycles each independently bias standard filters. Only one study directly tests the output gap's ability to forecast inflation, and even there the result depends on the estimation method chosen. The output gap remains conceptually indispensable but empirically fragile in developing economies, and policymakers should treat point estimates as ranges rather than precise signals.*

Keywords: *output gap; potential output; measurement uncertainty; emerging and developing economies; business cycles; informality; commodity prices*

1. Introduction

Central banks and finance ministries rely on the output gap to judge how much slack an economy has, to calibrate interest-rate rules, and to distinguish structural from cyclical fiscal deficits. Because inflation-targeting frameworks presume that inflationary pressure builds as output rises above potential, the accuracy of this estimate is not a peripheral technical question. In advanced economies, decades of relatively stable trend growth and dense statistical infrastructure support a rough consensus around standard filters; in emerging and developing economies (EMDEs), this consensus does not hold. Trend growth itself may be volatile (Aguiar & Gopinath, 2007), large informal sectors distort national accounts (Yépez, 2019; Horvath, 2018;

Leyva & Urrutia, 2020; Coşkun, 2022), commodity terms-of-trade swings move potential output alongside actual output (International Monetary Fund [IMF], 2015; Aslam et al., 2016), and credit cycles bias conventional filters (Grintzalis et al., 2017; Amador-Torres et al., 2015). This paper synthesizes seventeen studies to ask: how reliable is the output gap as a policy indicator in EMDEs once these structural features are taken into account? Section 2 reviews the evidence thematically; Section 3 compares and critically evaluates it; Section 4 concludes.

2. Literature Review

Trend-cycle instability. Aguiar and Gopinath (2007), examining Mexico, Canada, and other small open economies, find that the random-walk (trend) component explains 84% of output variation in emerging markets versus 61% in developed economies implying much apparent "slack" is really a shift in potential output. De Gorostiza-Roudnitski (2026b), applying a Beveridge–Nelson filter to Indonesia, Malaysia, Thailand, and the Philippines (1993–2022), reaches the opposite conclusion: less than one-third of growth volatility is trend-driven. The two studies disagree even within the same broad country class, suggesting the trend–cycle split itself is unsettled, not merely noisy.

Method sensitivity. Gerlach and Yiu (2004) find that HP, band-pass, Beveridge–Nelson, and unobserved-components filters converge across eight Asian economies despite the 1997 crisis. This convergence does not generalize: Kilic Celik et al. (2023), comparing nine potential-growth measures across up to 173 countries, find forecast-based estimates systematically highest and univariate filters lowest, while a companion production-function study of 83 countries documents a steady decline in global potential growth concentrated in commodity-exporting regions. Incorporating external information changes results further: Amador-Torres et al. (2015, Colombia/Chile/Mexico) and Grintzalis et al. (2017, EME panel) show finance- and credit-adjusted gaps diverge sharply from standard HP gaps, especially around crises and turning points, while De Gorostiza-Roudnitski (2026a) finds financial and global variables explain a large share of gap fluctuations in Southeast Asia. Alpysbaeva et al.

(2021) show that even a single HP/Kalman-filter application yields policy-relevant, if method-dependent, conclusions, identifying persistently procyclical fiscal policy in oil-dependent Kazakhstan.

Informality. Large informal sectors distort both GDP and the auxiliary indicators used to validate output gap estimates. Yépez (2019) shows informal production buffers Mexico–U.S. shocks via labour and expenditure reallocation but biases national accounts toward the formal sector. Horvath (2018) and Leyva and Urrutia (2020), calibrating models to Argentina and Mexico, show informality explains excess consumption volatility and raises measured output volatility even as it buffers employment. Coşkun (2022) finds informal employment countercyclical in Mexico, Colombia, and Turkey, but correlated differently with formal employment in each. De Gorostiza-Roudnitski (2026a) makes the measurement link explicit: informal employment weakens the unemployment–output gap relationship central banks rely on as a cross-check.

Commodity shocks. The IMF (2015) and the companion working paper by Aslam et al. (2016), covering 52 commodity-exporting EMDEs, find that actual output responds roughly twice as strongly as potential output to commodity terms-of-trade swings. The authors warn that overestimating the output gap during a commodity bust risks inflationary rather than sustainable stimulus—precisely the reliability failure this paper investigates. Alpysbaeva et al. (2021) and Kilic Celik et al. (2023) corroborate this risk for oil-dependent and commodity-exporting economies more broadly.

Financial cycles. Ferreira da Silva (2002), using GMM regressions across forty countries, finds that more developed financial systems are associated with smoother business cycles, establishing the mechanism that motivates the finance-adjusted output gap studies above.

Table 1. *Summary of Included Studies*

Author(s), Year	Country/Region	Period	Method	Main Finding (Policy Implication)
Aguiar & Gopinath (2007)	Mexico, Canada + EMEs	1980s–2000s	SOE model; trend/cycle decomposition	Trend shocks explain 84% of output variation in EMEs vs. 61% in AEs (output gap benchmark itself unstable in EMEs)

Author(s), Year	Country/Region	Period	Method	Main Finding (Policy Implication)
De Gorostiza-Roudnitski (2026a, 2026b)	Indonesia, Malaysia, Thailand, Philippines	1993–2022	Multivariate BN filter/Bayesian VAR; BN vs. HP/CF/Hamilton	Financial/global variables drive gap fluctuations; cyclical component dominates, contra Aguiar & Gopinath (add financial indicators to slack monitoring)
Gerlach & Yiu (2004)	8 Asian economies	1980s–2003	HP, BP, BN, UC filters compared	Filters broadly converge despite 1997 crisis (UC method preferred for confidence bands)
Kilic Celik et al. (2023, MPRA & WB)	173 / 83 countries	1981–2021	9-measure database; production-function approach	Estimates diverge substantially across methods; potential growth declining, esp. commodity exporters (no single method definitive)
Amador-Torres et al. (2015); Grintzalis et al. (2017); Ferreira da Silva (2002)	Colombia, Chile, Mexico; EME panel; 40 countries	1960s–2016	Finance-/credit-adjusted HP filter vs. HP; cross-country GMM	Finance-adjusted gaps diverge sharply from HP gaps around crises; developed financial systems smooth cycles (monetary policy should track financial-cycle stage)
Alpysbaeva et al. (2021)	Kazakhstan	2000s–2020	HP filter cross-checked with Kalman filter	Persistently procyclical fiscal policy despite oil dependence (structural budget balance rule recommended)
Ndzama (2025)	BRICS	2000–2022	HPF, BPF, MVHPF, SVAR vs. AR benchmark	Inflation-forecasting ability is method- and country-dependent; MVHPF generally best (inflation targeting improves usefulness)
IMF (2015); Aslam et al. (2016)	52 commodity-exporting EMDEs	1960–2015	Event studies, simulations, local projections	Actual output reacts twice as strongly as potential to terms-of-trade swings (avoid overestimating slack during commodity busts)
Yépez (2019); Horvath (2018); Leyva & Urrutia (2020); Coşkun (2022)	Mexico, Argentina, Colombia, Turkey	1980s–2010s	Calibrated SOE/RBC models with informal sector	Informality buffers shocks but distorts volatility measures and the unemployment-gap link (stabilization policy must account for informal-sector bias)

3. Comparative Analysis and Critical Discussion

Synthesizing across the seventeen studies, three patterns emerge. First, the trend-cycle split is genuinely unresolved rather than merely noisy: Aguiar and Gopinath (2007) and De Gorostiza-Roudnitski (2026b) reach opposite conclusions using different identification strategies consumption-and-net-exports-based inference versus direct Beveridge–Nelson decomposition of GDP on similar emerging-market samples. Second, method sensitivity is real but not uniform: convergence documented in relatively contained samples (Gerlach & Yiu, 2004) breaks down once financial, global, or production-function information is added (Kilic Celik et al., 2023; De Gorostiza-Roudnitski, 2026a; Grintzalis et al., 2017; Amador-Torres et al., 2015), with divergence largest exactly around crises and turning points, when accuracy matters most for policy. Third, informality, commodity dependence, and shallow financial systems act as largely independent sources of error; a single EMDE exposed to all three would compound them, though no study in this sample estimates the interaction jointly an informative gap in the literature itself.

Only Ndzama (2025) tests the output gap's inflation-forecasting performance directly, using four output gap models against an autoregressive benchmark for the BRICS economies (2000–2022). The multivariate HP filter performs best in most cases, but the autoregressive benchmark outperforms

all gap models for Brazil at longer horizons and China at shorter horizons, and forecasting is somewhat better under inflation targeting. This single, method-dependent result is consistent with, and plausibly a downstream consequence of, the broader measurement uncertainty documented above.

The literature's strengths are its large-panel evidence of disagreement (Kilic Celik et al., 2023), its coherent structural mechanisms for informality (Yépez, 2019; Horvath, 2018; Leyva & Urrutia, 2020; Coşkun, 2022), and its actionable commodity-cycle policy warning (Aslam et al., 2016). Its central limitation is that only Ndzama (2025) connects measurement uncertainty to actual inflation-forecasting performance; the rest document why output gap estimates are unreliable without testing how much this degrades their policy usefulness. Identification also varies—Aguiar and Gopinath (2007) infer trend persistence indirectly while De Gorostiza-Roudnitski (2026b) decomposes GDP directly—making their disagreement hard to adjudicate, and several single-region studies (Amador-Torres et al., 2015; Alpysbaeva et al., 2021) have limited external validity given their small samples.

4. Conclusion

This review of seventeen studies concludes that the output gap remains conceptually indispensable to monetary and fiscal policy in developing economies but is empirically fragile: trend volatility, method sensitivity, informality, commodity dependence, and shallow financial systems each independently degrade its reliability, and the one study testing its inflation-forecasting performance directly (Ndzama, 2025) finds this, too, is method-dependent. Policymakers should treat output gap estimates as ranges bounded by method choice rather than precise signals, cross-check filter-based estimates against informality- and finance-adjusted alternatives where data permit, and apply particular caution around commodity and financial-cycle turning points, where the literature reviewed here shows uncertainty to be largest. The clearest gap in the literature and the most direct avenue for future research is the near absence of studies connecting output gap measurement uncertainty to actual inflation outcomes; extending the finance-, informality-, and commodity-adjusted methodologies reviewed here into direct Phillips-curve estimation across a broader EMDE panel would close this gap between measurement research and policy validation.

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XALQARO TIJORAT BANKLARINING INFRATUZILMA LOYIHALARINI MOLIYALASHTIRISHDAGI ISHTIROK SHAKLLARI: QIYOSIY TAHLIL

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Annotatsiya. Maqola xalqaro tijorat banklarining infratuzilma loyihalarini moliyalashtirishdagi ishtirok shakllari va vositalari qiyosiy tahlil qilingan. Beshta yirik xalqaro bank tanlab olinib (HSBC, Deutsche Bank, Standard Chartered, JPMorgan Chase, Citibank), ularning infratuzilma moliyalashtirish sohasidagi joriy strategiyasi, institutsional tuzilmasi va real loyihalardagi ishtiroki tahlil qilinadi, shuningdek asosiy moliyaviy vositalar tavsiflanadi. Xalqaro tijorat banklarining yagona universal strategiyasi mavjud emas, har bir bank o'z mintaqaviy va tarmoq ixtisoslashuviga mos moliyalashtirish vositalarini va institutsional yondashuvni tanlashi ko’rib chiqiladi. Rivojlanayotgan mamlakatlar, jumladan O'zbekiston uchun hamkorlik uchun turli banklar bilan alohida-alohida hamkorlik strategiyasi ishlab chiqish zarurligini ko'rsatadi.

Kalit so'zlar: xalqaro tijorat banklari, infratuzilma moliyalashtirish, loyihaviy moliyalashtirish, sindikatlashtirilgan kreditlash, davlat-xususiy sheriklik, infratuzilma obligatsiyalari.

Forms of participation of international commercial banks in financing infrastructure projects: a comparative analysis

Annotation. The article presents a comparative analysis of the forms and instruments of participation of international commercial banks in financing infrastructure projects. Five major international banks were selected (HSBC, Deutsche Bank, Standard Chartered, JPMorgan Chase, Citibank), and their current strategy, institutional structure, and involvement in real projects in the field of infrastructure financing are analyzed, along with a description of the main financial instruments. It is shown that international commercial banks do not follow a single universal strategy; each bank selects financing instruments and an institutional approach corresponding to its own regional and sectoral specialization. For developing countries, including Uzbekistan, this indicates the need to develop a separate cooperation strategy for each individual bank.

Keywords: international commercial banks, infrastructure financing, project finance, syndicated lending, public-private partnership, infrastructure bonds.

Kirish

Infratuzilma loyihalarini moliyalashtirish davlat byudjeti imkoniyatlaridan ancha yuqori miqyosdagi resurslarni talab qiladi. Jahon banki hisob-kitoblariga ko'ra, 2030-yilgi Barqaror rivojlanish maqsadlariga erishish uchun rivojlanayotgan mamlakatlar YaIM (yalp ichki mahsulot)ning taxminan 4,5 foizini, ya'ni yiliga 1,5 trillion dollarni infratuzilmaga sarflashi kerak. [28]

Bunday ko'lamdagi ehtiyoj xalqaro tijorat banklarining ishtirokisiz amalga oshirilishi ehtimoli juda kam. Biroq amaliyot shuni ko'rsatadiki, turli xalqaro banklar infratuzilma sohasiga bir xil shaklda emas, balki o'ziga xos institutsional yondashuv, mintaqaviy ustuvorlik va moliyaviy vositalar orqali kirib boradi. Shu sababli ularning ishtirok shakllarini tizimli tarzda qiyosiy tahlil qilish nazariy va amaliy ahamiyat kasb etadi. Maqolaning maqsadi sifatida xalqaro tijorat banklarining infratuzilma loyihalarini moliyalashtirishdagi asosiy ishtirok shakllarini (bank-subyektlar kesimida va moliyaviy vositalar kesimida) tizimli o’rganish va ularning qiyosiy xususiyatlarini aniqlashdan qilib belgilandi.

Xalqaro tijorat banklarining infratuzilma moliyalashtirishdagi ishtirokini o'rganish xorijiy iqtisodiy adabiyotlarda uzoq tarixga ega. R. Della Croce OECD uchun tayyorlagan tadqiqotida institutsional investorlar va tijorat banklarining infratuzilma aktivlariga investitsiya kiritish motivlarini, jumladan ularning barqaror va uzoq muddatli pul oqimlariga bo'lgan qiziqishini tahlil qilgan[29]. F.J. Fabozzi va C. de Nahlik “Handbook of Infrastructure Investing” asarida infratuzilma aktivlarining alohida investitsiya sinfi sifatidagi xususiyatlarini va xalqaro banklar tomonidan qo'llaniladigan moliyalashtirish strukturalarini keng qamrovli tizimlashtirgan[30]. T. Ehlers (BIS) o'z tadqiqotida xalqaro banklarning infratuzilma moliyalashtirishdagi ishtirokini cheklovchi omillarni — uzoq muddatli resurs bazasining yetishmasligi va tartibga solish talablarining qattiqlashuvini — alohida ko'rsatib o'tgan[31].

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[31]Ehlers, T. Understanding the Challenges for Infrastructure Finance // BIS Working Papers No. 454, Bank for International Settlements, 2014.

Xalqaro tijorat banklarining infratuzilma moliyalashtirishdagi rolini o'rganishga bag'ishlangan tadqiqotlar bir necha yo'nalishga bo'linadi. E.R. Yescombe o'zining “Principles of Project Finance” asarida loyihaviy moliyalashtirish (project finance) mexanizmining nazariy asoslarini, jumladan non-recourse va limited recourse financing tushunchalarini batafsil yoritgan[32]. B.C. Esty “Modern Project Finance” asarida xalqaro banklarning sindikatlashtirilgan kreditlash amaliyotini tahlil qilgan[33]. A.R. Ulashov va G.R. Hakimova esa O'zbekiston tijorat banklari misolida investitsiya loyihalarini kreditlashdagi amaliy muammolarni o'rgangan[34]. Mavjud adabiyotlarda xalqaro banklarning ishtirok shakllari alohida-alohida o'rganilgan, ularni yaxlit qiyosiy tahlil asosida tizimlashtirish borasida bo'shliq mavjud ushbu maqola aynan shu bo'shliqni to'ldirishga qaratilgan.

Tadqiqot metodologiyasi. Tadqiqotda tavsiflovchi-qiyosiy tahlil usuli qo'llanildi. Ma'lumotlar manbai sifatida beshta yirik xalqaro tijorat bankining rasmiy investorlar uchun ma'lumot (Investor Relations) sahifalari, matbuot xabarlari va yillik hisobotlari (2024–2026), shuningdek Jahon banki va IJGlobal kabi xalqaro tashkilotlarning tahliliy hisobotlari asosida foydalanildi. Infratuzilma loyihalarini moliyalashtirishda faol beshta xalqaro tijorat bankining institutsional yondashuvi va joriy faoliyati quyida alohida-alohida ko'rib chiqiladi.

HSBC Holdings 2024-yil iyul oyida maxsus *HSBC Infrastructure Finance (HIF)* bo'linmasini tashkil etdi, uni Osiyo infratuzilma investitsiya banki (AIIB)ning sobiq raisi o'rinbosari Danny Alexander boshqaradi. Ushbu bo'linma bankning Global Banking Real Asset Finance jamoasi negizida tuzilgan bo'lib, infratuzilma moliyalashtirish, eksport moliyalashtirish va portfel boshqaruvini birlashtiradi hamda Singapurning Temasek jamg'armasi bilan qo'shma tashkil etilgan barqaror infratuzilma qarz kompaniyasi *Pentagreen Capital*ni boshqaradi[35]. HSBC 2030-yilgacha mijozlarga

[32]Yescombe, E.R. Principles of Project Finance. — 2nd ed. — Academic Press, 2014.
[33]Esty, B.C. Modern Project Finance: A Casebook. — John Wiley & Sons, 2003.
[34]Ulashov A.R., Hakimova G.R. Investitsiya loyihalarini kreditlash: muammolar va yechimlar // O'zbekiston milliy axborot agentligi, 2024.
[35]ESG Today. HSBC Launches New Infrastructure Finance Unit // esgtoday.com, 2024.

past uglerodli iqtisodiyotga o'tishda $750 mlrddan $1 trln gacha moliyalashtirish va investitsiya ko'rsatishni maqsad qilgan[36].

JPMorgan Chase tarkibida alohida Infratuzilmani moliyalashtirish va konsalting (maslaxat) jamoasi faoliyat yuritadi. 2021-yilda JPMorgan Chase 2030-yilgacha barqaror rivojlanishga $2,5 trln mablag' yo'naltirish maqsadini e'lon qildi, shundan $1 trln bevosita “yashil” infratuzilma va toza energetika loyihalariga mo'ljallangan[37]. 2025-yilda bank yana milliy iqtisodiy xavfsizlik uchun muhim tarmoqlarga yo'naltirilgan $1,5 trln hajmidagi Xavfsizlik va barqarorlik tashabbuslari dasturini e'lon qildi, bunda $10 mlrdgacha to'g'ridan-to'g'ri kapital investitsiyalar ham nazarda tutilgan[38].

Citigroup (Citibank) o'zining rasmiy tahlilida keyingi 15 yil ichida global infratuzilmaga $59 trln investitsiya zarurligini alohida ta'kidlaydi[39]. Bank 2030-yilgacha $1 trln hajmidagi barqaror moliyalashtirish maqsadini belgilagan bo'lib, 2025-yilga kelib bu ko'rsatkichning $647,2 mlrdiga erishilgan[40]. Bundan tashqari, Citibank Jahon banki guruhiga kiruvchi IFC bilan hamkorlikda rivojlanayotgan bozorlar uchun barqaror ta'minot zanjirini moliyalashtirish dasturlarini ham amalga oshirmoqda.

Deutsche Bank o'zining Ishonch va agentlik xizmatlari bo'linmasi orqali IJGlobal tashkilotining “Yilning eng yaxshi global korporativ ishonch xizmati provayderi” unvonini ketma-ket to'rt yil qo'lga kiritgan[41]. Bank real amaliy misol sifatida Portugaliyaning birinchi yuqori tezlikli temir yo'l loyihasi (Porto–Lissabon)ni moliyalashtirishda bosh tashkilotchi-bank bo’lgan, kredit beruvchi hamda foiz stavkasi svopi provayderi sifatida ishtirok etgan[42], Turkiyaning Istanbuldagi Shimoliy Marmara avtomagistralining Nakkaş–Başakşehir qismi loyihasida agentlik xizmatlarini ko'rsatgan[43].

[36]Carbon Credits. HSBC Opens New Unit For Low-Carbon Finance, Alongside $1 Trillion Pledge // carboncredits.com, 2024.
[37]JPMorgan Chase & Co. Targets More Than $2.5 Trillion over 10 Years // jpmorganchase.com, 2021.
[38]JPMorganChase. Security and Resiliency Initiative // jpmorganchase.com/newsroom, 2025.
[39]Citi. Business for 2030: Infrastructure // businessfor2030.org.
[40]Citigroup Global Sustainability Report 2025 // marketscreener.com, 2025.
[41]Deutsche Bank. Project Finance — Corporates and Institutions // corporates.db.com.
[42]Deutsche Bank provides project financing for Portugal's first high-speed railway project // corporates.db.com.
[43]Deutsche Bank. TAS closes agency deal for Turkey's Nakkaş–Başakşehir motorway project // corporates.db.com.

Standard Chartered banki 2024-yilda Afrika va Osiyoda murakkab, ko'p tarmoqli infratuzilma loyihalari uchun $4 mlrddan ortiq moliyalashtirish amalga oshirgan[44]. Standard Chartered 2030-yilgacha $300 mlrd barqaror moliyalashtirish maqsadini belgilagan bo'lib (2024-yil sentyabr holatiga $121 mlrdga erishilgan), shundan alohida $40 mlrd barqaror infratuzilma loyihalarini moliyalashtirishga mo'ljallangan[45]. Bankning aktivlarining 78 foizi Osiyo, Afrika va Yaqin Sharq mintaqalarida joylashgan bo'lib, bu uning rivojlanayotgan bozorlarga ustuvor yo'nalganligini tasdiqlaydi.

Yuqorida o’rganilgan ma’lumotlardan ko'rinib turibdiki, har bir bank infratuzilma moliyalashtirishni o'zining strategik ustuvor yo'nalishi sifatida belgilagan, biroq ularning institutsional yondashuvi har xil. HSBC va JPMorgan Chase alohida ixtisoslashgan bo'linmalar tashkil etgan, Deutsche Bank ishonch va agentlik xizmatlari orqali loyihalarga texnik-institutsional ko'mak ko'rsatishga ixtisoslashgan bo’lsa, Citigroup va Standard Chartered esa aniq miqdoriy maqsadlar orqali o'z strategiyasini bozorga ochiq e'lon qilgan.

1-jadval. Infratuzilma moliyalashtirishda faol xalqaro tijorat banklarining qiyosiy tavsifi

Bank	**Mintaqaviy yo'nalishi**	**Institutsional yondashuvi, maqsadi**
HSBC Holdings	Osiyo, Yaqin Sharq, Yevropa	HSBC Infrastructure Finance (HIF) bo'linmasi; $750 mlrd–$1 trln (2030)
JPMorgan Chase	AQSh, global	Infrastructure Finance and Advisory jamoasi; $1 trln yashil infra (2030)
Citigroup	Global, rivojlanayotgan bozorlar	$1 trln barqaror moliyalashtirish maqsadi (2030), $647,2 mlrd (2025)
Deutsche Bank	Yevropa, global	Trust and Agency Services; MLA va agentlik xizmatlari
Standard Chartered	Osiyo, Afrika, Yaqin Sharq	$40 mlrd barqaror infratuzilma maqsadi (2030); $4 mlrd (2024, yiliga)

Manba: har bir bankning rasmiy matbuot xabarlari va yillik hisobotlari (2024–2026) asosida muallif tomonidan tuzilgan.

[44]African Business. ‘Africa is not a new frontier for us, it is home’ // african.business, 2025.
[45]Standard Chartered. Sustainable Finance Impact Report 2024–2025 // sc.com.

1-jadvalga ko’ra. xalqaro tijorat banklari infratuzilma moliyalashtirishga bir xil yondashuvni qo'llamaydi. Bu farqlar O'zbekiston uchun alohida ahamiyatga ega, chunki mamlakat turli banklar bilan hamkorlik o'rnatishda ularning institutsional kuchli tomonlarini (masalan, HSBC/Standard Chartered - kapital, Deutsche Bank - agentlik va tuzilmaviy ekspertiza) hisobga olishi lozim. Bank-subyektlar bilan bir qatorda, ular qo'llaydigan asosiy moliyaviy vositalar ham o'ziga xos xavf-daromad profiliga ega hisoblanadi. Quyida ularni jadval shaklida ko’rish mumkin.

2-jadval. Xalqaro tijorat banklari tomonidan qo'llaniladigan asosiy moliyaviy vositalar

Vosita	**Mohiyati**	**Tipik muddat / xususiyat**
Uzoq muddatli bank kreditlari	Loyiha aktivlari garovi bilan ta'minlangan kredit liniyalari	10–15 yil, fixed/floating stavka
Sindikatlashtirilgan kreditlar	Bir guruh banklarning birgalikda moliyalashtirishi	Individual bank xavfini kamaytiradi
Loyihaviy moliyalashtirish (project finance)	Non-recourse yoki limited recourse asosida, loyiha pul oqimiga tayanadi	SPV orqali amalga oshiriladi
Kafolatlar va hujjatli operatsiyalar	To'lov va ijro kafolatlari, akkreditivlar	Kredit riskini taqsimlaydi
Infratuzilma obligatsiyalari	Xalqaro bozorlarga joylashtiriladigan qarz qog'ozlari	15–30 yil, institutsional investorlar uchun
Qarzlarni sekyuritizatsiya qilish	Kredit portfellarini bozor vositalariga aylantirish	Bank balansini “bo'shatadi”
DXSh orqali bilvosita ishtirok	Davlat kafolatlari va tarif mexanizmlari asosida	20–30 yil, risk taqsimlangan

Manba: World Bank Group, ADB, EBRD va boshq., “Public-Private Partnerships Reference Guide, Version 3”[46] *asosida muallif tomonidan tuzilgan.*

Moliyaviy vositalar bir-biridan asosan muddat, xavf taqsimoti va joylashtirish usuliga ko'ra sezilarli farqlanadi. Qisqa va o'rta muddatli loyihalar uchun sindikatlashtirilgan kreditlar ustunlik qilsa, uzoq muddatli ya’ni 20 yildan ortiq infratuzilma loyihalari uchun infratuzilma obligatsiyalari va DXSh mexanizmi ko'proq qo'llaniladi. Deutsche Bankning Portugaliya temir yo'li misolida ko'rinib turganidek,

[46]World Bank Group et al. Public-Private Partnerships Reference Guide, Version 3 // ppp.worldbank.org.

real amaliyotda banklar ko'pincha bir nechta vositani (kredit + svop + agentlik xizmati) bir loyiha doirasida kombinatsiyalashtirib qo'llaydi.

Xulosa

O'tkazilgan qiyosiy tahlilga ko’ra, xalqaro tijorat banklarining infratuzilma loyihalarini moliyalashtirishdagi ishtirok shakllari ikki asosiy o'lchamda tizimlashtirilishi mumkin. Birinchi tizimlashtirishbank darajasida bo’lib, har bir bankning o'ziga xos institutsional tuzilmasi, mintaqaviy ustuvorligi va miqdoriy maqsadlari orqali bo’ladi. Ikkinchisi esa vosita darajasida, ya’ni loyiha muddati va xavf profiliga mos moliyaviy instrumentni tanlash orqali.

Rivojlanayotgan mamlakatlar, jumladan O'zbekiston, uchun amaliy tavsiya sifatida milliy infratuzilma strategiyasini ishlab chiqishda faqat bitta emas, balki turli institutsional kuchga ega bir nechta xalqaro bank bilan parallel hamkorlik o'rnatish, loyiha turi va muddatiga qarab mos moliyaviy vositani tanlash, HSBC va Standard Chartered kabi Osiyo/Afrika bozorlariga ixtisoslashgan banklarning maqsadli dasturlariga ($40 mlrd, $1 trln kabi) mos loyihalar taqdim etish orqali ularning ustuvor mintaqalar ro'yxatiga kirish imkoniyatini oshirish kabilarni keltirish mumkin.

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QURILISH SANOATI KORXONALARIDA INTEGRATSIYALASHGAN HISOBOT KONSEPSIYASINING EVOLYUTSIYASI: BARQAROR RIVOJLANISH PARADIGMASI SHAKLLANISHINING XALQARO INSTITUTSIONAL BOSQICHLARI

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Annotatsiya. *Maqolada integratsiyalashgan hisobot kontseptsiyasining barqaror rivojlanish paradigmasi doirasidagi evolyutsiyasi tarixiy-institutsional yondashuv asosida tadqiq etilgan. Integratsiyalashgan hisobotning oltita xalqaro institutsional bosqichi tahlil qilinib, har bir bosqichdagi asosiy tashkiliy va me'yoriy voqealar tizimlashtirilgan. Manfaatdor tomonlar, legitimlik, signal, institutsional, agentlik va resurslarga asoslangan nazariyalar qiyosiy tahlil qilingan. KPMG (2024) va GRI ma'lumotlari asosida hisobot berish darajasining 1993-yildagi 12 foizdan 2024-yildagi 96 foizgacha o'sishi tahlil qilinib, "hisobot berish" va "haqiqiy integratsiyalashgan tafakkur" o'rtasidagi institutsional tafovut aniqlangan. Qurilish sanoati korxonalari uchun ushbu evolyutsion tajribani milliy institutsional sharoitga moslashtirish yuzasidan ilmiy-amaliy takliflar ishlab chiqilgan.*

Kalit so'zlar: *integratsiyalashgan hisobot, barqaror rivojlanish, institutsional evolyutsiya, IIRC, GRI, ISSB, manfaatdor tomonlar nazariyasi, dekapling, qurilish sanoati korxonalari, ESG.*

Abstract. *The article examines the evolution of integrated reporting within the sustainable development paradigm using a historical-institutional approach. Six international institutional stages are analyzed, systematizing their key organizational and regulatory events. Stakeholder, legitimacy, signalling, institutional, agency and resource-based theories are comparatively examined. Based on KPMG (2024) and GRI statistics, the growth of reporting rates from 12% in 1993 to 96% in 2024 reveals an institutional gap between "reporting" and "genuine integrated thinking." Practical recommendations are developed for construction industry enterprises in the national institutional environment.*

Keywords: *integrated reporting, sustainable development, institutional evolution, IIRC, GRI, ISSB, stakeholder theory, decoupling, construction industry enterprises, ESG.*

KIRISH

Zamonaviy korporativ boshqaruvda korxonalar faoliyatini faqat moliyaviy ko'rsatkichlar orqali baholash o'z ahamiyatini yo'qotib bormoqda. An'anaviy moliyaviy hisobot faqat pul birligida o'lchanadigan operatsiyalarni qayd etadi; natijada intellektual salohiyat, kadrlar sifati, manfaatdor tomonlar bilan munosabatlar va ekologik iz kabi qiymat yaratish manbalari hisobotdan tashqarida qolmoqda. Muammoning ikki jihati mavjud: axborot assimetriyasi ya'ni investorlarning to'liq bo'lmagan axborotga tayanishi hamda barqarorlik muammosi ya'ni iqlim o'zgarishi va

resurslar tanqisligi sharoitida jamiyatning uzoq muddatli ijtimoiy-ekologik hisobdorlik talabi.

Ushbu muammolar kesishuvida integratsiyalashgan hisobot konsepsiyasi tarixiy zaruriyat sifatida shakllandi. Qurilish sanoati korxonalari uchun bu jarayon alohida ahamiyatga ega: yuqori kapital sig‘imliligi va loyihalarning uzoq muddatliligi tufayli ular tashqi moliyalashtirishga ko‘proq muhtoj bo‘lib, ayni paytda qurilish materiallari va energiya sarfi, chiqindilar, mehnat xavfsizligi hamda shahar muhitiga ta’siri bo‘yicha eng yuqori ijtimoiy-ekologik ta’sirli tarmoqlardan biridir. Bu omillar ularni joriy etishning tabiiy “birinchi to‘lqin” ishtirokchilariga aylantiradi.

Tadqiqotning maqsadi integratsiyalashgan hisobotning xalqaro institutsional evolyutsiyasini davrlashtirilgan tarzda tahlil qilish, uni izohlovchi nazariy yondashuvlarni tizimlashtirish hamda ushbu tajribani O‘zbekiston qurilish sanoati korxonalariga moslashtirish yo‘nalishlarini asoslashdan iborat.

ASOSIY QISM

R.Freeman (1984) ishlab chiqqan manfaatdor tomonlar nazariyasi korxonaning aktsiyadorlardan tashqari xodimlar, mijozlar, yetkazib beruvchilar, mahalliy jamoa va davlat organlari oldidagi javobgarligini asoslaydi [1]. Legitimlik nazariyasi korxonaning jamiyat bilan “ijtimoiy shartnoma” asosida faoliyat yuritishini, signal nazariyasi esa nomoliyaviy axborotni ixtiyoriy oshkor qilishni kapital tortish xarajatlarini pasaytirish vositasi sifatida izohlaydi.

Meyer va Rowan (1977) asoslagan institutsional nazariyada integratsiyalashgan hisobotni joriy etish ko‘pincha tarmoqdagi “izomorfizm” — yetakchilarga taqlid qilish sifatida talqin etiladi [2]. Bromley va Powell (2012) rivojlantirgan “dekapling” konsepsiyasi esa tanqidiy nuqtai nazar beradi: tashqi bosim ostida qabul qilingan rasmiy hisobot amaliyoti korxonaning haqiqiy ichki boshqaruv jarayonlaridan uzilib qolishi mumkin [3].

J.Elkington 1994-yilda taklif etgan “uchlik natija” (people, planet, profit) konsepsiyasi metodologiyaning eng muhim g‘oyalaridan biridir [4]; muallifning o‘zi 2018-yilda amaliyotda u faqat hisobot vositasiga aylanib qolgani sababli uni qisman

“qaytarib olish” zarurligini yozgan [5]. R.Eccles va M.Krzus (2010) “One Report” asarida integratsiyalashgan hisobotni barqaror strategiya uchun yagona hisobot sifatida asoslagan [6], J.Flower (2015) IIRC faoliyatiga tanqidiy pozitsiyani ilgari surgan [8], de Villiers, Rinaldi va Unerman (2014) esa sohadagi ilmiy bo‘shliqlar va kelgusi tadqiqot yo‘nalishlarini tizimlashtirgan [9].

Tadqiqotda tarixiy-mantiqiy tahlil qo‘llanildi: 1987-2023 yillardagi evolyutsiya bosqichlari izchil tizimlashtirilib, sabab-oqibat bog‘liqliklari ochib berildi; qiyosiy tahlil yordamida olti nazariy yondashuv solishtirildi. Statistik tahlilda KPMGning 1993-yildan buyon o‘tkazilayotgan “Barqarorlik hisoboti bo‘yicha so‘rovnomasi” hamda 58 ta mamlakat va yurisdiksiyadagi 5800 ta kompaniyaning 180 000 dan ortiq ma’lumot elementini qamrab olgan GRI rasmiy ma’lumotlar bazasidan foydalanildi.

Integratsiyalashgan hisobotni yagona nazariya to‘liq izohlay olmaydi. Bu esa sohaning fanlararo ekanligini tasdiqlaydi, har bir nazariya hodisaning muayyan jihatini ochib beradi (1-jadval).

1-jadval.

Integratsiyalashgan hisobot nazariy asoslarini tashkil etuvchi kontseptsiyalarning qiyosiy tavsifi

Nazariya	**Asosiy g‘oyasi**	**Integratsiyalashgan hisobotdagi vazifasi**
Manfaatdor tomonlar nazariyasi	Korxona barcha manfaatdor tomonlar oldida javobgar	Hisobot auditoriyasini aktsiyadorlardan kengroq doiraga kengaytirish
Legitimlik nazariyasi	Korxona jamiyat bilan “ijtimoiy shartnoma” asosida faoliyat yuritadi	Ijtimoiy-ekologik shaffoflikni legitimlikni saqlash vositasi sifatida izohlaydi
Signal nazariyasi	Sifatli oshkoralik ijobiy bozor signali beradi	Ixtiyoriy hisobotning kapital tortish xarajatlarini pasaytirish mexanizmini tushuntiradi
Institutsional nazariya	Tashkilotlar tarmoq bosimi ostida bir-biriga taqlid qiladi (izomorfizm)	Hisobot amaliyotining tarqalish mexanizmini, shuningdek dekapling xavfini izohlaydi
Agentlik nazariyasi	Mulkdorlar va boshqaruvchilar manfaatlari nomutanosib bo‘lishi mumkin	Hisobotni boshqaruv ustidan nazorat va oshkoralik mexanizmi sifatida asoslaydi
Resurslarga asoslangan yondashuv	Noyob resurslar barqaror raqobat ustunligini ta’minlaydi	Shaffoflik va reputatsiyani nomoddiy strategik resurs sifatida talqin qiladi

Tarixiy-institutsional tahlil oltita izchil bosqichni ajratish imkonini berdi. Dastlabki uch bosqichda kontseptual asoslar shakllandi (1987-1999), standartlashtirish kengaydi (2000-2009) va g‘oya institutsionalizatsiyalashdi (2010-2013); ularning asosiy voqealari 2-jadvalda umumlashtirilgan. To‘rtinchi bosqich (2015-2020) BMT Barqaror rivojlanish maqsadlari va Parij iqlim kelishuvi orqali barqarorlik ko‘rsatkichlarini global maqsadlar bilan bog‘lash zaruriyatini kuchaytirdi. Beshinchi bosqich (2021-2023) institutsional konsolidatsiya IIRC va SASBning VRF ga birlashishi, ISSB tuzilishi hamda IFRS S1/S2 standartlarining 2023-yil 26-iyunda e’lon qilinishi bilan yakunlandi. Oltinchi bosqichda (2023-yildan hozirgacha) majburiy me’yoriy tizimga o‘tish kuzatilmoqda: 39 ta yurisdiksiya ISSB standartlarini joriy eta boshladi, Yevropa Ittifoqida esa CSRD direktivasi bosqichma-bosqich amal qilmoqda.

2-jadval.

Integratsiyalashgan hisobot evolyutsiyasining asosiy institutsional bosqichlari

Bosqich / davr	**Nomi**	**Asosiy voqealar va tashkilotlar**
I. 1987-1999	Kontseptual asoslar shakllanishi	Brundtland hisoboti (1987); Exxon Valdez halokati (1989); GRI tashkil etilishi (1997)
II. 2000-2009	Standartlashtirish kengayishi	GRI birinchi ko‘rsatmalari (2000); UN Global Compact (2000); G2 (2002), G3 (2006); CDSB (2007)
III. 2010-2013	Institutsionalizatsiya	IIRC (2010, London); SASB (2011, San-Fransisko); Xalqaro IR Konsepsiyasi (2013)
IV. 2015-2020	BRM va Parij kelishuvi bilan uyg‘unlashuv	BMT Barqaror rivojlanish maqsadlari va Parij iqlim kelishuvi (2015); “gang of five” bayonoti (2020)
V. 2021-2023	Institutsional konsolidatsiya	IIRC+SASB → VRF (2021); ISSB e’loni (2021); IFRS S1/S2 (2023)
VI. 2023dan hozirgi kungacha	Majburiy me’yoriy tizim	CSRD bosqichma-bosqich amal qilishi; 39 yurisdiktsiya ISSB standartlarini joriy etish jarayonida

KPMG so‘rovnomasining 2024-yilgi 13-nashriga ko‘ra, jahonning eng yirik 250 kompaniyasidan (G250) 96 foizi barqarorlik va ESG bo‘yicha hisobot bermoqda. Bu 1993-yildagi 12 foizdan sezilarli o‘sgan, 82 foizi esa barqarorlik axborotini bevosita yillik moliyaviy hisobotlariga kiritmoqda ya’ni integratsiyalashgan yondashuv chuqurlashmoqda. GRI standartlaridan foydalanish G250 guruhida 77 foizni, N100 guruhida 71 foizni tashkil etadi.

Ayni paytda statistika muhim ziddiyatni ko‘rsatadi: hisobot berish darajasi (96%) bilan joriy etish chuqurligi ko‘rsatkichlari (maxsus barqarorlik rahbari atigi 56%, ikki tomonlama muhimlik tahlili taxminan 50%) o‘rtasida sezilarli tafovut mavjud. Bu ko‘plab korxonalarda integratsiyalashgan hisobot hali “integratsiyalashgan tafakkur” darajasiga yetmay, ko‘proq tashqi rioya funksiyasini bajarayotganini ko‘rsatadi. Ushbu tafovut “dekapling” xavfi bilan izohlanadi va CSRD kabi tizimlarda mustaqil tashqi tasdiqlash majburiy talabga aylanishiga sabab bo‘ldi.

O‘zbekistonda rasmiy statistikada “integratsiyalashgan hisobot” yoki “ESG hisobot” alohida kategoriya sifatida ajratilmagan, bu qurilish sanoatida ham ushbu ko‘rsatkichlarni tizimli kuzatishni cheklaydi. Shunga qaramay, ayrim yirik korxonalarning xalqaro standartlar (MHXS) asosida audit qilingan hisobotlari bunday o‘tishning dastlabki ko‘rinishi sifatida baholanishi mumkin.

Amaliyotda joriy etish jarayoni notekis kechdi. Janubiy Afrika 2010-yildayoq King III kodeksi orqali ro’yxatga kiritilgan kompaniyalar uchun uni “bajarish yoki tushuntirish” tamoyilida deyarli majburiy qilgan birinchi mamlakatlardan bo‘ldi. Yevropa Ittifoqida jarayon 2014-yilgi Nomoliyaviy Hisobot Direktivasi (NFRD) bilan boshlanib, uni almashtirgan CSRD bilan davom etmoqda; AQShda esa barqarorlik hisoboti asosan ixtiyoriy bo‘lib qolmoqda.

IFRS Fondi va GRI hamkorligida 2022-yilda shakllangan “ikki ustun” modeli xalqaro hisobot arxitekturasining asosiy amaliy tamoyilidir. Birinchi ustun ISSBning IFRS S1/S2 standartlari ya’ni “moliyaviy muhimlik” tamoyiliga asoslanib, investorlar uchun korxonaning moliyaviy holatiga bevosita ta’sir etuvchi barqarorlik omillarini oshkor qilishni talab qiladi. Ikkinchi ustun esa GRI standartlari ya’ni “ta’sir muhimligi” asosida korxonaning jamiyat va atrof-muhitga ta’sirini oshkor qilishni nazarda tutadi. Yevropa Ittifoqining CSRD/ESRS tizimi ikkala tamoyilni birlashtirgan “ikki tomonlama muhimlik” yondashuvini qo‘llaydi. Uch yondashuvning bir vaqtda mavjudligi murakkablik va qo‘shimcha xarajatlar tug‘dirib, qurilish sanoati korxonalari uchun optimal tanlov muammosini dolzarblashtirmoqda.

Hisobot darajasining tez o‘sishi bilan bir qatorda “yashil bo‘yash” natijalarni haqiqatdagidan yaxshiroq ko‘rsatish maqsadida hisobotni ataylab bezash haqidagi xavotirlar ham kuchaymoqda. Bu muammo “dekapling” konsepsiyasi bilan bevosita bog‘liq bo‘lib, tashqi audit va tasdiqlash mexanizmlari ahamiyatini yanada oshiradi.

So‘nggi yillarda yettinchi bosqichning dastlabki alomatlari kuzatilmoqda. Raqamli texnologiyalar va sun’iy intellektning hisobot tayyorlash, ma’lumotlarni yig‘ish, tekshirish va tahlil jarayonlariga faol tatbiq etilishi; GRI standartlararo (ESRS, ISSB, CDP) moslashuv uchun raqamli taksonomiya ustida ishlamoqda. Bu hisobot xarajatlarini pasaytirish va ma’lumotlar sifatini oshirish barobarida ma’lumotlar

yaxlitligi, algoritmik shaffoflik va sun’iy intellekt yordamida tayyorlangan hisobotlar ishonchliligini tasdiqlash bo‘yicha yangi ilmiy-uslubiy savollarni tug‘dirmoqda.

Majburiy tartibga solishga o‘tish ilmiy adabiyotda bir xilda baholanmaydi: majburiylik hisobotlarning taqqoslanuvchanligi, ishonchliligi va qamrovini oshirib, “erkin minuvchi” muammosini bartaraf etadi; ayni paytda u, ayniqsa kichik va o‘rta korxonalar uchun, muvofiqlashtirish xarajatlarini sezilarli oshirishi mumkin. Bu bahs o‘tish strategiyasida korxona hajmi, faoliyat xususiyati va institutsional tayyorgarlikni hisobga oluvchi differensial yondashuv zarurligini ko‘rsatadi.

XULOSA VA TAKLIFLAR

Tadqiqot natijalari integratsiyalashgan hisobot kontseptsiyasi barqaror rivojlanish paradigmasining korporativ boshqaruvdagi tabiiy va izchil davomi sifatida shakllanganini tasdiqlaydi. Uning evolyutsiyasi bir necha nazariy yondashuvlar uyg‘unlashuviga asoslangan olti bosqichli institutsional jarayon orqali kechdi. Ayni paytda tadqiqot “hisobot berish” va “haqiqiy integratsiyalashgan tafakkur” o‘rtasidagi tafovutni, GRI, ISSB va CSRD/ESRS metodologiyalari o‘rtasidagi kelishmovchiliklarni hamda O‘zbekiston qurilish sanoati korxonalari kontekstidagi ilmiy-uslubiy bo‘shliqlarni ochib berdi.

Tadqiqot asosida quyidagi takliflar ishlab chiqildi: birinchidan, “integratsiyalashgan hisobot” tushunchasini milliy adabiyotda xalqaro IR Konsepsiyasi ta’rifiga muvofiq mustahkamlash; ikkinchidan, xalqaro olti bosqichli davrlashtirish modelini milliy sharoitga moslashtirib, qurilish sanoati korxonalari uchun bosqichma-bosqich o‘tish yo‘l xaritasini shakllantirish; uchinchidan, mahalliy qurilish sanoati korxonalari bo‘yicha muntazam statistik monitoring tizimini joriy etish; to‘rtinchidan, “hisobot berish” va “integratsiyalashgan tafakkur”ning haqiqiy chuqurligini baholovchi integratsiyalashganlik darajasi indeksini ishlab chiqish; beshinchidan, ular uchun GRI, ISSB va CSRD/ESRS o‘rtasida milliy iqtisodiyot xususiyatlarini hisobga oluvchi, xalqaro standartlar bilan interoperabil “gibrid” yondashuvni ilmiy asoslash zarur.

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ЛОКАЛИЗАЦИЯ ЦЕЛЕЙ УСТОЙЧИВОГО РАЗВИТИЯ НА ОБЛАСТНОМ УРОВНЕ: ИНТЕГРИРОВАННЫЙ МЕТОДОЛОГИЧЕСКИЙ ИНСТРУМЕНТАРИЙ МОНИТОРИНГА

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Аннотация. *Ни один из действующих международных документов по мониторингу Целей устойчивого развития (ЦУР) - Руководящие принципы ЕЭК ООН, Руководство по подготовке VNR, методологии ESCAP, IGES и UN-Habitat - не закрывает весь цикл мониторинга на уровне области: каждый регламентирует лишь отдельную часть процесса. В статье предлагается собрать их в единый трехуровневый каркас - институциональный, процедурный и измерительный, - где измерительной основой служит Global Urban Monitoring Framework, дополненная показателями KPI for Smart Sustainable Cities. Каркас рассчитан на условия Узбекистана и может лечь в основу пилотного добровольного областного обзора (VSR).*

Ключевые слова: *цели устойчивого развития; локализация ЦУР; добровольный областной обзор; мониторинг устойчивого развития территорий; Global Urban Monitoring Framework; Узбекистан.*

Abstract. *None of the existing international documents on SDG monitoring - the UNECE Guiding Principles, the UN Handbook for VNRs, and the ESCAP, IGES and UN-Habitat methodologies - covers the full monitoring cycle at the oblast level; each regulates only part of the process. The article proposes bringing them together into a single three-layer framework - institutional, procedural and measurement - with the Global Urban Monitoring Framework, complemented by the KPI for Smart Sustainable Cities, serving as the measurement base. Tailored to conditions in Uzbekistan, the framework could underpin a pilot Voluntary Subnational Review (VSR).*

Keywords: *sustainable development goals; SDG localization; voluntary subnational review; territorial sustainability monitoring; Global Urban Monitoring Framework; Uzbekistan.*

Введение. Область не страна и не отдельный город. Международного мандата на подготовку собственного обзора ЦУР у нее нет, но именно на этом уровне принимаются решения, от которых напрямую зависит повседневная

жизнь людей: состояние дорог, работа школ и больниц, доступ к воде. После принятия Повестки-2030 добровольная отчетность по ЦУР быстро вышла за пределы национального уровня вслед за Добровольными национальными обзорами (VNR) появились Добровольные местные обзоры (VLR) и Добровольные субнациональные обзоры (VSR), рассчитанные именно на регионы и области.

Узбекистан страна с заметными различиями между областями: по уровню социально-экономического развития, структуре экономики, доступности статистических данных. Единой методологии мониторинга ЦУР ни для одной из них пока не выработано, хотя необходимый инструментарий уже существует. Проблема не в его отсутствии, а в том, что он разбросан по десятку разных документов, каждый из которых решает лишь свою узкую задачу.

Задача настоящей статьи собрать эти разрозненные подходы в один рабочий каркас мониторинга устойчивого развития территории на уровне области: с институциональной основой, процедурой подготовки обзора и системой измерения результата, применимой к условиям Узбекистана.

Основная часть.

Начать стоит с самого общего документа. Руководящие принципы ЕЭК ООН по пространственному планированию (UNECE, 2008) появились еще до Повестки-2030 и к оценке ЦУР отношения не имеют. Зато они объясняют, каким должно быть само территориальное управление: скоординированным между уровнями власти, межведомственным, с постоянной обратной связью по итогам принятых решений. Без этой институциональной основы любой набор индикаторов существует сам по себе, в отрыве от реального управления территорией.

Дальше в дело вступает ООН, но уже не про управление, а про процедуру оценки. Руководство по подготовке VNR (United Nations, 2015, 2025) устанавливает добровольность, национальную ответственность, принцип «Leave

No One Behind», опору на официальную статистику. Единого набора индикаторов эти документы намеренно не задают: каждая страна формирует его самостоятельно, из-за чего результаты разных стран трудно сравнивать напрямую.

На следующем уровне практика. ESCAP выпустила региональные рекомендации по подготовке местных обзоров для Азиатско-Тихоокеанского региона (UN ESCAP, 2020). Институт глобальных экологических стратегий предложил десятиэтапный метод Shimokawa, в котором обзор - не отчет, а часть постоянного управленческого цикла (IGES, 2020). UN-Habitat совместно с UCLG выпустили методологию Action-Oriented VLR, нацеленную на конкретные проекты, а не на документ ради документа (UN-Habitat & UCLG, 2024). Отдельное руководство UCLG (2021) посвящено именно областному уровню Voluntary Subnational Reviews. Из всего перечисленного VSR ближе всего к задаче настоящей статьи: он согласовывает региональную политику с национальными стратегиями достижения ЦУР, что для областей Узбекистана и требуется.

Но ни один из этих документов не отвечает на простой вопрос: чем измерять? Эту роль взял на себя Global Urban Monitoring Framework (UN-Habitat, 2022) система, одобренная Статистической комиссией ООН и объединяющая показатели Повестки-2030, Новой программы развития городов и официальной статистики ООН. GUMF охватывает экономику, социальную сферу, экологию, пространственное развитие и институты и признана UN-Habitat рекомендуемой индикаторной основой для VLR и VSR. Единственное, чего ей недостает, - цифровизации; для этого есть отдельная система, KPI for Smart Sustainable Cities (ITU, 2022): 91 показатель по трем блокам - экономика, окружающая среда, общество и культура.

Соединив всё перечисленное, можно предложить трехуровневый каркас для области. На институциональном уровне рабочая группа с участием профильных управлений хокимията, территориальной статистики и

гражданского общества, по образцу модели Shimokawa: обзор как постоянный процесс, а не разовая бумага. На процедурном - логика VSR: сверка приоритетов области с национальными стратегиями и последующее включение результатов в национальный VNR. На измерительном - не весь массив показателей GUMF, а его подмножество, отобранное под реальную доступность данных территориальной статистики, и там, где данные позволяют, дополнение цифровыми показателями KPI for SSC.

Проверить это можно на практике. Пилотный VSR для одной из областей Узбекистана дал бы сразу два результата: самостоятельный инструмент региональной политики с ясной картиной сильных и слабых сторон области по компонентам устойчивого развития - и готовый вклад в следующий национальный VNR. Связка VSR-VNR, которую описывает руководство UCLG (2021), работает именно в этом направлении.

Заключение.

Ни один из рассмотренных документов сам по себе не закрывает весь цикл мониторинга - институт, процедуру и измерение приходится собирать вместе. Предложенный каркас делает именно это: институциональная логика ЕЭК ООН, процедура VSR и измерительная база GUMF с дополнением KPI for SSC адаптированные под то, что реально можно собрать по области, а не под идеальный набор данных, которого пока нет.

Следующий шаг очевиден опробовать подход на конкретной области и по итогам сформулировать, как встроить результаты областного обзора в национальную систему отчетности по ЦУР.

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5-SECTION

ПРОГНОЗИРУЕМОСТЬ И КЛАССИФИКАЦИЯ ИНТЕРФЕРЕНЦИОННЫХ ОШИБОК В УСВОЕНИИ КАТЕГОРИИ ЧИСЛА РУССКОГО ЯЗЫКА

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Аннотация. В статье обосновывается положение о том, что интерференционные ошибки узбекских учащихся в русском числе не хаотичны, а прогнозируемы, поскольку выводятся из типологического различия двух языков. Предлагается их классификация по пяти основным типам: опущение показателя множественности, сверхгенерализация продуктивных окончаний, неразличение существительных pluralia и singularia tantum, нарушение управления при числительном и сбой согласования. Показано, что прогнозируемость ошибки позволяет перейти от реактивного исправления к опережающей профилактике, а встроенная в методику диагностика делает коррекцию адресной.

Ключевые слова: интерференционная ошибка, прогнозирование ошибок, классификация ошибок, диагностика, категория числа, коррекция, русский язык как неродной.

Abstract. The article argues that the interference errors of Uzbek learners in the Russian category of number are not random but predictable, since they follow from the typological difference between the two languages. A classification into five main types is proposed: omission of the plural marker, over-generalisation of productive endings, failure to distinguish pluralia and singularia tantum nouns, violation of government with a numeral, and agreement failure. It is shown that predictability allows a shift from reactive correction to anticipatory prevention, while diagnostics built into the methodology makes correction targeted.

Keywords: interference error, error prediction, error classification, diagnostics, category of number, correction, Russian as a non-native language.

Введение. Ошибка в методике преподавания языка нередко воспринимается как досадная случайность, которую следует исправить по факту её появления. Между тем в обучении русскому языку как неродному значительная часть ошибок закономерна: она порождается не невнимательностью ученика, а объективным различием родного и изучаемого языков. Такие ошибки называют интерференционными, и их принципиальная особенность в том, что они предсказуемы.

Настоящая статья ставит целью показать прогнозируемость ошибок узбекских учащихся в области русского числа, предложить их упорядоченную

классификацию и обосновать вытекающий отсюда диагностико-коррекционный подход. Тезис работы прост: если ошибку можно предсказать, её можно предупредить, а значит, обучение следует строить не вокруг исправления, а вокруг профилактики.

1. Понятие прогнозируемой ошибки

Прогнозируемой мы называем ошибку, тип которой может быть указан заранее, до наблюдения над конкретным классом, — на основании сопоставления систем родного и изучаемого языков. Русское число выражается флективно, множеством конкурирующих моделей, слитых с падежом и родом; узбекское — единым агглютинативным аффиксом, отсутствующим при количественном слове. Из этого различия логически выводятся точки, в которых учащийся будет переносить родную модель на русскую. Идея опоры на межъязыковое сопоставление восходит к традиции контрастивной лингводидактики [1].

Прогнозируемость меняет статус ошибки в глазах методиста. Ошибка перестаёт быть индивидуальным сбоем и становится закономерным этапом освоения, который можно предвидеть и обойти. Это отличает интерференционную ошибку от случайной описки и требует особой методической реакции — не наказания за ошибку, а построения материала так, чтобы вероятность её появления снижалась.

2. Типология ошибок в категории числа

Анализ позволяет выделить пять основных типов интерференционных ошибок. Первый — опущение показателя множественности, прежде всего в сочетании с числительным, где родной язык его не требует (пять книга, много дом). Второй — сверхгенерализация продуктивных окончаний -ы/-и, распространяемых на слова, требующие иных моделей (стулы вместо стулья, человеки вместо люди). Третий — неразличение существительных pluralia и singularia tantum, чуждых родному языку (одна ножница; вкусные молоки).

Четвёртый тип — нарушение управления в конструкции «числительное + существительное», где русский язык требует особых падежных форм (три ученики вместо три ученика, пять книги вместо пять книг). Пятый — сбой согласования по числу внутри именной группы и с предикатом, усиленный отсутствием категории рода в родном языке (интересный книги; птицы летит). Такая классификация не просто описывает ошибки, но связывает каждый тип с конкретной зоной типологического расхождения, что и делает её инструментом прогноза.

3. Диагностика как основа адресной коррекции

Если типы ошибок известны заранее, диагностику можно встроить в саму методику, а не проводить её постфактум. Констатирующий срез, построенный по пяти выделенным типам, позволяет установить, какие именно зоны интерференции актуальны для данного класса, и с какой частотой. Тем самым учитель получает не общее впечатление о «слабом знании темы», а точную карту трудностей конкретной группы.

На основе этой карты коррекция становится адресной: усилия направляются не на равномерное повторение всей темы, а на те точки, где реально фиксируется сбой. Такой подход экономит учебное время и повышает результативность, поскольку соответствует принципу опоры на индивидуальные и групповые особенности учащихся, признанному в современной лингводидактике [4;8].

Заключение

Интерференционные ошибки узбекских учащихся в русском числе поддаются прогнозу и классификации, поскольку прямо соотносятся с зонами типологического расхождения двух языков. Предложенная типология из пяти типов может служить одновременно основой диагностических материалов и ориентиром для построения упражнений. Главный методический вывод состоит в переходе от реактивной модели обучения, реагирующей на уже совершённую

ошибку, к опережающей, предупреждающей её появление, — что и составляет ядро дальнейшей разработки методической системы.

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TALABALARNING ILMIY-TADQIQOTCHILIK FAOLIYATINI RIVOJLANTIRISH SHART-SHAROITLARI

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Annotatsiya: *Maqolada talabalarning ilmiy-tadqiqotchilik faoliyatini rivojlantirishga xizmat qiluvchi tashkiliy-pedagogik, metodik, motivatsion va axborot-texnologik shart-sharoitlar yoritilgan. Ilmiy muammoni aniqlash, axborotni izlash va tahlil qilish, tadqiqotni tashkil etish, natijalarni umumlashtirish hamda nashrga tayyorlash ko‘nikmalarini bosqichma-bosqich shakllantirish zarurati asoslanib, ilmiy faoliyatni ta’lim, amaliyot va raqamli texnologiyalar bilan integratsiyalash bo‘yicha tavsiyalar berilgan.*

Kalit so‘zlar: *talaba, ilmiy-tadqiqotchilik faoliyati, ilmiy izlanish, tadqiqot kompetensiyasi, innovatsiya, nazariy tadqiqot, amaliy tadqiqot, axborot texnologiyalari, ilmiy natija.*

Abstract: *The article examines the organizational-pedagogical, methodological, motivational, and information-technological conditions that contribute to the development of students’ research activities. It substantiates the necessity of gradually developing students’ skills in identifying scientific problems, searching for and analysing information, organizing research, generalizing results, and preparing them for publication. Recommendations are also provided for integrating research activities with the educational process, practical training, and modern digital technologies.*

Keywords: *student, research activity, scientific inquiry, research competence, innovation, theoretical research, applied research, information technologies, research results.*

KIRISH. Globallashuv sharoitida ta’lim, ishlab chiqarish va xizmat ko‘rsatish sohalari samaradorligini oshirish, raqobatbardosh kadrlarni tayyorlash hamda zamonaviy texnologiyalarni amaliyotga joriy etish muhim vazifalardan biri hisoblanadi. Mazkur jarayon oliy ta’lim muassasalarida talabalarning ilmiy va ijodiy salohiyatini rivojlantirish, ularni mustaqil izlanish va innovatsion faoliyatga tayyorlash zaruratini kuchaytirmoqda. Bugungi kunda ta’lim hamda kasbiy faoliyatning aksariyat

yo‘nalishlari pedagogik va raqamli texnologiyalar asosida tashkil etilayotganligi sababli talabalar ushbu imkoniyatlardan samarali foydalanish ko‘nikmalariga ega bo‘lishlari lozim.

ASOSIY QISM

Uzluksiz ta’lim tizimi yuqori malakali va raqobatbardosh mutaxassislarni tayyorlashning muhim asosi bo‘lib, ta’lim standartlari, malaka talablari, o‘quv-metodik ta’minot hamda faoliyat ko‘rsatish muhitini qamrab oladi. Oliy ta’lim tizimida yaratilgan ilmiy-pedagogik shart-sharoitlar talabalarning tadqiqotchilik faoliyatini rivojlantirish, mustaqil fikrlaydigan va zamonaviy talablarga javob beradigan mutaxassislarni shakllantirishga xizmat qiladi.

Oliy ta’lim samaradorligi ko‘p jihatdan talabalarni ilmiy-tadqiqot ishlariga maqsadli yo‘naltirishga bog‘liq. Ilmiy-tadqiqot faoliyati insonning muayyan ilmiy muammoni o‘rganish, hodisa va jarayonlar to‘g‘risida yangi bilimlarni hosil qilish, mavjud qarashlarni takomillashtirish hamda olingan natijalarni amaliyotga tatbiq etishga qaratilgan maqsadli va ijodiy faoliyatidir. Shu sababli talabalar ilmiy faoliyatini muayyan tizim va izchil bosqichlar asosida tashkil etish zarur.

Talabalarning ilmiy-tadqiqotchilik faoliyatini rivojlantirish uchun, avvalo, quyidagi shart-sharoitlar yaratilishi lozim:

- talabalarda ilmiy izlanishga nisbatan barqaror qiziqish va ichki motivatsiyani shakllantirish;

- ta’lim mazmunini ilmiy muammolar, tadqiqot topshiriqlari va amaliy loyihalar bilan boyitish;

- professor-o‘qituvchilar tomonidan sifatli ilmiy rahbarlik va metodik maslahatlarni yo‘lga qo‘yish;

- ilmiy laboratoriyalar, to‘garaklar, muammoli guruhlar va loyiha maydonlari faoliyatini rivojlantirish;

- elektron kutubxonalar, ilmiy ma’lumotlar bazalari va zamonaviy dasturiy vositalardan foydalanish imkoniyatlarini kengaytirish;

- talabalarni konferensiyalar, tanlovlar, seminarlar va ilmiy loyihalarga

muntazam jalb etish;

- ilmiy natijalarni nashr qilish va amaliyotga joriy etishni qo‘llab-quvvatlash.

Talabalarni ilmiy-tadqiqot faoliyatiga maqsadli yo‘naltirish ta’lim muassasalarining ilmiy imkoniyatlarini kengaytiradi, fan va ta’lim integratsiyasini rivojlantiradi hamda nazariya bilan amaliyotning o‘zaro bog‘liqligini ta’minlaydi. Bunda tadqiqot mavzulari talabaning mutaxassisligi, ilmiy qiziqishi va amaliyotdagi mavjud muammolar bilan uyg‘unlashtirilishi maqsadga muvofiq.

Talabalarning ilmiy-tadqiqotchilik faoliyatini rivojlantirish jarayonini quyidagi izchil bosqichlar asosida tashkil etish mumkin:

1. Ma’lumotlarni to‘plash bosqichi. Mazkur bosqichda tadqiqot mavzusiga oid ilmiy manbalar, nazariy qarashlar, amaliy tajribalar va statistik ma’lumotlar izlanadi. Talaba mavjud axborotlarni aniqlash, saralash, saqlash, tizimlashtirish va tanqidiy tahlil qilish ko‘nikmalarini egallaydi. Axborotning ishonchliligi, ilmiyligi va tadqiqot maqsadiga muvofiqligini baholash ushbu bosqichning muhim vazifasi hisoblanadi.

2. Nazariy tadqiqot bosqichi. Nazariy tadqiqot mavjud ilmiy bilimlar, konsepsiyalar, metodlar va yondashuvlarni o‘rganishga asoslanadi. Ushbu bosqichda tadqiqot muammosi aniqlashtiriladi, mavzu belgilanadi, maqsad va vazifalar shakllantiriladi, ilmiy faraz ilgari suriladi hamda tadqiqotning metodologik asoslari tanlanadi. Nazariy tahlil kelgusida amalga oshiriladigan amaliy izlanishlarning ilmiy poydevorini yaratadi.

3. Amaliy tadqiqot bosqichi. Mazkur bosqichda nazariy qarashlar va tanlangan metodlar amaliyotda sinab ko‘riladi. Talabalar kuzatish, suhbat, so‘rovnoma, test, tajriba-sinov, pedagogik eksperiment va boshqa empirik metodlardan foydalanib ma’lumotlar to‘playdilar. Amaliy tadqiqot dasturi o‘rganilayotgan muammo, tadqiqot maqsadi va ishtirokchilarning xususiyatlariga muvofiq ishlab chiqilishi zarur.

4. Ma’lumotlarni tahlil qilish va natijalarni shakllantirish bosqichi. Tadqiqot davomida to‘plangan ma’lumotlar tizimlashtiriladi, statistik va sifat tahlili asosida qayta ishlanadi. Bunda matematik-statistik metodlar, axborot-tahlil dasturlari, jadval, diagramma va boshqa ko‘rgazmali vositalardan foydalanish mumkin. Olingan

natijalar ilmiy faraz va tadqiqot vazifalari bilan taqqoslanib, tegishli xulosalar chiqariladi.

5. Ilmiy natijalarni nashr etish bosqichi. Tadqiqot natijalari ilmiy maqola, tezis, hisobot, tavsiyanoma, loyiha, uslubiy qo‘llanma yoki boshqa ilmiy mahsulot ko‘rinishida rasmiylashtiriladi. Ushbu bosqich talabadan yuqori darajadagi mas’uliyat, akademik halollik va ilmiy nutq madaniyatini talab qiladi. Natijalarni nashr etishda foydalanilgan manbalarni to‘g‘ri ko‘rsatish, ma’lumotlarning haqqoniyligi va xulosalarning asoslanganligiga rioya etish zarur.

6. Tadqiqotchilik faoliyatini rivojlantirish bosqichi. Yakuniy bosqichda tadqiqot jarayonida aniqlangan muammo va kamchiliklar tahlil qilinadi, ularni bartaraf etish yo‘llari belgilanadi hamda yangi ilmiy vazifalar shakllantiriladi. Olingan tajriba keyingi tadqiqot loyihalarini ishlab chiqish, yangi metodlarni sinab ko‘rish va ilmiy faoliyat yo‘nalishlarini kengaytirishga xizmat qiladi. Mazkur bosqich talabada uzluksiz ilmiy rivojlanish va o‘z-o‘zini takomillashtirish ehtiyojini shakllantiradi.

Ushbu bosqichlar o‘zaro uzviy bog‘langan bo‘lib, talabalar ilmiy-tadqiqotchilik kompetensiyasining izchil rivojlanishini ta’minlaydi. Bir bosqichda erishilgan natija keyingi bosqich uchun metodologik va amaliy asos vazifasini bajaradi. Shu bois ilmiy faoliyatni tashkil etishda mazkur bosqichlarning mantiqiy ketma-ketligiga rioya qilish muhimdir.

Ilmiy-tadqiqot ishlarini dastlabki nazariy izlanishlardan boshlab natijalarni amaliyotga joriy etishgacha bo‘lgan yaxlit jarayon sifatida tashkil qilish talabalarning ilmiy kompetensiyalarini rivojlantirishga xizmat qiladi. Bunday tizim talabalarda axborotni izlash, tahlil qilish, muammoning ilmiy yechimini topish, ilmiy matn yaratish hamda natijalarni taqdim etish ko‘nikmalarini shakllantiradi.

Talabaning jamiyat rivojiga munosib hissa qo‘sha oladigan mutaxassis sifatida shakllanishi uning ilmiy izlanish olib borishi, axborotni tizimlashtirishi, muammoga xos fikr va texnikaviy yechimlarning maqbul variantlarini tanlashi bilan bog‘liq. Aqliy faoliyat ilmiy-ijodiy izlanish bilan uzviy aloqador bo‘lib, talabaning yangi moddiy va ma’naviy qadriyatlar yaratish imkoniyatlarini kengaytiradi.

Ilmiy-tadqiqotchilik faoliyatini rivojlantirishda axborot texnologiyalaridan samarali foydalanish alohida ahamiyatga ega. Elektron kutubxonalar, ilmiy ma’lumotlar bazalari, statistik dasturlar, virtual laboratoriyalar va masofaviy hamkorlik platformalari ilmiy axborotni izlash, qayta ishlash, saqlash va taqdim etish imkoniyatlarini kengaytiradi. Biroq texnologik vositalar tadqiqotchining mustaqil fikrlashi va ilmiy mas’uliyatining o‘rnini bosa olmaydi; ular ilmiy faoliyat samaradorligini oshiruvchi yordamchi vosita sifatida qo‘llanishi lozim.

Pedagogik texnologiyalar ham talabalarning ilmiy-ijodiy faoliyatini rivojlantirishda muhim o‘rin egallaydi. Muammoli ta’lim, loyiha metodi, keys-stadi, hamkorlikdagi ta’lim, munozara va tadqiqot topshiriqlari talabalarda mustaqil fikrlash, muammoni tahlil qilish va ilmiy xulosa chiqarish ko‘nikmalarini shakllantiradi. O‘qituvchi esa bilimlarni tayyor shaklda yetkazuvchi emas, balki talabani ilmiy izlanishga yo‘naltiruvchi, maslahat beruvchi va tadqiqot faoliyatini qo‘llab-quvvatlovchi subyekt sifatida faoliyat yuritishi lozim.

Talabalar ilmiy-tadqiqotchilik faoliyatining rivojlanganlik darajasi ularning ilmiy motivatsiyasi, metodologik savodxonligi, mustaqil ishlash qobiliyati, axborot bilan ishlashi, ilmiy muammoni aniqlashi, tadqiqot metodlarini qo‘llashi, natijalarni asoslab berishi va ilmiy mahsulot yarata olishi kabi mezonlar orqali baholanishi mumkin. Ushbu mezonlar asosida talabalarning ilmiy faoliyatidagi mavjud holat aniqlanadi va keyingi rivojlanish yo‘nalishlari belgilanadi.

XULOSA

Talabalarning ilmiy-tadqiqotchilik faoliyatini rivojlantirish oliy ta’lim sifatini oshirish, mustaqil fikrlaydigan, innovatsion yondashuvga ega va raqobatbardosh mutaxassislarni tayyorlashning muhim shartidir. Mazkur jarayonni samarali tashkil etish uchun ta’lim mazmunini ilmiy muammolar bilan boyitish, tadqiqot faoliyatini bosqichma-bosqich yo‘lga qo‘yish, sifatli ilmiy rahbarlikni ta’minlash, zamonaviy laboratoriyalar va axborot resurslaridan foydalanish hamda talabalarni ilmiy loyihalarga keng jalb etish zarur.

Fan, ta’lim va amaliyotning o‘zaro integratsiyasi talabalarning ilmiy bilimlarni

chuqur egallashi, tadqiqot metodlaridan foydalanishi va olingan natijalarni real muammolar yechimiga yo‘naltirishiga xizmat qiladi. Shu bois talabalarning ilmiy-tadqiqotchilik faoliyatini rivojlantirish oliy ta’lim muassasalarining ustuvor pedagogik vazifalaridan biri sifatida qaralishi lozim.

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ADAPTIV TA‘LIMNING PEDAGOGIK EVOLYUTSIYASI

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Annotatsiya. *Mazkur maqolada adaptiv ta'limning pedagogik evolyutsiyasi, uning shakllanish bosqichlari hamda zamonaviy ta'lim tizimidagi o'rni ilmiy-pedagogik nuqtayi nazardan tahlil qilingan. Adaptiv ta'lim konsepsiyasining dasturlashtirilgan ta'lim, kompetensiyaviy yondashuv, konstruktivizm, kognitiv psixologiya va sun'iy intellekt texnologiyalari bilan uzviy bog'liq rivojlanish jarayonlari yoritilgan. Shuningdek, Learning Analytics, Intelligent Tutoring Systems (ITS), Big Data va generativ sun'iy intellekt asosidagi adaptiv platformalarning pedagogik imkoniyatlari ochib berilgan. Tadqiqotda adaptiv ta'limning evolyutsion rivojlanish modeli ishlab chiqilib, uning oliy ta'lim sifatini oshirish, talabalarning individual ta'lim trayektoriyasini shakllantirish hamda shaxsga yo'naltirilgan ta'limni takomillashtirishdagi ahamiyati asoslab berilgan.*

Kalit so'zlar: *adaptiv ta'lim, pedagogik evolyutsiya, shaxsga yo'naltirilgan ta'lim, sun'iy intellekt, Learning Analytics, Intelligent Tutoring Systems, adaptiv o'quv muhiti, kompetensiyaviy yondashuv.*

Abstract. *This article analyzes the pedagogical evolution of adaptive learning, its stages of development, and its role in the modern education system from a scientific and pedagogical perspective. It examines the developmental trajectory of the adaptive learning concept in relation to programmed instruction, the competency-based approach, constructivism, cognitive psychology, and artificial intelligence technologies. Furthermore, the pedagogical potential of adaptive platforms based on Learning Analytics, Intelligent Tutoring Systems (ITS), Big Data, and Generative Artificial Intelligence is explored. The study develops an evolutionary model of adaptive learning and substantiates its significance in improving the quality of higher education, designing individualized learning trajectories for students, and enhancing learner-centered education.*

Keywords: *adaptive learning, pedagogical evolution, learner-centered education, artificial intelligence, Learning Analytics, Intelligent Tutoring Systems (ITS), adaptive learning environment, competency-based approach.*

Kirish. XXI asrda raqamli transformatsiya, sun'iy intellekt texnologiyalari va ma'lumotlarga asoslangan boshqaruvning jadal rivojlanishi ta'lim tizimini tubdan o'zgartirmoqda. An'anaviy, barcha ta'lim oluvchilar uchun bir xil mazmundagi o'qitish modeli zamonaviy jamiyat ehtiyojlarini to'liq qondira olmay qoldi. Bugungi kunda har

bir talabaning individual qobiliyati, bilim darajasi, o'rganish sur'ati, kognitiv uslubi va kasbiy ehtiyojlarini hisobga oladigan moslashuvchan ta'lim tizimlarini yaratish dolzarb ilmiy va amaliy vazifaga aylandi. Shu nuqtayi nazardan, adaptiv ta'lim zamonaviy pedagogikaning eng istiqbolli yo'nalishlaridan biri sifatida e'tirof etilmoqda.

Adaptiv ta'lim – bu ta'lim jarayonini o'quvchining individual xususiyatlari, ehtiyojlari va o'zlashtirish natijalariga mos ravishda dinamik tarzda tashkil etishga qaratilgan pedagogik tizimdir. Mazkur yondashuvda o'quv mazmuni, topshiriqlar murakkabligi, o'qitish strategiyasi, baholash mexanizmlari hamda ta'lim trayektoriyasi real vaqt rejimida o'quvchining faoliyatiga moslashtiriladi. Natijada ta'lim samaradorligi oshadi, individual rivojlanish qo'llab-quvvatlanadi va shaxsga yo'naltirilgan ta'lim tamoyillari amaliyotga tatbiq etiladi.

Adaptiv ta'lim g'oyasi bugungi kunda paydo bo'lgan yangi konsepsiya emas. Uning nazariy asoslari XX asrning o'rtalarida shakllangan dasturlashtirilgan ta'lim, bixeviorizm, kognitiv psixologiya va konstruktivistik yondashuvlarga borib taqaladi. Keyinchalik B. Bloomning **Mastery Learning** konsepsiyasi, B.F. Skinnerning dasturlashtirilgan ta'lim modeli, J. Piaget va L.S. Vygotskiyning rivojlantiruvchi ta'lim haqidagi qarashlari adaptiv pedagogikaning nazariy poydevorini mustahkamladi. XXI asrda esa Learning Analytics, Big Data, bulutli texnologiyalar va sun'iy intellektning rivojlanishi adaptiv ta'limni yangi bosqichga olib chiqdi. Ayniqsa, Intelligent Tutoring Systems (ITS), Machine Learning algoritmlari hamda generativ sun'iy intellekt vositalari ta'lim jarayonini individual boshqarish imkoniyatlarini sezilarli darajada kengaytirdi.

O'zbekistonda ham raqamli ta'limni rivojlantirish, sun'iy intellekt texnologiyalarini ta'limga joriy etish hamda shaxsga yo'naltirilgan pedagogik yondashuvlarni takomillashtirish davlat siyosatining ustuvor yo'nalishlaridan biri hisoblanadi. Shu sababli adaptiv ta'limning pedagogik evolyutsiyasini ilmiy jihatdan tahlil qilish, uning rivojlanish bosqichlarini tizimlashtirish va zamonaviy pedagogik texnologiyalar bilan integratsiyalashuv mexanizmlarini aniqlash muhim ilmiy-amaliy ahamiyat kasb etadi.

Adaptiv ta‘limning pedagogik evolyutsiyasi

Adaptiv ta‘lim bugungi kunda sun'iy intellekt bilan chambarchas bog'liq tushuncha bo'lsa-da, uning shakllanish tarixi XX asrning o'rtalariga borib taqaladi. Uning rivojlanishini shartli ravishda bir necha bosqichlarga ajratish mumkin.

1-bosqich. Dasturlashtirilgan ta'lim (1950–1970)

Adaptiv ta'limning ilk nazariy asoslari B. F. Skinner tomonidan ishlab chiqilgan dasturlashtirilgan o'qitish konsepsiyasiga tayanadi. Ushbu yondashuv behaviorizm nazariyasiga asoslanib, bilimlarni kichik bloklarga ajratish, bosqichma-bosqich o'zlashtirish va darhol qayta aloqa berishni nazarda tutgan. Garchi bu tizim bugungi zamonaviy adaptiv platformalar bilan qiyoslaganda sodda bo'lsa-da, u individual ta'limni tashkil etish g'oyasiga asos soldi.

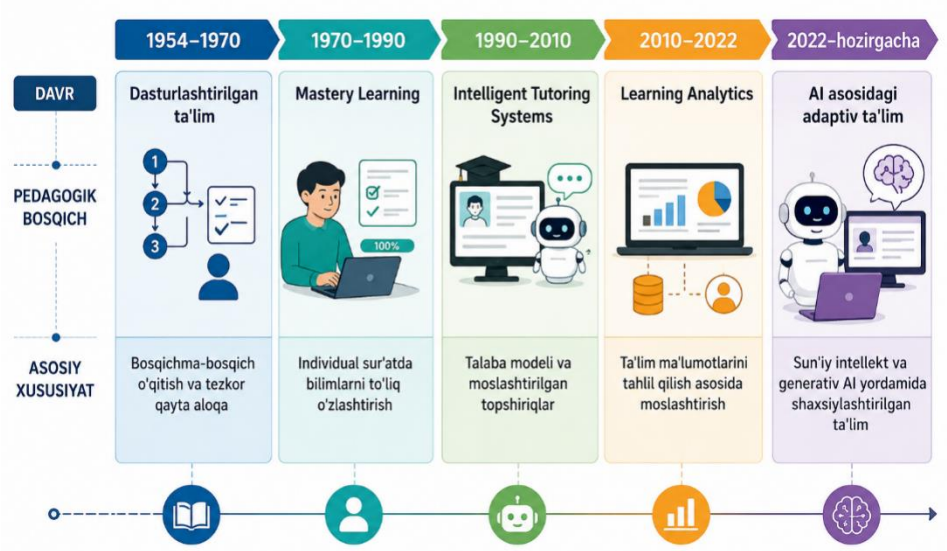
2-bosqich. O'zlashtirishga asoslangan ta'lim (1970–1990)

Benjamin Bloom tomonidan ilgari surilgan "Mastery Learning" konsepsiyasi har bir talabaning ma'lum kompetensiyani to'liq egallashini asosiy maqsad sifatida belgiladi. Ushbu modelda o'quvchilar bir xil tezlikda emas, balki o'z imkoniyatlariga mos sur'atda ta'lim olishi nazarda tutilgan. Mazkur yondashuv keyinchalik adaptiv ta'lim algoritmlarining pedagogik asoslaridan biriga aylandi.

3-bosqich. Aqlli o'qituvchi tizimlari (1990–2010)

Kompyuter texnologiyalarining rivojlanishi natijasida Intelligent Tutoring Systems (ITS) paydo bo'ldi. Bu tizimlar talabaning bilim holatini diagnostika qilish, xatolarini aniqlash va individual tavsiyalar berish imkonini yaratdi. Ushbu davrda adaptiv ta'lim faqat nazariy konsepsiya emas, balki amaliy dasturiy tizim sifatida shakllana boshladi.

ADAPTIV TA’LIM EVOLYUTSIYASINING ASOSIY BOSQICHLARI



Adaptiv ta'limning pedagogik evolyutsiyasining ilmiy-metodik tavsifi. Adaptiv ta'limning XX asrning o'rtalaridan boshlab hozirgi davrgacha bo'lgan evolyutsion rivojlanish bosqichlari aks ettirilgan. Mazkur evolyutsiya pedagogik nazariyalarning takomillashuvi, axborot-kommunikatsiya texnologiyalarining rivojlanishi hamda sun'iy intellekt texnologiyalarining ta'lim tizimiga integratsiyalashuvi bilan uzviy bog'liq bo'lib, ta'limni individuallashtirish darajasining bosqichma-bosqich ortib borishini ifodalaydi.

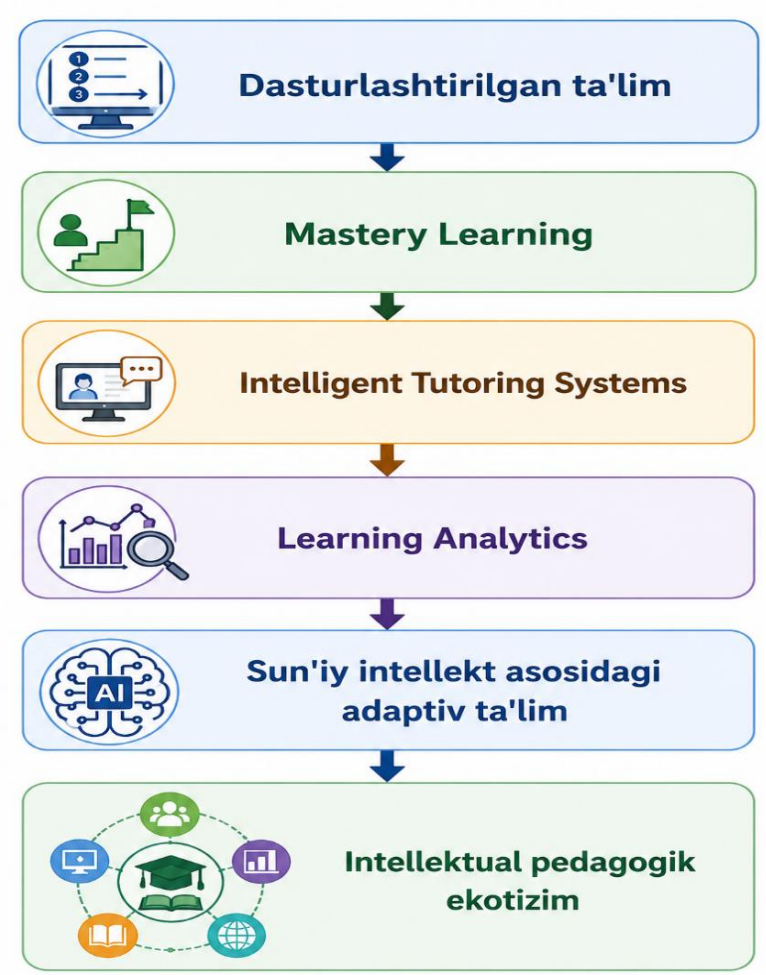
Evolyutsiyaning umumiy ilmiy-metodik tahlili

Rasmda aks ettirilgan evolyutsiya adaptiv ta'limning beshta asosiy rivojlanish tendensiyasini ko'rsatadi:

- **individualizatsiya darajasining ortishi** – standart o'qitishdan shaxsiy ta'lim trayektoriyasiga o'tish;
- **pedagogik boshqaruvning intellektuallashuvi** – oddiy algoritmik boshqaruvdan AI asosidagi adaptiv qaror qabul qilish tizimlariga o'tish;
- **ma'lumotlarga asoslangan pedagogika** – intuitiv qarorlardan Learning Analytics va Big Data tahliliga asoslangan boshqaruvga o'tish;
- **o'qituvchining funksional transformatsiyasi** – bilim beruvchidan fasilitator, mentor va AI bilan hamkorlik qiluvchi pedagogga aylanishi;

- **adaptiv ekotizimning shakllanishi** – ta'lim jarayonining LMS, AI, Learning Analytics, raqamli resurslar va kompetensiyalarni baholash tizimlari bilan integratsiyalashgan yagona intellektual muhitga aylanishi.

1-rasimda adaptiv ta’lim pedagogic evolyutsiyasi keltirilgan



1-rasim. Adaptiv ta’lim pedagogic evolyutsiyasi.

1-rasmda adaptiv ta'limning shakllanishi va rivojlanishining konseptual evolyutsiyasi aks ettirilgan. Mazkur model adaptiv ta'limning dasturlashtirilgan o'qitishdan boshlab sun'iy intellekt asosidagi intellektual pedagogik ekotizimgacha bo'lgan rivojlanish bosqichlarini ifodalaydi. Evolyutsiyaning har bir bosqichi ta'lim jarayonini shaxsga yo'naltirish, ta'limni individuallashtirish hamda pedagogik boshqaruvni takomillashtirishning yangi ilmiy yondashuvlarini namoyon etadi.

Mazkur evolyutsiya shuni ko'rsatadiki, adaptiv ta'lim texnologiyalari dastlab o'quv materialini ketma-ket o'zlashtirishni tashkil etishga qaratilgan bo'lsa, keyinchalik o'quvchining individual imkoniyatlari, bilim darajasi, o'rganish sur'ati va

kompetensiyalarini hisobga oluvchi intellektual pedagogik tizimlarga aylangan. Hozirgi bosqichda esa sun'iy intellekt va generativ AI texnologiyalari yordamida ta'lim jarayonini real vaqt rejimida moslashtirish imkoniyati yuzaga kelgan.

Xulosa. Adaptiv ta'limning pedagogik evolyutsiyasi shuni ko'rsatadiki, mazkur yondashuv an'anaviy ta'lim modelidan shaxsga yo'naltirilgan, moslashuvchan va intellektual ta'lim tizimiga o'tishning mantiqiy natijasidir. Dasturlashtirilgan ta'lim, bixeviorizm, kognitiv pedagogika, konstruktivizm va kompetensiyaviy yondashuv kabi nazariyalar adaptiv ta'limning ilmiy-metodologik poydevorini shakllantirgan bo'lsa, zamonaviy raqamli texnologiyalar hamda sun'iy intellekt uning rivojlanishini yangi bosqichga olib chiqdi.

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TA’LIMDA SUN’IY INTELLEKTNING KOMPETENTLIKNI RIVOJLANTIRISH VA BAHOLASHDAGI O‘RNI

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Annotatsiya. *So‘nggi yillarda sun’iy intellektning ta’limdagi qo‘llanilishiga oid tadqiqotlar jadal rivojlanmoqda. Ushbu adabiyotlar sharhida TPACK modeli, kompetentlik nazariyasi, sun’iy intellekt yordamida yozish ta’limi, o‘qituvchilar kompetentligini rivojlantirish, ijodkorlik, hisoblash tafakkuri hamda kompetentlikni baholashga oid nazariy va empirik tadqiqotlar tahlil qilindi. Tahlil natijalari sun’iy intellekt vositalari kognitiv, funksional va pedagogik kompetentlikni rivojlantirishda ijobiy natija berayotganini, biroq motivatsiya va boshqa hissiy omillarga ta’siri barcha tadqiqotlarda bir xil emasligini ko‘rsatdi. Shuningdek, sun’iy intellekt yordamida kompetentlikni baholash imkoniyatlari kengayib borayotgan bo‘lsa-da, uning nazariy asoslari hali yetarli darajada ishlab chiqilmaganligi aniqlandi. Shu bois ushbu yo‘nalishda nazariy va empirik tadqiqotlarni o‘zaro bog‘liq holda davom ettirish muhim hisoblanadi.*

Kalit so‘zlar: *sun’iy intellekt, generativ sun’iy intellekt, ta’lim, kompetentlik, TPACK, kompetentlikni baholash.*

Abstract. *Research on the use of artificial intelligence (AI) in education has grown rapidly in recent years. This literature review examines theoretical and empirical studies on the TPACK framework, competence theory, AI-assisted writing instruction, AI-integrated teacher competence, creativity, computational thinking, and AI-based competence assessment. The review found that AI tools generally support the development of cognitive, functional, and pedagogical competence, while their effects on motivation and other affective outcomes remain inconsistent across studies. Although AI is increasingly used for competence assessment, its theoretical foundations remain insufficiently developed. Therefore, future research should integrate stronger theoretical perspectives with empirical evidence to better understand AI’s role in education.*

Keywords: *artificial intelligence, generative artificial intelligence, education, competence, TPACK, competence assessment.*

KIRISH. Sun’iy intellektning ta’lim jarayoniga keng joriy etilishi bu sohada olib borilayotgan tadqiqotlar sonining keskin ortishiga olib keldi. Ammo tadqiqotlarning

turli yo‘nalishlarda olib borilgani sohaning umumiy ilmiy manzarasini tushunishni qiyinlashtiradi. Lim va boshq. (2026) Web of Science ma’lumotlar bazasiga kiritilgan 291 ta ilmiy maqola asosida adabiyotlar tahlilini o‘tkazib, ta’limda sun’iy intellekt (SI) bo‘yicha tadqiqotlarning beshta asosiy yo‘nalishini aniqlagan. Bular generativ SI ning ta’limga ta’siri, sohaning nazariy asoslari va rivojlanish istiqbollari, SI dan foydalanishning axloqiy masalalari, kasbiy ta’limda SI va uning foydalanuvchilar tomonidan qabul qilinishi hamda amaliy qo‘llanilishiga oid tizimli adabiyotlar sharhlaridir. Tahlil natijalari shuni ko‘rsatadiki, so‘nggi yillarda ta’limda sun’iy intellekt bo‘yicha olib borilgan tadqiqotlarning asosiy qismi generativ SI texnologiyalariga bag‘ishlangan. Shu bilan birga, ushbu tadqiqotlarning nazariy asoslari generativ SI paydo bo‘lishidan avval ta’lim texnologiyalari sohasida olib borilgan ilmiy tadqiqotlarga tayanadi.

Bu holat tabiiydir. Chunki bugungi kunda generativ SI bo‘yicha muhokama qilinayotgan ko‘plab masalalar, jumladan, o‘qituvchilarni undan foydalanishga tayyorlash, SI yordamida qanday kompetentliklarni shakllantirish mumkinligi hamda SI asosida olingan natijalarning qanchalik ishonchli ekanligi haqidagi savollar generativ SI ommalashishidan ancha oldin nazariy jihatdan o‘rganila boshlagan edi. Shu sababli ushbu sharh avval shakllangan nazariy qarashlar bilan generativ SI bo‘yicha yangi empirik tadqiqotlar o‘rtasidagi uzviy bog‘liqlikni tahlil qiladi. Bunda texnologiya integratsiyalashgan o‘qituvchi bilimi (Mishra & Koehler, 2006), kompetentlik tushunchasining nazariy rivojlanishi (Yarygin & Korostelev, 2023) hamda generativ SI ning ta’lim va baholash jarayonlaridagi qo‘llanilishiga bag‘ishlangan empirik tadqiqotlar (Lee & Jeong, 2026; Kaya va boshq., 2025; Nikolaeva va boshq., 2026; Benvenuti va boshq., 2023) birgalikda tahlil qilinadi. Sharhning maqsadi tadqiqotlarni ketma-ket bayon qilish emas, balki ular asosida qanday umumiy xulosalar shakllanganini hamda qaysi masalalar hali ham ochiqligicha qolayotganini aniqlashdan iborat. Lim va boshq. (2026) aniqlagan tadqiqot yo‘nalishlari orasida pedagogik va nazariy masalalarga bag‘ishlangan ishlar alohida

o‘rin tutadi. Shu sababli keyingi qismda ta’limda sun’iy intellektni qo‘llashning muhim nazariy asoslaridan biri hisoblangan TPACK modeli ko‘rib chiqiladi.

ASOSIY QISM

Ta’limda texnologiyani o‘qitish jarayoniga integratsiyalash haqidagi zamonaviy qarashlarning muhim qismi Mishra va Koehler (2006) tomonidan ishlab chiqilgan Texnologik pedagogik mazmun bilimi (TPACK) nazariyasiga asoslanadi. Mualliflar Shulmanning (1986, Mishra & Koehler, 2006 orqali) pedagogik mazmun bilimi haqidagi qarashlarini rivojlantirib, texnologiyani alohida o‘zlashtiriladigan ko‘nikmalar majmui sifatida emas, balki mazmun, pedagogika va texnologiyaning o‘zaro bog‘liq holdagi birligi sifatida talqin qiladilar. Ularning fikricha, texnologiyani ta’lim jarayoniga samarali integratsiyalash ushbu uch tarkibiy qismning o‘zaro uyg‘unlashuviga asoslangan murakkab bilimni talab qiladi. O‘qituvchilar va professor-o‘qituvchilar ishtirokida o‘tkazilgan empirik tadqiqotlar shuni ko‘rsatdiki, bunday kompetentlik qisqa muddatli texnologik treninglar orqali emas, balki o‘quv materiallarini birgalikda loyihalash va amaliy faoliyat davomida shakllanadi.

Oradan qariyb yigirma yil o‘tgan bo‘lsa-da, TPACK nazariyasi o‘z dolzarbligini saqlab qolmoqda. Uning asosiy g‘oyasi shundan iboratki, mazmun, pedagogika va texnologiya o‘zaro bog‘liq bo‘lib, ulardan biridagi o‘zgarish qolgan ikkisiga ham ta’sir qiladi. Aynan shu jihat generativ SI ning ta’limga kirib kelishi bilan yuzaga kelgan yangi vaziyatni izohlash imkonini beradi. Kaya, Ursavaş va Yildiz Durak (2025) ushbu nazariyani generativ SI sharoitiga moslashtirib, 323 nafar turk o‘qituvchisi ishtirokida PLS-SEM modeli yordamida SI-TPACK modelini ishlab chiqdi va empirik sinovdan o‘tkazdi. Tadqiqot natijalariga ko‘ra, o‘qituvchilarning o‘zaro hamkorligi an’anaviy TPACK hamda SI-TPACK ko‘rsatkichlari bilan sezilarli bog‘liq bo‘lgan. Aksincha, yosh, ta’lim darajasi, ish tajribasi va maktab turi kabi demografik omillar bunday bog‘liqlikni ko‘rsatmagan. Bu natijalar Mishra va Koehlerning fikrini yana bir bor tasdiqlaydi. Ularning ta’kidlashicha, texnologiyani ta’lim jarayoniga muvaffaqiyatli joriy etishda o‘qituvchining shaxsiy xususiyatlaridan ko‘ra, hamkorlikda olib boriladigan amaliy faoliyat muhimroq ahamiyatga ega.

Shu bilan birga, ushbu nazariy kengaytirishni ehtiyotkorlik bilan talqin qilish lozim. Mishra va Koehlerning TPACK nazariyasi nisbatan barqaror texnologiyalar bilan uzoq muddat davom etgan sifat tadqiqotlari asosida ishlab chiqilgan. Kaya va hamkorlarining SI-TPACK modeli esa generativ SI kabi tez o‘zgarayotgan texnologiya sharoitida, bir vaqtning o‘zida o‘tkazilgan Likert shkalasiga asoslangan so‘rovnoma ma’lumotlari orqali baholangan. Shuning uchun har ikkala tadqiqot bir xil nazariy asosga tayanishiga qaramay, ularning metodologiyasi va tadqiqot obyekti sezilarli darajada farq qiladi. Demak, SI-TPACK modelini TPACK nazariyasining bevosita davomi sifatida emas, balki uning generativ SI sharoitiga moslashtirilgan talqini sifatida baholash maqsadga muvofiqdir. Bu farq esa hozirgi adabiyotlarda hali yetarli darajada muhokama qilinmagan.Ta’limda sun’iy intellekt bo‘yicha olib borilayotgan tadqiqotlarning yana bir muhim nazariy yo‘nalishi kompetentlik tushunchasi bilan bog‘liq. Chunki ushbu tadqiqotlarning aksariyati bevosita yoki bilvosita kompetentlikni rivojlantirish yoki uni baholashga qaratilgan. Yarygin va Korostelev (2023) Jon Ravenning “Zamonaviy jamiyatda kompetentlik” (1984), “O‘quvchi jamiyatda kompetentlik” (2001) va “Zamonaviy jamiyatning nokompetentligi” (2023) asarlari asosida kompetentlik tushunchasining tarixiy rivojlanishini tahlil qilgan. Tahlil natijalari kompetentlik haqidagi qarashlar jamiyat va ta’lim ehtiyojlari ta’sirida bosqichma-bosqich rivojlanib borganini ko‘rsatadi. Xususan, kompetentlik tushunchasi R. Uaytning (1959) “atrof-muhit bilan samarali o‘zaro ta’sir” g‘oyasidan boshlab, MakKlellandning (1973) kompetentlikni baholash an’anaviy intellekt testlariga nisbatan muhimroq ekanligi haqidagi qarashlari orqali rivojlangan. Keyinchalik Raven kompetentlik tushunchasining mazmunini kengaytirib, uni nafaqat shaxsga, balki ta’lim muassasalari va boshqa ijtimoiy tuzilmalar faoliyatiga ham xos xususiyat sifatida baholagan.

Ravenning qarashlari ta’limda SI bo‘yicha olib borilayotgan tadqiqotlar uchun alohida ahamiyatga ega. Uning fikricha, kompetentlik bevosita kuzatiladigan ko‘rsatkich emas. U qadriyatlar, motivatsiya va shaxsiy xususiyatlar bilan bog‘liq murakkab tushuncha bo‘lgani sababli uni faqat miqdoriy vositalar yordamida to‘liq

baholab bo‘lmaydi. Raven bu fikrni Kempbell qonuni orqali asoslaydi: ijtimoiy ko‘rsatkichlar qaror qabul qilishda qanchalik ko‘p qo‘llanilsa, ular shunchalik o‘z asl mazmunini yo‘qotishi va baholanayotgan jarayonni buzishi mumkin (Raven, 2023, Yarygin & Korostelev, 2023). Shu asosda u ta’limdagi baholash tizimlarini ham tanqid qilib, ayrim hollarda ilmiy dalillar siyosatni shakllantirish o‘rniga, aksincha, siyosiy qarashlarni asoslash vositasiga aylanib qolayotganini ta’kidlaydi (Raven, 2023, Yarygin & Korostelev, 2023).

Yuqorida ko‘rib chiqilgan nazariy qarashlar ushbu sharhning keyingi tahlillari uchun asos bo‘lib xizmat qiladi. Kompetentlik murakkab tushuncha bo‘lgani sababli, uni sun’iy intellekt yordamida aniq va xolis baholash mumkinligi haqidagi qarashlarni ehtiyotkorlik bilan baholash zarur. Shu bois keyingi bo‘limlarda sun’iy intellekt yordamida kompetentlikni baholashga oid tadqiqotlar Ravenning kompetentlik haqidagi yondashuvi asosida tahlil qilinadi.

Ko‘rib chiqilgan tadqiqotlar orasida generativ SI ning yozish ko‘nikmalarini rivojlantirishdagi samaradorligini o‘rgangan ishlardan biri Li va Jeong (2026) tadqiqotidir. Tadqiqotda yozish kursida ChatGPT va Papago kabi generativ SI vositalaridan foydalangan 85 nafar koreyalik universitet talabasi ishtirok etgan. Tadqiqot aralash metod asosida olib borilgan. Ma’lumotlar Park (2024, Lee va Jeong, 2026 orqali keltirilgan) tadqiqoti asosida moslashtirilgan, ishonchliligi tekshirilgan so‘rovnoma hamda to‘rt nafar talaba bilan o‘tkazilgan yarim tuzilmali intervyular yordamida to‘plangan.

Tadqiqot natijalariga ko‘ra, generativ SI vositalaridan foydalanish talabalarning lug‘at boyligini kengaytirish, grammatik xatolarni kamaytirish va yozishga bo‘lgan ishonchini oshirishga yordam bergan. Shunga qaramay, talabalar SI vositalaridan yozish jarayonida faol foydalangan bo‘lsalar ham, ularga bo‘lgan umumiy munosabat unchalik yuqori bo‘lmagan. Tadqiqot davomida talabalar matnni avval koreys tilida yozib, keyin uni SI yordamida ingliz tiliga moslashtirgan. Intervyu natijalari esa bu borada talabalarning qarashlari turlicha ekanini ko‘rsatgan. Ayrim talabalar SI tavsiyalari yozish jarayonini osonlashtirib, o‘ziga bo‘lgan ishonchni oshirganini

ta’kidlagan. Boshqalari esa SI dan foydalanish natijasida matnning o‘ziga xosligi va mualliflik hissi kamayishini aytgan. Ishtirokchilardan biri hatto SI yordamida tayyorlangan matnni “endi bu mening matnim emas” deb baholagan (Lee va Jeong, 2026).

Tadqiqot generativ SI dan foydalanishning ijobiy va salbiy tomonlarini birgalikda namoyon etadi. Bir tomondan, u talabalarning yozish ko‘nikmalarini rivojlantirishga yordam bergan. Ikkinchi tomondan esa, uning talabalarning motivatsiyasi, SI ga bo‘lgan munosabati va matnni o‘ziniki deb his qilishiga ta’siri bir xil bo‘lmagan. Ayrim talabalar SI dan foydalanishni foydali deb baholagan bo‘lsa, boshqalari undan ortiqcha foydalanish mustaqil fikrlash va mualliflik hissiga salbiy ta’sir ko‘rsatishini ta’kidlagan. Shunisi e’tiborga loyiqki, bunday holat faqat Li va Jeong (2026) tadqiqotida emas, balki keyingi bo‘limlarda tahlil qilinadigan boshqa empirik tadqiqotlarda ham uchraydi. Bu esa mazkur xulosalar alohida bir tadqiqotga xos emas, balki turli tadqiqotlarda ham tasdiqlanayotganini ko‘rsatadi.

Benvenuti, Kangelosi, Weinberger, Mazzoni, Benassi, Barbaresi va Orsoni (2023) sun’iy intellektning ijodkorlik, tanqidiy fikrlash, muammolarni hal qilish hamda hisoblash tafakkuri kabi yuqori darajadagi kompetentliklarni rivojlantirishdagi o‘rnini tahlil qilgan. Mualliflar ushbu masalani Piaje konstruktivizmi, Faoliyat nazariyasi va Vygotskiyning rivojlanish nazariyasi asosida yoritgan. Tadqiqot PRISMA talablari asosida olib borilgan tizimli adabiyotlar sharhiga tayangan. Bunda PsycINFO, Scopus va Web of Science ma’lumotlar bazalaridan dastlab 945 ta manba aniqlangan bo‘lsa, belgilangan mezonlar asosida ulardan faqat 20 tasi tahlil uchun tanlab olingan. Bu natija mazkur yo‘nalishda empirik tadqiqotlar soni hali ham cheklanganini ko‘rsatadi.

Sharh natijalari sun’iy intellekt yuqori darajadagi kompetentliklarni rivojlantirishga yordam berishi mumkinligini ko‘rsatadi. Biroq bu boradagi ilmiy dalillar hali yetarli emas. Masalan, Rong, Lian va Tang (2022, Benvenuti va boshq., 2023 orqali keltirilgan) sun’iy intellekt va virtual reallikka asoslangan tasviriy san’at mashg‘ulotlari o‘rta maktab o‘quvchilarining ijodkorligini rivojlantirib, test topshirish bilan bog‘liq xavotirni kamaytirganini aniqlagan. Shuningdek, Liapis, Yannakakis,

Aleksopoulos va Lopes (2016, Benvenuti va boshq., 2023) sun’iy intellekt yordamida tashkil etilgan loyihalash faoliyati o‘quvchilarning muammolarga yangicha yondashish va noodatiy yechim topish qobiliyatini rivojlantirishini ko‘rsatgan. Shunga qaramay, Benvenuti va hamkorlari ushbu tadqiqotlarning aksariyati sifat ma’lumotlariga asoslanganini qayd etadi. Shu sababli ularning natijalarini kengroq tatbiq etishda ehtiyotkorlik zarur.

Muammolarni hal qilish ko‘nikmalarini rivojlantirish bo‘yicha olingan natijalar boshqa yo‘nalishlarga qaraganda ancha ishonchli hisoblanadi. Kelleway va hamkorlari (2022, Benvenuti va boshq., 2023) Mouselab-MDP metodidan foydalangan holda oltita eksperiment o‘tkazgan. Natijalar shuni ko‘rsatganki, sun’iy intellekt ishtirokchilarga faqat yakuniy javobni emas, balki masalani qanday yechish kerakligi bo‘yicha tavsiyalar berganida, ular yangi vaziyatlarda samaraliroq yechimlarni qo‘llagan. Eng muhimi, bu natija vaqt o‘tishi bilan ham saqlanib qolgan. Demak, sun’iy intellektdan foydalanishda faqat natijani ko‘rsatish emas, balki fikrlash jarayoniga yo‘l-yo‘riq berish samaraliroq bo‘lishi mumkin.

Umuman olganda, Benvenuti va hamkorlarining sharhi sun’iy intellekt yuqori darajadagi kompetentliklarni rivojlantirish uchun katta imkoniyatlarga ega ekanini ko‘rsatadi. Biroq bu boradagi ilmiy xulosalarni to‘liq tasdiqlash uchun mavjud tadqiqotlar hali yetarli emas. Shuning uchun kelgusida bu yo‘nalishda ko‘proq va puxta rejalashtirilgan tadqiqotlar olib borilishi zarur.

Oldingi bo‘limlarda sun’iy intellektning o‘quvchilarga ta’siri ko‘rib chiqilgan bo‘lsa, Kaya va hamkorlari (2025) tadqiqotida asosiy e’tibor o‘qituvchilarga qaratilgan. Mualliflar TPACK nazariyasini generativ SI sharoitiga moslashtirish bilan birga, o‘qituvchilarning sun’iy intellektdan foydalanishga bo‘lgan qiziqishiga qaysi omillar ta’sir qilishini ham o‘rgangan. Tadqiqot natijalariga ko‘ra, pedagogik bilim (PK), pedagogik mazmun bilimi (PCK) va SI asosidagi texnologik bilim (SI-TB) o‘qituvchilarning sun’iy intellektdan foydalanishga bo‘lgan qiziqishi bilan bog‘liq bo‘lgan. Biroq mazmun bilimi (CK), SI asosidagi texnologik mazmun bilimi (SI-TMB), SI asosidagi texnologik pedagogik bilim (SI-TPB) hamda umumiy SI-TPACK

ko‘rsatkichlari bo‘yicha bunday bog‘liqlik aniqlanmagan. Jinslar kesimida o‘tkazilgan tahlil ayrim farqlar mavjudligini ko‘rsatgan. Jumladan, pedagogik bilim faqat ayol o‘qituvchilarda, SI asosidagi texnologik bilim esa faqat erkak o‘qituvchilarda sun’iy intellektdan foydalanishga bo‘lgan qiziqish bilan bog‘liq bo‘lgan. Shuningdek, hamkorlikning SI-TMB va SI-TPB ga ta’siri ham faqat ayol o‘qituvchilar guruhida kuzatilgan.

Tadqiqot natijalari bir nechta muhim jihatlarni ko‘rsatadi. Avvalo, umumiy SI-TPACK ko‘rsatkichining o‘qituvchilarning sun’iy intellektdan foydalanishga bo‘lgan qiziqishi bilan bog‘liq emasligi Li va Jeong (2026) tadqiqotida talabalar bo‘yicha olingan natijalarni eslatadi. Garchi bu ikki tadqiqot turli mamlakatlarda, turli ishtirokchilar bilan va turli usullar asosida o‘tkazilgan bo‘lsa-da, ularning xulosalari bir-biriga yaqin. Ya’ni, sun’iy intellekt bilim va ko‘nikmalarni rivojlantirishga yordam beradi, biroq u har doim ham foydalanuvchilarning qiziqishi, motivatsiyasi yoki unga bo‘lgan ijobiy munosabatini oshirmaydi. Bu holat ushbu sharhda ko‘rib chiqilgan bir nechta tadqiqotlarda ham uchragani sababli, muhim umumiy xulosa sifatida qaralishi mumkin.

Jins bo‘yicha aniqlangan farqlar e’tiborga molik bo‘lsa-da, ular asosida umumiy xulosa chiqarish hali erta. Chunki ushbu sharhda ko‘rib chiqilgan boshqa tadqiqotlarda jins sun’iy intellektdan foydalanish natijalariga ta’sir qiluvchi omil sifatida o‘rganilmagan. Shuning uchun bu natijalarni tasdiqlash uchun kelgusida yana qo‘shimcha tadqiqotlar o‘tkazish maqsadga muvofiq.

Nikolaeva, Diachkova va Sizenko (2026) sun’iy intellektning o‘qitish jarayonidagi o‘rni bilan bir qatorda, undan kompetentlikni baholashda foydalanish imkoniyatlarini ham o‘rgangan. Tadqiqot Kiyev milliy Taras Shevchenko universitetida o‘tkazilgan bo‘lib, unda 55 nafar talabaning barqaror rivojlanishga bag‘ishlangan to‘rt haftalik kurs yakunidagi global kompetentligi baholangan. Baholash OECD (2018, Nikolaeva va boshq., 2026) mezonlari asosida sun’iy intellekt texnologiyalari, jumladan, matnni tahlil qilish va mashinali o‘qitish usullari yordamida amalga oshirilgan. Natijalar sun’iy intellekt bergan baholar o‘qituvchilar bergan

baholar bilan deyarli bir xil ekanini ko‘rsatgan. Shuningdek, talabalar nazariy bilimlarni yuqori darajada o‘zlashtirgani (o‘rtacha 9,67/10) hamda yozma ishlarda madaniy farqlarni hisobga olgan holda fikr bildirish ko‘nikmasi kurs davomida 40 foizga oshgani aniqlangan.

Tadqiqot natijalari sun’iy intellektdan kompetentlikni baholashda samarali foydalanish mumkinligini ko‘rsatadi. Bu xulosa yuqorida ko‘rib chiqilgan boshqa tadqiqotlar natijalari bilan ham mos keladi. Ya’ni, sun’iy intellekt bilim va ko‘nikmalarni rivojlantirish hamda ularni baholashda samarali vosita bo‘lishi mumkinligi tobora ko‘proq tadqiqotlarda qayd etilmoqda. Biroq ushbu tadqiqotning ayrim cheklovlari ham mavjud. Avvalo, tadqiqotda nazorat guruhi bo‘lmagani sababli aniqlangan natijalar bevosita sun’iy intellekt yordamida baholash bilan bog‘liqmi yoki kurs davomida yuz bergan tabiiy o‘zgarishlar natijasimi, bunga aniq javob berish qiyin. Mualliflar sun’iy intellekt bergan baholar o‘qituvchi baholari bilan mos kelganini, shuningdek baholash vositalari pilot sinovlar va baholovchilar o‘rtasidagi ishonchlilik orqali tekshirilganini qayd etadi. Biroq bu xulosalarni tasdiqlovchi korrelyatsiya koeffitsientlari yoki boshqa statistik ko‘rsatkichlar maqolada keltirilmagan. Shu jihatdan ushbu tadqiqot Li va Jeong (2026) ishidan farq qiladi. Chunki ular qo‘llagan o‘lchov vositalarining ishonchliligini Kronbax alfa ko‘rsatkichlari orqali aniq ko‘rsatgan. Shu sababli Li va Jeong tadqiqotida o‘lchov vositalarining ishonchliligi aniqroq asoslangan bo‘lsa, Nikolaeva va hamkorlari tadqiqotida bu masala yetarli darajada yoritilmagan.

Mualliflar tadqiqotning yana bir muhim chekloviga ham e’tibor qaratadi. Ularning ta’kidlashicha, sun’iy intellekt talabalar javoblaridagi nozik ma’no farqlarini va matnning umumiy mazmunini har doim ham to‘g‘ri anglay olmaydi. Bu holat, ayniqsa, ingliz tilida yozilgan matnlarda ukrain tilining ta’siri sezilganda yaqqol namoyon bo‘lgan (Nikolaeva va boshq., 2026). Bu jihat Li va Jeong (2026) tadqiqotidagi natijalarni ham eslatadi. Ular ham ona tili yozish jarayoniga ta’sir qilishini qayd etgan. Demak, til va madaniy muhit sun’iy intellekt yordamida baholashning aniqligiga ta’sir etuvchi muhim omillardan biri hisoblanadi.

Ushbu natijalarni Ravenning kompetentlik haqidagi qarashlari bilan bog‘lab tahlil qilish maqsadga muvofiq. Garchi Nikolaeva va hamkorlari ham, Raven ham bir-birining tadqiqotlariga murojaat qilmagan bo‘lsalar-da, ularning qarashlari o‘rtasida muayyan o‘xshashlik va farqlar mavjud. Nikolaeva va hamkorlari global kompetentlikni test natijalari, yozma javoblar hamda hissiyot tahlili kabi ko‘rsatkichlar asosida baholagan. Raven esa kompetentlikni faqat ayrim ko‘rsatkichlar orqali to‘liq baholab bo‘lmaydigan murakkab tushuncha deb hisoblaydi. Uning fikricha, bunday ko‘rsatkichlar kompetentlik haqida ma’lum tasavvur berishi mumkin. Biroq ular insonning haqiqiy kompetentligini to‘liq aks ettirmaydi va uni soddalashtirilgan holda baholashga olib kelishi mumkin.

Bu tanqid faqat Nikolaeva va hamkorlarining tadqiqotiga emas, balki sun’iy intellekt yordamida kompetentlikni baholashga bag‘ishlangan boshqa tadqiqotlarga ham taalluqlidir. Hozirgi tadqiqotlarning aksariyatida asosiy e’tibor sun’iy intellekt bergan baholar bilan o‘qituvchi baholari qanchalik mos kelishini aniqlashga qaratilgan. Biroq kompetentlikning mazmuni nimadan iborat ekani va uni sun’iy intellekt yordamida qanchalik to‘g‘ri baholash mumkinligi masalasiga yetarli e’tibor berilmagan. Shu sababli bu masala sun’iy intellekt asosidagi baholash tadqiqotlarida hali to‘liq yechimini topmagan muhim muammolardan biri bo‘lib qolmoqda.

Tahlil qilingan adabiyotlar asosida bir nechta muhim xulosalarni chiqarish mumkin. Birinchidan, turli mamlakatlarda o‘tkazilgan tadqiqotlar bir-biriga yaqin natijalarni ko‘rsatadi. Sun’iy intellekt vositalari o‘quvchilar va o‘qituvchilarning kognitiv, funksional hamda pedagogik kompetentligini rivojlantirishda ijobiy samara bergan. Biroq ularning motivatsiya, qiziqish va boshqa hissiy omillarga ta’siri cheklangan yoki barcha tadqiqotlarda bir xil natija bermagan. Bu holat Li va Jeong (2026) hamda Kaya va hamkorlari (2025) tadqiqotlarida yaqqol kuzatiladi. Benvenuti va hamkorlari (2023) olib borgan adabiyotlar sharhida ham shunga o‘xshash xulosalar keltirilgan. Turli mamlakatlarda, turli ishtirokchilar ishtirokida va turli tadqiqot usullari asosida olingan natijalarning bir-birini tasdiqlashi ushbu xulosalarning ishonchliligini oshiradi.

Ikkinchidan, bir nechta tadqiqotlarda uchragan yana bir muhim masala sun’iy intellektning til va madaniyatga xos nozik ma’no farqlarini to‘liq anglay olmasligi bilan bog‘liq. Bu muammo Li va Jeong (2026) hamda Nikolaeva va hamkorlari (2026) tadqiqotlarida ham qayd etilgan. Bu esa muammo faqat bitta sun’iy intellekt vositasiga xos emasligini, balki hozirgi sun’iy intellekt texnologiyalarining umumiy cheklovlaridan biri ekanini ko‘rsatadi.

Uchinchidan, ushbu adabiyotlar sharhi davomida aniqlangan eng muhim masala kompetentlik nazariyasi bilan amaldagi baholash usullari o‘rtasidagi farqdir. So‘nggi tadqiqotlarda sun’iy intellekt kompetentlikni baholash vositasi sifatida tobora ko‘proq qo‘llanilmoqda. Biroq Ravenning qarashlariga ko‘ra, kompetentlikni faqat o‘lchanadigan ko‘rsatkichlar asosida to‘liq baholab bo‘lmaydi. Shu sababli asosiy masala sun’iy intellekt bergan baholar o‘qituvchi baholariga qanchalik yaqin ekanida emas, balki u kompetentlikni qanchalik to‘g‘ri baholay olayotganidadir. Bu masalani faqat yangi empirik tadqiqotlar o‘tkazish bilangina hal qilib bo‘lmaydi. Buning uchun, avvalo, kompetentlikning mazmuni va uni baholash mezonlarini nazariy jihatdan yanada aniqroq asoslash zarur.

Nihoyat, mavjud empirik tadqiqotlar hali ham hudud va ishtirokchilar tarkibi jihatidan cheklangan. Ushbu sharhda tahlil qilingan asosiy tadqiqotlar Janubiy Koreya, Turkiya va Ukrainadagi ayrim ta’lim muassasalarida o‘tkazilgan. Ayrim tadqiqotlarda ishtirokchilar ham muayyan guruhlar bilan cheklangan. Masalan, Li va Jeong (2026) tadqiqotida ishtirokchilarning 78,8 foizini erkaklar, 92,9 foizini esa bakalavriatning birinchi bosqichida tahsil olayotgan STEM yo‘nalishi talabalari tashkil etgan. Bundan tashqari, ushbu sharhda K-12 ta’limi, oliy ta’limdan tashqari ta’lim muassasalari hamda Global Janub davlatlarida olib borilgan tadqiqotlar qamrab olinmagan. Shu sababli ushbu sharhda chiqarilgan xulosalarni boshqa ta’lim tizimlari va turli ijtimoiy-madaniy sharoitlarga tatbiq etishda ehtiyotkorlik zarur.

XULOSA

Ushbu adabiyotlar sharhida sun’iy intellektning ta’lim sohasida qo‘llanilishiga oid ilmiy tadqiqotlar kompetentlik nazariyasi va zamonaviy empirik tadqiqotlar

asosida tahlil qilindi. Tahlil natijalari sun’iy intellekt vositalari o‘quvchilar va o‘qituvchilarning funksional, pedagogik hamda ayrim kognitiv kompetentligini rivojlantirishda ijobiy natija berayotganini ko‘rsatdi. Shu bilan birga, mavjud tadqiqotlarda bu natijalar aynan sun’iy intellekt qo‘llanilishi bilan bog‘liq ekanini to‘liq isbotlaydigan dalillar yetarli emasligi aniqlandi. Shuningdek, adabiyotlar tahlili sun’iy intellekt yordamida kompetentlikni baholash bo‘yicha tadqiqotlar bilan kompetentlik nazariyasi o‘rtasida muayyan uzilish mavjudligini ko‘rsatdi. Aksariyat tadqiqotlarda asosiy e’tibor sun’iy intellekt bergan baholarning o‘qituvchi baholari bilan mosligiga qaratilgan bo‘lsa, kompetentlikning mazmunini qay darajada to‘g‘ri aks ettirishi masalasi yetarli darajada yoritilmagan.

Adabiyotlar tahlili kelgusidagi tadqiqotlar uchun ham ayrim muhim yo‘nalishlarni belgilash imkonini berdi. Avvalo, sun’iy intellektning ta’lim natijalariga ko‘rsatadigan ta’sirini boshqa omillardan aniq ajratish uchun nazorat guruhi ishtirokidagi va uzoq muddatli tadqiqotlarni ko‘paytirish zarur. Bundan tashqari, tadqiqotlarni turli mamlakatlar, ta’lim bosqichlari va ijtimoiy-madaniy sharoitlarda olib borish hamda sun’iy intellekt asosidagi baholash vositalarini kompetentlik nazariyasi nuqtayi nazaridan chuqurroq o‘rganish muhimdir. Bu yo‘nalishdagi tadqiqotlarning rivojlanishi sun’iy intellektning ta’limdagi imkoniyatlarini yanada to‘liq baholash va undan samarali foydalanish bo‘yicha ilmiy asoslangan xulosalar chiqarishga xizmat qiladi.

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BO‘LAJAK O‘QITUVCHILAR RAQAMLI KOMPETENTLIGINI SUN’IY INTELLEKT PLATFORMALARI ASOSIDA RIVOJLANTIRISH MEXANIZMINI TAKOMILLASHTIRISH

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Annotatsiya. *Ushbu maqolada bo‘lajak o‘qituvchilarning raqamli kompetentligini rivojlantirishda sun’iy intellekt platformalaridan foydalanish mexanizmini takomillashtirish masalasi ko‘rib chiqilgan. Zamonaviy AI vositalarining pedagogik salohiyati, ularni pedagogika ta'limi jarayoniga integratsiya qilishning mavjud muammolari tahlil qilingan hamda raqamli kompetentlikni bosqichma-bosqich shakllantirishga qaratilgan tashkiliy-pedagogik mexanizm taklif etilgan. Tadqiqot natijalari oliy ta'lim muassasalarida pedagog kadrlar tayyorlash sifatini oshirishga xizmat qiladi.*

Kalit so‘zlar. *raqamli kompetentlik, sun’iy intellekt, bo‘lajak o‘qituvchilar, pedagogik ta’lim, AI platformalari, raqamli transformatsiya, TPACK, o‘qitish mexanizmi.*

Annotation. *This article examines the mechanism for improving the digital competence development of future teachers through the use of artificial intelligence platforms. The pedagogical potential of modern AI tools and the existing challenges of their integration into teacher education are analyzed, and an organizational-pedagogical mechanism for the phased formation of digital competence is proposed. The findings contribute to enhancing the quality of teacher training in higher education institutions.*

Keywords. *digital competence, artificial intelligence, future teachers, teacher education, AI platforms, digital transformation, TPACK, development mechanism.*

Kirish. XXI asr ta’lim tizimining eng muhim vazifalaridan biri-kelajak avlodni tayyorlaydigan o‘qituvchilarning o‘zlarini raqamli davr talablariga mos ravishda tayyorlashdir. Sun’iy intellekt (SI) texnologiyalarining jadal rivojlanishi nafaqat ta’lim mazmuniga, balki ta’lim jarayonini tashkil etish usullariga ham tub o‘zgarishlar olib kelmoqda. ChatGPT, Claude, Google Gemini, Copilot kabi generativ SI platformalari darslarni loyihalashtirish, o‘quv materiallarini moslashtirish, baholash va qaytar aloqa berish jarayonlarini sezilarli darajada avtomatlashtirish imkonini bermoqda.

Shu bilan birga, bo‘lajak o‘qituvchilarning aksariyati ushbu vositalardan samarali foydalanish uchun zarur bo‘lgan raqamli kompetentlikka to‘liq ega emas. Ko‘pgina pedagogika yo‘nalishi talabalari SI vositalarini faqat matn generatsiya qilish uchun sirtqi darajada qo‘llaydi, ularning didaktik salohiyatini chuqur anglamaydi. Bu holat pedagogik ta’lim tizimida raqamli kompetentlikni rivojlantirishning yangi, tizimli mexanizmini ishlab chiqish zaruratini keltirib chiqaradi.

Mazkur tadqiqotning maqsadi-bo‘lajak o‘qituvchilarning raqamli kompetentligini sun’iy intellekt platformalari asosida rivojlantirishning mavjud amaliyotini tahlil qilish va uni takomillashtirishga qaratilgan tashkiliy-pedagogik mexanizmni ishlab chiqishdan iborat.

Asosiy qism.

1. Raqamli kompetentlik tushunchasi va uning tarkibiy komponentlari.

Raqamli kompetentlik-bu shaxsning axborot-kommunikatsiya texnologiyalaridan, jumladan sun’iy intellekt vositalaridan, kasbiy faoliyatda samarali, tanqidiy va mas’uliyatli tarzda foydalana olish qobiliyatidir (Redecker, 2017). Yevropa Ittifoqining DigCompEdu doiraviy hujjatida o‘qituvchilarning raqamli kompetentligi olti yo‘nalishda ko‘rib chiqiladi: kasbiy faollashuv, raqamli resurslar, o‘qitish va o‘rganish, baholash, o‘quvchilarni qo‘llab-quvvatlash hamda o‘quvchilarning raqamli kompetentligini rivojlantirish.

Mishra va Koehlerning (2006) TPACK (Technological Pedagogical Content Knowledge) nazariyasiga ko‘ra, samarali o‘qituvchi texnologik, pedagogik va predmet bilimlarini uzviy bog‘lay olishi kerak. Sun’iy intellekt platformalari kontekstida bu nazariya yangi ma’no kasb etadi: o‘qituvchi nafaqat AI vositasidan foydalanishni, balki uni aniq pedagogik maqsadga, o‘quvchilar ehtiyojiga va predmet mazmuniga moslab qo‘llashni bilishi lozim.

2. Zamonaviy sun’iy intellekt platformalarining pedagogik salohiyati.

Bugungi kunda ta'lim sohasida qo‘llanilayotgan SI platformalarini shartli ravishda uch guruhga bo‘lish mumkin: generativ til modellari (ChatGPT, Claude, Gemini), moslashuvchan o‘qitish tizimlari (adaptive learning platforms) va baholash-

nazorat vositalari (AI-based assessment tools). Ushbu platformalar quyidagi imkoniyatlarni taqdim etadi:

- o‘quv materiallarini talabalar darajasiga moslab tayyorlash;
- test va topshiriqlarni avtomatik generatsiya qilish hamda ularni baholash;
- talabalarga individual qaytar aloqa (feedback) berish;
- dars ishlanmalari va metodik materiallarni tezkor loyihalashtirish;
- tilni o‘rganish, kod yozish, ilmiy matn tahlili kabi sohalarda maslahat vazifasini bajarish.

Biroq, ushbu imkoniyatlardan to‘liq foydalanish faqat foydalanuvchining tegishli raqamli kompetentlikka ega bo‘lgan taqdirdagina mumkin bo‘ladi. Aks holda AI vositalari sirtqi, mexanik tarzda qo‘llaniladi, bu esa ta’lim sifatiga salbiy ta’sir ko‘rsatishi mumkin (Ertmer, 1999).

3. Bo‘lajak o‘qituvchilarni tayyorlash jarayonida mavjud muammolar.

O‘tkazilgan kuzatishlar va ilmiy adabiyotlar tahlili quyidagi asosiy muammolarni aniqlashga imkon berdi:

Birinchidan, pedagogika yo‘nalishlari o‘quv rejalarida sun’iy intellekt platformalari bilan ishlashga bag'ishlangan alohida modul yoki fan mavjud emas yoki u parchalangan holda, boshqa fanlar tarkibida yuzaki o‘rgatiladi.

Ikkinchidan, o‘qituvchi-professor-o‘qituvchilar tarkibining o‘zi ham SI vositalaridan foydalanish bo‘yicha yetarli metodik tayyorgarlikka ega emas, bu esa talabalarga sifatli namuna ko‘rsatishni qiyinlashtiradi.

Uchinchidan, SI vositalaridan foydalanishning axloqiy-huquqiy jihatlari (plagiat, ma’lumotlar maxfiyligi, algoritmik xolislik) bo‘yicha tizimli bilim berilmaydi, bu talabalarda noto‘g‘ri foydalanish odatlarini shakllantirishi mumkin.

To‘rtinchidan, amaliyot davomida talabalar SI vositalaridan real pedagogik vaziyatlarda foydalanish tajribasiga ega bo‘lmaydi - bu ko‘nikma faqat nazariy darslarda qoladi.

4. Rivojlantirish mexanizmini takomillashtirish: tashkiliy-pedagogik model.

Yuqorida keltirilgan muammolarni bartaraf etish maqsadida bo‘lajak o‘qituvchilarning raqamli kompetentligini SI platformalari asosida rivojlantirishning to‘rt bosqichli mexanizmi taklif etiladi.

Birinchi bosqich - diagnostik-motivatsion bosqich. Talabalarning boshlang'ich raqamli kompetentlik darajasi diagnostika qilinadi, ularda SI vositalaridan foydalanishga nisbatan ichki motivatsiya shakllantiriladi. Bu bosqichda oddiy amaliy topshiriqlar orqali talabalar AI platformalarining imkoniyatlari bilan tanishtiriladi.

Ikkinchi bosqich - nazariy-metodik bosqich. O‘quv rejaga “Ta’limda sun’iy intellekt” nomli maxsus modul kiritiladi. Ushbu modulda TPACK nazariyasi, AI vositalarining didaktik tasnifi, ulardan foydalanishning axloqiy me’yorlari o‘rgatiladi.

Uchinchi bosqich - amaliy-loyihaviy bosqich. Talabalar mikro-o‘qitish (micro-teaching) va pedagogik amaliyot davomida SI platformalari yordamida real dars ishlanmalari, baholash vositalari va individual o‘quv topshiriqlari tayyorlaydi hamda ularni amalda sinab ko‘radi.

To‘rtinchi bosqich - reflektiv-baholash bosqichi. Talabalar o‘z faoliyatini portfolio va reflektiv kundalik shaklida tahlil qiladi, natijalar o‘qituvchi-mentor va o‘zaro baholash (peer-assessment) orqali baholanadi, bu esa kompetentlikni doimiy takomillashtirish tsiklini ta’minlaydi.

Taklif etilayotgan mexanizmning o‘ziga xos xususiyati shundaki, u chiziqli emas, balki tsiklik xarakterga ega: har bir bosqich yakunida olingan natijalar keyingi tsiklning diagnostik bosqichi uchun asos bo‘ladi, bu esa uzluksiz professional rivojlanishni ta'minlaydi.

5. Mexanizmning amaliy tatbiq shartlari.

Taklif etilgan mexanizmni muvaffaqiyatli tatbiq etish uchun quyidagi tashkiliy shart-sharoitlar zarur: o‘qituvchi-professor-o‘qituvchilar uchun SI vositalari bo‘yicha malaka oshirish kurslarini tashkil etish; oliy ta’lim muassasalarida raqamli infratuzilmani (barqaror internet, litsenziyalangan AI platformalar) yaratish; SI vositalaridan foydalanish bo‘yicha institutsional siyosat va axloqiy me’yorlarni ishlab

chiqish; talabalar va o‘qituvchilar o‘rtasida yaxshi amaliyotlar almashinuvini rag‘batlantiruvchi platforma tashkil etish.

Xulosa.

Sun’iy intellekt platformalari bo‘lajak o‘qituvchilarning raqamli kompetentligini rivojlantirishda katta salohiyatga ega, biroq bu salohiyat faqat tizimli, bosqichma-bosqich va reflektiv yondashuv asosida amalga oshirilgan taqdirdagina to‘liq ro‘yobga chiqadi. Maqolada taklif etilgan diagnostik-motivatsion, nazariy-metodik, amaliy-loyihaviy va reflektiv-baholash bosqichlaridan iborat tsiklik mexanizm pedagogika yo‘nalishi talabalarini zamonaviy raqamli ta’lim muhitida faoliyat yuritishga tayyorlashning samarali yo‘li bo‘la oladi. Kelgusi tadqiqotlarda ushbu mexanizmning turli yo‘nalishlar bo‘yicha empirik sinovdan o‘tkazilishi va uning ta’sirchanligini miqdoriy baholash dolzarb vazifa bo‘lib qolmoqda.

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BO‘LAJAK O‘QITUVCHILAR RAQAMLI KOMPETENTLIGINI DIAGNOSTIKA VA MONITORING QILISH MEXANIZMINI TAKOMILLASHTIRISH

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Annotatsiya. *Ushbu maqolada bo‘lajak o‘qituvchilarning raqamli kompetentligini diagnostika va monitoring qilish mexanizmlarini takomillashtirish masalasi ilmiy-amaliy jihatdan tahlil qilingan. Zamonaviy pedagogik ta’limda raqamli kompetentlik darajasini baholashning an’anaviy va innovatsion metodlari qiyosiy o‘rganilib, sun’iy intellekt hamda raqamli platformalar asosidagi ko‘p bosqichli monitoring modeli taklif etilgan. Tadqiqotda DigCompEdu va TPACK xalqaro freymvorklariga tayangan holda bo‘lajak pedagoglarning raqamli ko‘nikmalarini dinamik baholash va korreksiya qilishning tashkiliy-pedagogik shart-sharoitlari yoritib berilgan.*

Kalit so‘zlar: *raqamli kompetentlik, diagnostika, monitoring, bo‘lajak o‘qituvchilar, DigCompEdu, TPACK, intellektual tahlil, raqamli portfolio, pedagogik ta’lim.*

Annotation. *This article examines the theoretical and practical aspects of improving the mechanism for diagnosing and monitoring the digital competence of future teachers. It provides a comparative analysis of traditional and innovative assessment methods in modern teacher education and proposes a multi-stage monitoring model powered by AI and digital tools. Based on the DigCompEdu and TPACK international frameworks, the study highlights the organizational and pedagogical conditions for dynamic evaluation and continuous development of pre-service teachers' digital skills.*

Keywords: *digital competence, diagnostics, monitoring, future teachers, DigCompEdu, TPACK, learning analytics, digital portfolio, teacher education.*

Kirish. Ta’lim tizimining raqamli transformatsiyasi sharoitida pedagog kadrlar tayyorlash sifati to‘g‘ridan-to‘g‘ri ularning raqamli kompetentlik darajasiga bog‘liqdir. Zamonaviy o‘qituvchi nafaqat axborot-kommunikatsiya texnologiyalaridan (AKT) foydalanish ko‘nikmasiga, balki o‘quv jarayoniga sun’iy

intellekt va raqamli resurslarni didaktik jihatdan to‘g‘ri integratsiya qila olish salohiyatiga ega bo‘lishi lozim.

Biroq amaliyot shuni ko‘rsatmoqdaki, oliy pedagogik ta’lim muassasalarida bo‘lajak o‘qituvchilarning raqamli ko‘nikmalarini shakllantirish jarayoni ko‘p hollarda bir martalik baholash yoki sirtqi nazorat (test, imtihon) bilan cheklanadi. Talabalarning raqamli kompetentligini bosqichma-bosqich, dinamik tarzda diagnostika va monitoring qilishning moslashuvchan mexanizmi yetarlicha shakllanmagan.

Ushbu tadqiqotning maqsadi — bo‘lajak o‘qituvchilarning raqamli kompetentlik darajasini aniq belgilash, ularni rivojlantirish trayektoriyasini proaktiv kuzatish hamda baholashning zamonaviy tashkiliy-pedagogik mexanizmini takomillashtirishdan iborat.

Asosiy qism

1. Raqamli kompetentlikni diagnostika va monitoring qilishning nazariy-metodologik asoslari.

Raqamli kompetentlik tushunchasi shaxsning raqamli texnologiyalardan kasbiy va ijtimoiy faoliyatda samarali, tanqidiy hamda etik me’yorlarga amal qilgan holda foydalana olish qobiliyatidir.

Pedagogik ta’limda ushbu kompetentlikni diagnostika qilish ikki asosiy xalqaro standartga tayanadi.

DigCompEdu (European Framework for the Digital Competence of Educators). O‘qituvchining kasbiy faolligi, raqamli resurslarni yaratish, o‘qitish, baholash va o‘quvchilarni qo‘llab-quvvatlash bo‘yicha 6 ta yo‘nalishdagi ko‘nikmalarini belgilaydi.

TPACK (Technological Pedagogical Content Knowledge). Texnologik, pedagogik va predmet bilimlarining uzviy integratsiyasini baholaydi.

Diagnostika — bu talabaning joriy raqamli ko‘nikmalari darajasini (boshlang‘ich, o‘rta, yuqori) hamda bilimdagi bo‘shliqlarni aniqlash bo‘lsa, monitoring — uzoq muddatli ta’lim jarayonida ushbu kompetentlikning o‘sish dinamikasini uzluksiz kuzatib borish va korreksiya qilish tizimidir.

2. An’anaviy baholash va takomillashtirilgan monitoring mexanizmi qiyosiy tahlili.

Amaldagi oliy ta’lim tizimida raqamli tayyorgarlikni baholash usullari zamonaviy talablarga har doim ham javob beravermaydi.

1-jadval.

Baholash parametrlari	**An’anaviy diagnostika usullari**	**Takomillashtirilgan monitoring mexanizmi**
Baholash chastotasi	Semestr oxirida 1-2 marotaba (imtihon/test).	Uzluksiz, real vaqt rejimida (learning analytics).
Baholash ob’ekti	Nazariy bilimlarni yod olganlik darajasi.	Amaliy ko‘nikmalar, raqamli kontent yaratish va didaktik qo‘llash.
Vositalar	Standart testlar, yozma ishlar.	Raqamli e-portfolio, intellektual simulated darslar, AI-analytics.
Natija va qaytar aloqa	Yakuniy ball (baho) ko‘rinishida.	Individual rivojlanish trayektoriyasi va korreksion tavsiyalar.

3. Raqamli kompetentlikni diagnostika va monitoring qilishning to‘rt bosqichli mexanizmi.

Bo‘lajak o‘qituvchilarning raqamli kompetentligini uzluksiz baholash va takomillashtirish uchun quyidagi tashkiliy-pedagogik model taklif etiladi.

1-bosqich: Diagnostik-kirish bosqichi (Baseline Assessment).

Maqsad: ODTUga qabul qilingan yoki modulni boshlayotgan talabalarning boshlang‘ich raqamli savodxonligini aniqlash.

Vositalar: Auto-testlar, sotsiologik so‘rovnomalar hamda interaktiv topshiriqlar orqali talabaning raqamli profili (DigCompEdu darajasi: A1, A2, B1, B2) shakllantiriladi.

2-bosqich: Formativ-analitik monitoring (Continuous Learning Analytics).

Maqsad: O‘quv jarayonida talabalarning raqamli vositalar bilan ishlash faolligini kuzatish.

Vositalar: LMS (Learning Management System) platformalaridagi intellektual tahlil modullari. Tizim talabaning raqamli topshiriqlarni bajarish tezligi, foydalanilgan dasturiy vositalar xilma-xilligi va xatolarini avtomatik tahlil qiladi.

3-bosqich: Amaliy-loyihaviy monitoring (Micro-teaching & Portfolio).

Maqsad: Talabaning pedagogik amaliyot va mikro-o‘qitish davomida raqamli vositalarni didaktik maqsadlarga moslay olishini baholash.

Vositalar: Raqamli e-Portfolio talaba tomonidan yaratilgan interaktiv dars rejalari, AI platformalari yordamida tayyorlangan multimediali materiallar va test topshiriqlari bazasi.

Peer-assessment (O‘zaro baholash). Talabalarning bir-birlari tayyorlagan raqamli dars ishlanmalariga taqriz berishi.

4-bosqich: Summativ-reflektiv bosqich (Final Diagnostic Cycle).

Maqsad: Bitiruvchi talabaning raqamli kompetentligi o‘sish dinamikasini baholash va kasbiy tayyorgarlik darajasini tasdiqlash.

Vositalar: Keys-stadi (Case-study) topshiriqlari, sun’iy intellekt vositalarida olingan natijalarning etik va didaktik tahlili, reflektiv esselar.

4. Monitoring mexanizmini samarali tatbiq etish shartlari

Taklif etilgan diagnostika va monitoring mexanizmini OTMlar amaliyotiga muvaffaqiyatli joriy etish uchun quyidagi tashkiliy-pedagogik shart-sharoitlar ta’minlanishi zarur:

Intellektual LMS platformalarini integratsiya qilish. Diagnostika jarayonlarini avtomatlashtirish uchun o‘quv platformalariga sun’iy intellektga asoslangan tahlil modullarini kiritish.

Kriterial baholash rubrikalarini ishlab chiqish. Har bir raqamli ko‘nikma (masalan: prompt-injiniring, raqamli xavfsizlik, o‘quv kontentini dizaynlash) bo‘yicha aniq deskriptorlar va mezonlarni belgilab qo‘yish.

Professor-o‘qituvchilarning baholash kompetentsiyasini oshirish. Monitoring natijalarini to‘g‘ri talqin qila oladigan va talabalarga individual korreksion ta’sir ko‘rsatuvchi tutor-o‘qituvchilarni tayyorlash.

Etik va konfidentsiallik me’yorlari. Talabaning diagnostik ma’lumotlari va monitoring tahlillari shaxsiy ma’lumotlar daxlsizligi qoidalariga mos holda saqlanishini ta’minlash.

Xulosa

Bo‘lajak o‘qituvchilarning raqamli kompetentligini diagnostika va monitoring qilish mexanizmini takomillashtirish — bu shunchaki baholash usullarini o‘zgartirish emas, balki pedagogik ta’lim sifatini oshirishning strategik omilidir.

Bir martalik nazoratdan uzluksiz, tsiklik va adaptiv monitoring tizimiga o‘tish bo‘lajak pedagoglarga o‘zlarining raqamli ko‘nikmalarini real vaqt rejimida baholash va rivojlantirish imkonini beradi. Taklif etilgan to‘rt bosqichli model ta’lim muassasalariga raqamli jamiyat talablariga to‘liq javob bera oladigan, moslashuvchan va yuqori kompetentsiyaga ega raqamli pedagog kadrlarni tayyorlash jarayonini sifat jihatidan yangi bosqichga olib chiqish imkoniyatini yaratadi.

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INTERNATIONAL PRACTICES OF USING CONCEPTUAL TABLES AND GRAPHIC ORGANIZERS IN PRIMARY TEACHER EDUCATION: A COMPARATIVE PERSPECTIVE

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Abstract. *Competency-based reform has repositioned teacher education around what future teachers can do with knowledge rather than what they can recall. Within this shift, conceptual tables and graphic organizers—visual tools that externalise the structure of ideas—have become instruments not only for pupils but for the professional formation of teachers themselves. This paper compares how four influential systems (Finland, Singapore, the United States, and South Korea) position these tools in the preparation of pre-service primary teachers, and asks what is transferable to Uzbekistan. Using a qualitative comparative design combining document and content analysis with synthesis of peer-reviewed research, the study finds strong convergence at the level of learning theory and competency goals, but marked divergence in how the tools are framed—ranging from an explicitly taught strategy to an embedded thinking routine to an implicit curricular expectation. The analysis identifies transferable practices—explicit modelling, gradual release, and integration into pedagogical reasoning rather than isolated technique—and outlines the pedagogical conditions, likely challenges, and evidence-based recommendations for strengthening Uzbek primary teacher education. The contribution is a critical synthesis of international experience rather than a new instructional model.*

Keywords: *graphic organizers; conceptual tables; pre-service primary teachers; teacher education; comparative education; competency-based education; visual scaffolding; Uzbekistan.*

1. Introduction

Across contemporary school systems, the purpose of teacher education has shifted from transmitting subject matter towards cultivating professional competence—the capacity to design, adapt and justify instruction under real classroom conditions. This reframing has renewed interest in instructional tools that make the structure of knowledge explicit and manipulable. Conceptual tables and graphic organizers—matrices, hierarchies, comparison charts, flow diagrams and concept

maps—are among the most durable of these tools, precisely because they operationalise well-established learning theory. Ausubel's (1968) account of meaningful learning holds that new ideas are retained when they are consciously subsumed under relevant prior concepts, and Novak and Cañas (2008) developed concept mapping as an instrument for exactly that assimilation. Cognitive-load theory (Sweller et al., 2019) and the generative view of learning (Fiorella & Mayer, 2015) add a complementary rationale: by offloading and spatially organising information, such tools free working memory and prompt learners to build coherent mental representations.

The empirical case for graphic organizers is substantial. Meta-analytic evidence associates their use with gains in vocabulary, comprehension and inferential reasoning (Dexter & Hughes, 2011; Dexter et al., 2011), and a recent meta-analysis distinguishes the benefits of learner-generated versus instructor-provided organizers, underscoring that design and enactment—not the diagram itself—determine impact (Ponce et al., 2025). Yet a recurring finding is that teachers tend to treat these tools as discrete techniques rather than as elements of a coherent, sequenced pedagogy (Obunan & Riva, 2026). This gap is fundamentally one of teacher preparation: whether future teachers learn to reason with, and not merely reproduce, visual tools.

Comparative international analysis is valuable here because the tools travel across systems while their pedagogical framing does not. Studying how high-performing and reforming systems embed conceptual tables and graphic organizers in initial teacher education reveals which conditions convert a technique into a competence. For Uzbekistan, which is pursuing an ambitious competency-based transformation of schooling and pedagogical higher education (President of the Republic of Uzbekistan, 2019, 2025; Ministry of Preschool and School Education, 2023; UNICEF, 2021), such analysis offers evidence-informed direction while respecting local conditions.

Accordingly, the study pursues one aim: to critically compare international practices in integrating conceptual tables and graphic organizers into pre-service

primary teacher education, and to identify transferable practices for Uzbekistan. It is guided by three research questions: (RQ1) How do selected systems position these tools within initial teacher education? (RQ2) What do these practices share, and how do they differ analytically? (RQ3) Which practices can realistically be adapted to strengthen the competence of Uzbek pre-service primary teachers? The significance of the study lies in moving beyond country-by-country description towards an analytical synthesis usable for curriculum design.

2. Methodology

The study employs a qualitative comparative research design. Comparative education methodology is appropriate because the object of inquiry is not an isolated intervention but a set of situated pedagogical practices whose meaning depends on system context. Four purposively selected cases—Finland, Singapore, the United States and South Korea—were chosen for their documented influence on international teacher-education discourse, the availability of reliable English-language literature, and their contrasting governance models, which maximise analytical variation.

Three complementary methods were combined. **Document analysis** examined official frameworks and policy texts—for example the Finnish Teacher Education Development Programme (Finnish Ministry of Education and Culture, 2022), Singapore's TE21/V3SK model (National Institute of Education, 2009) and South Korea's competency-based curriculum settlement (Asia Society, 2017; NCEE, 2025). **Content analysis** of peer-reviewed studies identified how the tools are conceptualised, taught and assessed, using constant-comparison coding across the categories later reported in Table 1 (structure, tool status, curricular anchoring, competencies). **Synthesis** integrated the coded evidence into cross-case themes, distinguishing convergence from divergence. Triangulating policy documents with independent scholarship reduces reliance on aspirational policy language. The design is interpretive rather than statistical; its aim is analytical generalisation—transferable insight—rather than measurement of effect.

3. Comparative Analysis of International Practices

3.1 Finland

Finnish primary teacher education is research-based and set at Master's level, and its defining feature is professional autonomy grounded in inquiry. The 2022 development programme frames teacher competence broadly—pedagogical and didactic competence, curriculum competence, and research competence and critical thinking are named explicitly (Finnish Ministry of Education and Culture, 2022). Within this culture, graphic organizers and conceptual tables are rarely prescribed; they surface as instruments of pedagogical reasoning that student teachers select, justify and evaluate, often through the research orientation cultivated by the Master's thesis. The distinctive contribution of the Finnish case is therefore not a specific technique but a stance: visual tools are subordinated to reasoned didactic decision-making, which protects against mechanical use.

3.2 Singapore

Singapore offers the sharpest contrast in framing. Through the National Institute of Education's TE21 model and its V3SK articulation of Values, Skills and Knowledge (National Institute of Education, 2009), thinking is treated as a teachable, visible object. Visible-thinking routines and concept mapping—rooted in the Making Thinking Visible tradition (Ritchhart et al., 2011; Ritchhart & Church, 2020)—are enacted as part of a signature pedagogy that deliberately develops multidimensional and dispositional thinking in pre-service teachers (Tan, 2019). Here conceptual tables and graphic organizers are embedded, evidence-informed routines rather than optional add-ons: student teachers experience them as learners and then learn to orchestrate them, so the tool and the professional disposition are cultivated together.

3.3 United States

The United States is the system with the deepest research base on graphic organizers and the most explicit instructional tradition. Structured approaches such as Thinking Maps, and a large body of effectiveness research—particularly in inclusive and special-education settings—position graphic organizers as an explicitly taught

strategy with identifiable design features (Dexter & Hughes, 2011; Dexter et al., 2011). Crucially, this literature specifies the conditions of effective use: explicit modelling, feedback and gradual release of responsibility, without which even well-designed organizers underperform (Ponce et al., 2025). The American case thus contributes a technology of instruction—clear procedures for teaching the tools—balanced by the caution that procedure without reasoning risks the very ritualisation Finland avoids.

3.4 South Korea

South Korea's 2022 revised national curriculum consolidates a competency-based orientation built around competencies including knowledge-information processing and creative thinking (Asia Society, 2017; NCEE, 2025). Conceptual tables and graphic organizers operate here largely as implicit enablers: they are not the headline of teacher preparation, but they materialise the cognitive operations the curriculum demands—organising, comparing and synthesising information. Reforms strengthening pre-service teachers' digital and pedagogical competence (see Zhang et al., 2026, on the broader pre-service competence literature) increasingly bring such visual-structuring tools into technology-rich instruction. The Korean case shows how tools can be carried by curricular expectations even when not named as a distinct object of training.

3.5 Cross-case synthesis

Read together (Table 1), the cases converge on a common foundation. All four rest on constructivist, meaning-oriented learning theory; all pursue competency-based goals; and all use visual externalisation to reduce cognitive load and support metacognition. Where they diverge is in how the tools are positioned along a continuum from explicit strategy (United States), through embedded thinking routine (Singapore), to instrument of autonomous reasoning (Finland) and implicit curricular expectation (South Korea). This divergence is pedagogically consequential: it determines whether pre-service teachers acquire a repertoire of procedures, a disposition, a reasoning practice, or merely an expectation. Figure 1 represents this relationship, with shared foundations at the base differentiating into country-distinctive

emphases. The analytical lesson is that effectiveness depends less on which organizer is used than on how deliberately teacher education cultivates the reasoning that governs its use.

Table 1. Comparative framing of conceptual tables and graphic organizers in primary teacher education.

Dimension	Finland	Singapore	United States	South Korea
Teacher-education structure	Research-based, Master's-level ITE in universities; high autonomy.	Centralised, single-provider model (NIE) partnered with MOE and schools.	Decentralised; university- and state-based programmes with accreditation standards.	University/college programmes plus a competitive national certification examination.
Status of graphic organizers / conceptual tables	Chosen by teachers as instruments of pedagogical reasoning, not mandated.	Embedded as visible-thinking routines within a signature pedagogy.	Explicitly taught, research-validated strategy (e.g., Thinking Maps).	Implicit within competency curriculum; support processing of knowledge.
Curricular anchoring	Broad-based competence; didactics and curriculum studies.	V3SK / TE21 graduand-teacher competencies.	Inclusive-education and literacy/subject-methods coursework.	2022 revised competency-based national curriculum.
Competencies developed	Critical thinking, research competence, adaptive didactics.	Metacognition, multidimensional and dispositional thinking.	Comprehension, differentiation, explicit instruction.	Knowledge-information processing, creative thinking.

Note. Compiled by the author from the sources cited in Section 3.

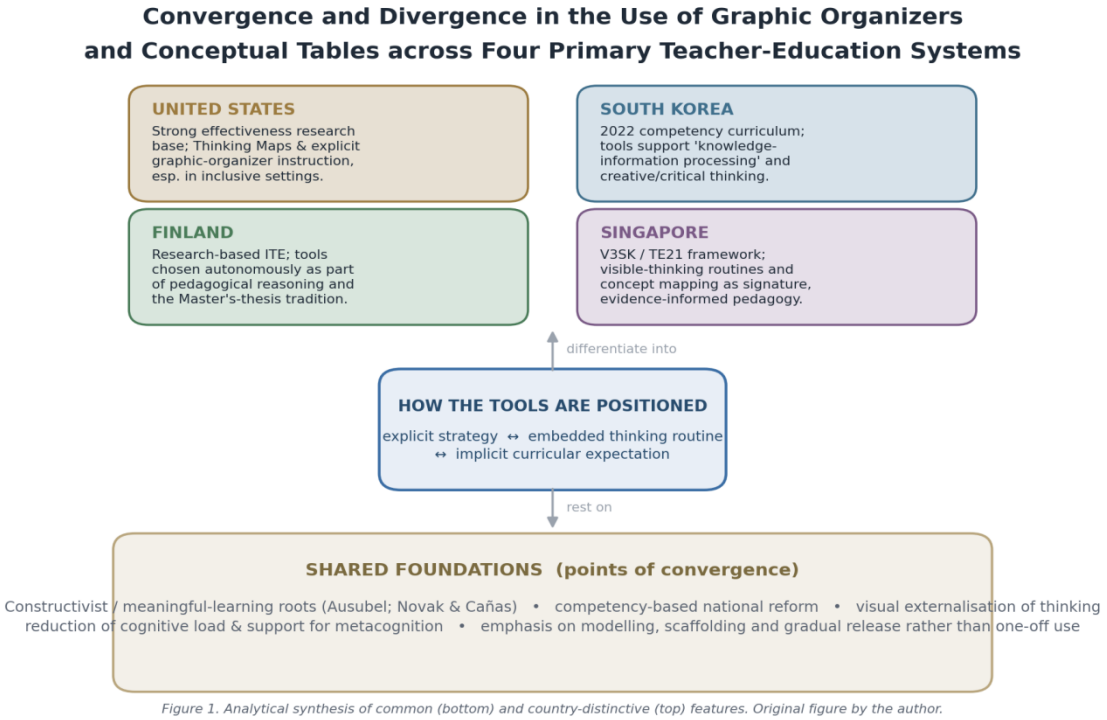

Figure 1. Common and distinctive features of the four systems (original figure by the author).

4. Implications for Uzbekistan

Uzbekistan's reform trajectory creates favourable conditions for adopting these practices deliberately. The 2019 Concept of Development of Public Education until 2030 and the 2023–2026 Partnership Compact commit the system to competency-based, inclusive curricula (President of the Republic of Uzbekistan, 2019; Ministry of Preschool and School Education, 2023), while UNICEF-supported curriculum reform has embedded competency, inclusion and higher-order thinking in the primary grades (UNICEF, 2021). The 2025 restructuring of pedagogical higher education, including the establishment of a national pedagogical university and dual-education models (President of the Republic of Uzbekistan, 2025), opens space to redesign how future primary teachers are prepared to use conceptual tables and graphic organizers.

Three practices appear realistically transferable. First, from the United States, the explicit teaching of a small, well-chosen set of organizers with modelling, feedback and gradual release—so that competence is built systematically rather than assumed. Second, from Singapore, the principle of dual experience: pre-service teachers should first learn through visible-thinking routines and only then learn to orchestrate them, so tool and disposition develop together. Third, from Finland, the framing of visual tools as instruments of pedagogical reasoning, assessed through teachers' justification of their choices rather than mere production of diagrams. These are consistent with the dissertation's premise that competence resides in the reasoned, sequenced use of conceptual tables and graphic organizers, not in the artefacts themselves.

Implementation requires specific pedagogical conditions: teacher educators who can model the tools authentically; practicum structures that allow supervised, iterative use in real primary classrooms; and assessment that rewards reasoning and adaptation. Likely challenges include limited trainer capacity, the risk of ritualised or purely decorative use, uneven digital resources, and the tendency—well documented internationally (Obunan & Riva, 2026)—to treat organizers as isolated activities. Accordingly, the study recommends: (1) integrating a structured strand on conceptual tables and graphic organizers into primary-teacher didactics rather than treating it as an optional workshop; (2) embedding modelled, gradually released use within the

practicum; (3) assessing competence through performance tasks that require justification of tool choice; and (4) building teacher-educator capacity so that modelling is credible. None of these proposes a new educational model; each adapts internationally validated practice to Uzbek conditions.

5. Conclusion

This comparative study set out to clarify how leading systems integrate conceptual tables and graphic organizers into primary teacher education and what is transferable to Uzbekistan. The principal finding is that the four systems converge on learning theory and competency goals but diverge in how they frame the tools—as explicit strategy, embedded routine, reasoning instrument or implicit expectation—and that this framing, more than the choice of diagram, governs effectiveness. Theoretically, the analysis reinforces that the tools are valuable insofar as teacher education develops the pedagogical reasoning that directs them, consistent with meaningful-learning and generative-learning accounts. Practically, it recommends explicit modelling with gradual release, dual learner–orchestrator experience, reasoning-focused assessment, and teacher-educator capacity building, adapted to Uzbek reform conditions. The study's contribution is a critical synthesis of international experience and a set of evidence-based, transferable recommendations—not a new model. Future research should test these adaptations empirically with Uzbek pre-service primary teachers, examining how structured preparation changes the quality of their reasoning with conceptual tables and graphic organizers over the practicum.

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ENHANCING EFL STUDENTS' ORAL COMMUNICATION SKILLS THROUGH SELF-EMOTIONAL LEARNING STRATEGIES

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Annotatsiya. *Mazkur tezisda ingliz tili talabalari og'zaki muloqot ko'nikmalarini rivojlantirishda Self-Emotional Learning (SEL) strategiyalaridan foydalanish imkoniyatlari ko'rib chiqiladi. Tadqiqotning maqsadi talabalarning ingliz tilida og'zaki muloqot jarayonida duch keladigan ishonchsizlik, xato qilishdan qo'rqish, hayajon va boshqa emotsional to'siqlarni aniqlash hamda SEL strategiyalarining ushbu jarayondagi ahamiyatini o'rganishdan iborat. Tadqiqotda 119 nafar talaba ishtirok etib, ular o'rtasida so'rovnoma o'tkazildi. Natijalar talabalarning aksariyati emotsional holatni boshqarishni og'zaki muloqot uchun muhim deb hisoblashini ko'rsatdi.*

Kalit so'zlar: *Self-Emotional Learning, EFL students, oral communication skills, speaking, self-confidence, emotional awareness, English language teaching.*

Abstract. *This paper examines the potential of Self-Emotional Learning (SEL) strategies for enhancing EFL students' oral communication skills. The study aims to explore emotional barriers that students experience during English-speaking activities, including lack of confidence, fear of making mistakes, and anxiety, and to examine students' perceptions of SEL-based approaches. A total of 119 students participated in a questionnaire-based study. The findings indicate that most respondents consider emotional awareness and regulation important for oral communication and show positive attitudes toward interactive speaking activities. The study suggests that SEL strategies may serve as a useful complementary approach to EFL speaking instruction.*

Keywords: *Self-Emotional Learning, EFL students, oral communication skills, speaking, self-confidence, emotional awareness, English language teaching.*

Introduction. Developing students' ability to communicate effectively in English is an important objective of foreign language education. Oral communication requires more than grammatical and lexical knowledge. Learners also need to express ideas confidently, respond appropriately, interact with others, and manage their emotions during communication. However, EFL students may experience barriers such as lack of self-confidence, fear of making mistakes, anxiety, and reluctance to speak

English in front of others. Such factors can reduce students' participation in speaking activities and limit opportunities for oral communication practice.

Foreign language learning is therefore influenced by both linguistic and affective factors. Horwitz, Horwitz, and Cope (1986) identified foreign language classroom anxiety as an important issue affecting learners' experiences in language classrooms. Students who are concerned about making mistakes or being negatively evaluated may hesitate to participate even when they have sufficient linguistic knowledge.

In this context, Self-Emotional Learning (SEL) can be considered a complementary approach to EFL speaking instruction. In the present study, Self-Emotional Learning refers specifically to the development of students' ability to recognize, understand, regulate, and appropriately express their emotions during the learning process. The focus is placed on emotional awareness, self-management, confidence, and positive interaction during English-speaking activities.

It is important to distinguish this research-specific use of the term *Self-Emotional Learning* from the broader concept of *Social and Emotional Learning* commonly associated with the Collaborative for Academic, Social, and Emotional Learning (CASEL). The present study focuses specifically on students' emotional experiences and their management during oral communication activities rather than examining the full range of social and emotional competencies.

The purpose of this study is to explore EFL students' perceptions of emotional factors affecting their oral communication and to examine the potential relevance of Self-Emotional Learning strategies in English-speaking activities. The study is based on questionnaire data collected from 119 students and focuses on their perceptions of emotional regulation, speaking difficulties, preferred communicative activities, and motivation.

Main Part

The study was conducted to explore EFL students' perceptions of emotional factors affecting their oral communication and their attitudes toward Self-Emotional Learning strategies. A descriptive survey design was used. The questionnaire consisted

of ten questions covering students' awareness of Self-Emotional Learning, the perceived importance of emotional regulation, speaking-related emotional difficulties, preferred speaking activities, and the motivational role of emotional exercises. A total of 119 students participated in the survey. The quantitative data were analyzed using frequencies and percentages.

The first question focused on the importance of managing and expressing emotions during oral communication. The results showed that 60 students (50.4%) considered this ability *very important*, while 42 students (35.3%) considered it *important*. Thus, 102 respondents (85.7%) expressed a positive view of the importance of emotional management and expression in oral communication. Fifteen students (12.6%) gave a neutral response, while only two respondents (1.7%) considered it less important.

The survey also examined students' previous awareness of Self-Emotional Learning. Sixty-eight respondents (57.1%) stated that they had heard about SEL in English language classes, whereas 51 respondents (42.9%) had not. This result indicates that although more than half of the participants were familiar with the concept, a considerable number of students had not previously encountered SEL in their English learning experience.

Students were also asked which aspect of oral communication they believed could improve most through better emotional control. Confidence was the most frequently selected response, chosen by 60 students (50.4%). Fluency was selected by 23 respondents (19.3%), pronunciation by 14 (11.8%), vocabulary use by 11 (9.2%), and interaction skills by five respondents (4.2%). These findings indicate that students particularly associate emotional regulation with confidence in oral communication.

The participants' preferred activities for developing oral communication and emotional expression were also examined. Group discussions were selected by 40 respondents (33.6%), followed by role plays with 33 respondents (27.7%) and debates with 29 respondents (24.4%). Interactive tasks were selected by 11 respondents (9.2%), while four students (3.4%) preferred dramatization. The results demonstrate students'

preference for interactive activities that provide opportunities to communicate, express opinions, and respond to peers.

Another question examined the motivational role of emotional exercises and speaking situations. On a five-point scale, 59 respondents (49.6%) selected the highest rating of 5, while 34 respondents (28.6%) selected 4. Consequently, 93 students (78.2%) gave a high rating of 4 or 5. Seventeen respondents (14.3%) selected 3, while nine respondents (7.6%) selected 1 or 2. This result suggests that most participants perceive emotionally supportive speaking activities as potentially motivating.

The questionnaire further identified situations that students find emotionally difficult when speaking English. Answering unexpected questions was the most frequently reported difficulty, selected by 44 respondents (37.0%). Speaking in front of an audience was selected by 37 respondents (31.1%). Talking to new people and dealing with examinations or presentations were each selected by 18 respondents (15.1%). These findings indicate that spontaneous responses and public speaking represent important emotional challenges for the participants.

Overall, the survey results demonstrate that students perceive emotional factors as relevant to their oral communication experiences. The high proportion of respondents who considered emotional management important, together with the strong preference for interactive speaking activities, suggests that emotional awareness and self-management can be meaningfully incorporated into EFL speaking lessons. Group discussions, role plays, and debates may provide suitable contexts for combining language practice with opportunities for students to manage emotions, express ideas, and develop confidence.

At the same time, the findings should be interpreted in accordance with the nature of the study. The data reflect students' self-reported perceptions and do not establish a direct causal relationship between Self-Emotional Learning strategies and improved speaking performance. Therefore, further classroom-based research using pre-test and post-test speaking assessments may provide additional evidence regarding the effectiveness of SEL-based approaches in EFL education.

3. Conclusion

The findings of this study indicate that EFL students perceive emotional factors as an important part of oral communication. Among the 119 respondents, 85.7% considered the ability to manage and express emotions during speaking to be important or very important. These finding highlights students' awareness of the relationship between their emotional state and participation in English-speaking activities.

The results also show that confidence was the most frequently identified aspect of oral communication associated with emotional control. Students demonstrated a particular preference for group discussions, role plays, and debates, suggesting that interactive speaking activities may provide useful opportunities for combining language practice with emotional awareness and self-management.

The most frequently reported difficulties were answering unexpected questions and speaking in front of an audience. These findings suggest that EFL speaking instruction may benefit from activities that gradually expose students to spontaneous communication and public speaking while supporting their emotional regulation and confidence.

Overall, Self-Emotional Learning strategies may serve as a useful complementary approach to EFL oral communication instruction. However, the present findings are based on students' self-reported perceptions and therefore do not establish a direct causal effect of SEL strategies on speaking performance. Further classroom-based research using pre-test and post-test assessments is needed to examine their effectiveness more systematically.

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DEVELOPMENT OF STUDENTS' SELF-ASSESSMENT MECHANISMS IN THE HIGHER EDUCATION PROCESS

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Annotatsiya. *Ushbu tezis oliy ta'limda talabalarning o'zini-o'zi baholash mexanizmlarini rivojlantirishning psixologik-pedagogik asoslarini yoritadi. Tadqiqot maqsadi o'zini-o'zi baholashni metakognitiv monitoring, mezonli rubrika va refleksiv qaydlar orqali barqaror ko'nikmaga aylantirish modelini taklif etishdir. Metodologiya sifatida nazariy tahlil, diagnostik ko'rsatkichlar tizimi va amaliy joriy etish ssenariylari qo'llanadi. Ilmiy yangilik sifatida baholashning shaffof mezonlari, kalibrlash va teskari aloqa integratsiyasi asosida rivojlanish trayektoriyasi asoslanadi.*

Kalit so'zlar. *o'zini-o'zi baholash; metakognitiv monitoring; rubrika; refleksiya; o'zini boshqarib o'qish; teskari aloqa; akademik motivatsiya*

Аннотация. *Данный тезис раскрывает психолого-педагогические основания развития механизмов самооценивания студентов в высшем образовании. Цель состоит в обосновании модели, превращающей самооценивание в устойчивый навык через метакогнитивный мониторинг, критериальные рубрики и рефлексивные записи. Методология включает теоретический анализ, систему диагностических индикаторов и сценарии внедрения в учебный процесс. Научная новизна связана с интеграцией прозрачных критериев, калибровки и обратной связи для построения индивидуальной траектории развития.*

Ключевые слова. *самооценивание; метакогнитивный мониторинг; рубрика; рефлексия; саморегулируемое обучение; обратная связь; академическая мотивация.*

Abstract. This thesis examines psychological and pedagogical foundations for developing students' self-assessment mechanisms in higher education. The aim is to justify a model that transforms self-assessment into a stable competence through metacognitive monitoring, criterion-based rubrics, and reflective logs. The methodology relies on theoretical analysis, a system of diagnostic indicators, and implementation scenarios embedded in coursework. Scientific novelty lies in integrating transparent criteria, calibration procedures, and feedback loops to construct individualized development trajectories and improve academic self-regulation.

Keywords. self-assessment; metacognitive monitoring; analytic rubric; reflection; self-regulated learning; feedback; academic motivation

In higher education, self-assessment is defined as a conscious activity aimed at determining the level of error and further development steps by comparing a student's learning outcomes with personal criteria and external requirements. The mechanism of this phenomenon is primarily the emergence of an internal diagnosis of "what I know and what I don't know" through metacognitive monitoring, followed by an assessment based on criteria and evidence, and ultimately, the transformation of the conclusion into a reading strategy. For example, if a student writing an essay in the field of pedagogy checks their work on the criteria of evidence, logical consistency and citation culture through the rubric, they will clearly see the weak points before rewriting. In the study and practical observations, conclusions are drawn regarding a significant increase in the frequency and quality indicators of task processing and a reduction in the number of errors in groups where self-assessment has been established; for example, in a semester where a reflexive diary was maintained, a decrease in the proportion of typical errors in control work and an increase in the rate of timely submission are noted. From a scientific perspective, this process aligns with the cycle of planning, monitoring, and evaluation in the theory of self-regulated learning and is explained as a factor that strengthens internal motivation and educational responsibility [1;].

The psychological structure of self-assessment is usually explained by the unity of the cognitive, affective, and volitional components; that is, the student not only knows the result but also reacts to it and decides to correct it. The mechanism of this structure is that the cognitive part ensures the understanding of criteria and the separation of evidence, while the affective part manages emotional regulation, such as the acceptance of success or failure, learning from mistakes, and the volitional part activates processing based on a clear plan, finding additional sources, and allocating time. For example, if a first-year student has a strong negative self-esteem, such as "I won't be able to do it anyway," then showing small achievements in the rubric reduces

affective pressure and restores willpower for the next attempt. Empirical developments indicate that students trained in self-assessment are more likely to experience a decrease in academic anxiety and an increase in self-confidence, resulting in fewer learning interruptions and increased audience engagement. As a scientific explanation, such changes are linked to the concept of self-efficacy and are justified by the fact that positive self-esteem increases the likelihood of entering an educational task and strengthens responsibility for the result [4;].

One of the mechanisms for developing self-assessment in higher education is the use of criterion-based assessment and analytical rubrics, which are defined as a regulatory model that accurately describes the learning outcome by quality levels. At the heart of the mechanism are transparent criteria: the student "links" the rubric indicators to evidence from their own work, then calibrates them against the teacher's grade and analyzes the reasons for the difference. For example, if the presentation section provides criteria such as "logical structure," "visual design," "source citation," and "question-answer," the student will justify the levels from 1 to 4 for each criterion with evidence and create a clear plan for the next presentation. Observations show that in courses where rubricated assessment is introduced, cases of appeal and disagreement decrease because the student understands the reason for the grade; furthermore, the practice of "scheduled retake" often improves the result to a moderate degree. From a scientific perspective, the rubric enhances the validity and reliability of assessment, as the uniformity of criteria reduces subjectivity and standardizes the language of teacher-student assessment [2;].

The second important mechanism is reflective notes, portfolios, and self-monitoring journals, where reflection is defined as the process of a student analyzing their own experience and drawing educational conclusions from it. The mechanism operates through a sequence of reflexive questions: "What was my goal," "Which strategy worked," "Where did I make a mistake," "What will I change next time" questions activate metacognitive control and move from the usual "completed-failed" view to "how and why" analysis. For example, if a student enters a table of results, the

causes of errors, and a correction plan into the portfolio during a laboratory work, it will reduce methodological errors in the next experiment. In practice, in disciplines with a reflective portfolio, there is a decrease in the plagiarism of independent work assignments and an increase in the share of individual research, as the student documents the process and indicates their personal path. As a scientific explanation, such an approach supports deep learning strategies, as reflection serves to reconstruct, interpret, and reinforce knowledge in long-term memory [1;].

The third mechanism is peer assessment and feedback culture, where peer-assessment is defined as a didactic process in which students of similar status analyze each other's work based on criteria. The mechanism works in such a way that the student sees a "living" representation of criteria in the work of others, masters the language of assessment, and then, upon returning to their own work, begins to use these criteria as internal controls; this process creates a social form of calibration. For example, in a two-stage seminar discussion, if students first evaluate each other's essay project in a small group according to the rubric and then submit the final version, the quality of processing will improve and logical gaps will decrease. In observations, indicators such as increased audience activity, an increase in the number of questions, and a decrease in dependence on the teacher are more common in lessons where peer assessment is used, as the assessment process becomes not just a "judgment" but a learning tool. The scientific explanation is that interaction with peers within the close development zone emphasized by Vygotsky intensifies cognitive conflict, develops argumentation, and accelerates the internalization of self-esteem criteria [2;].

When implementing self-assessment, a system of diagnostic indicators is necessary; diagnostics are defined as a set of criteria aimed at measuring the accuracy of a student's assessment, the quality of reflection, and the level of strategic change. Three links operate within the mechanism: the first is the "difference between self-assessment and teacher assessment" regarding assessment accuracy, the second is text analysis indicators regarding depth of reflection, and the third is observational and portfolio evidence regarding changes in learning strategies. For example, the formula

$\Delta=|S-T|$ is taken as the calibration indicator, where S is the student's score and T is the teacher's score; a decrease in Δ during the semester indicates that the assessment is becoming more realistic; such an approach strengthens psychometric control. Practical data typically show that Δ is greater in the first weeks, then Δ decreases through rubrics, feedback, and resubmission, indicating that assessment competence is being formed. As a scientific explanation, such indicators serve to verify reliability, increase the objectivity of assessment, and create an evidence-based model for managing educational outcomes [5;].

The table below is provided for a comparative analysis of self-assessment development mechanisms in higher education, where the goal, means, expected result, and risk factors of each mechanism are summarized in academic criteria. The logic of the mechanism's operation is that instead of expecting the same result across different disciplines and formats, the didactic design is adapted by anticipating the strengths and limitations of the mechanisms. For example, if a rubric is very effective in an engineering report, it is more effective in reflexive everyday pedagogical practice, and peer assessment provides high motivation in design and design disciplines. Observations show that when mechanisms are used in combination, a more stable result is achieved, as the limitation of one mechanism is compensated for by another. As a scientific explanation, this situation corresponds to the principle of triangulation; that is, instead of drawing conclusions based on a single indicator, it is possible to determine the quality of the educational process through several sources of evidence [1;].

Table 1. Comparative analysis of self-assessment mechanisms

Name of the mechanism; Fixed asset; Expected result; Risk and restriction

Criterion rubric; description of analytical criteria and levels; transparency and accuracy of assessment; misinterpretation of criteria

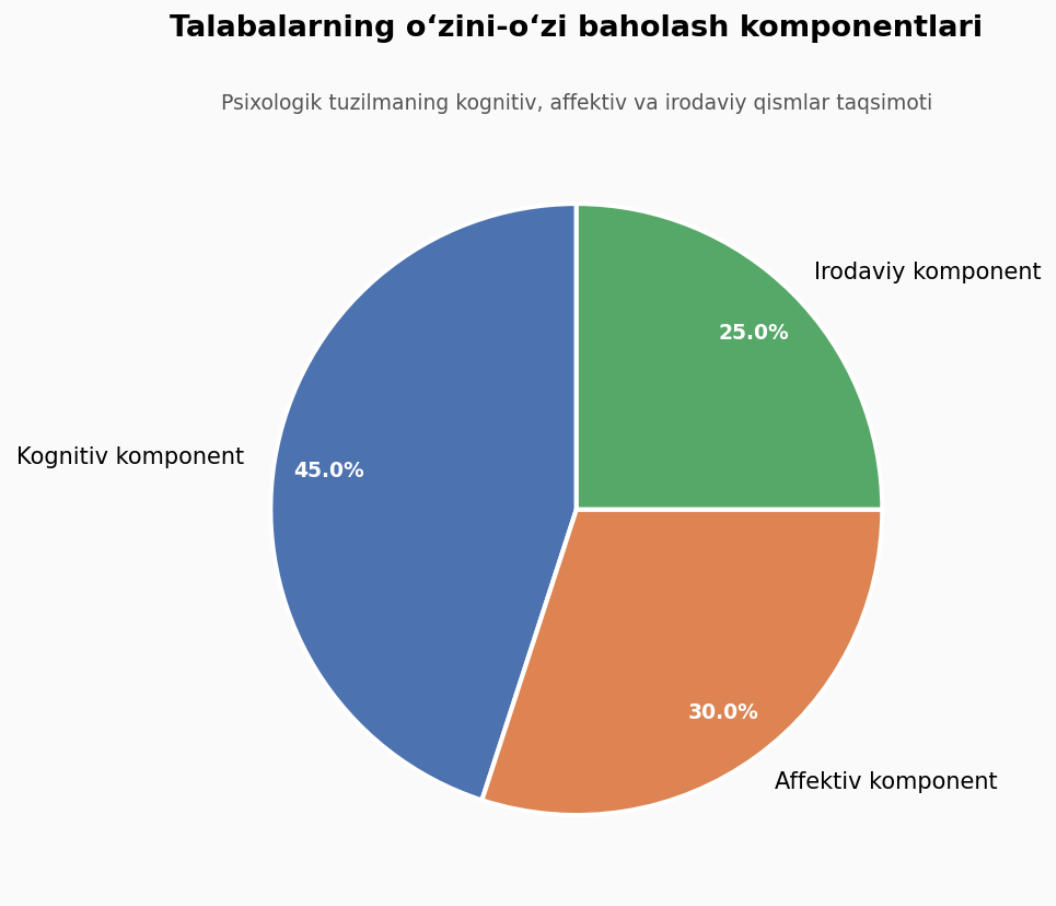
Reflective portfolio; diary, evidence folder; in-depth study and strategic adjustment; becoming a formal record

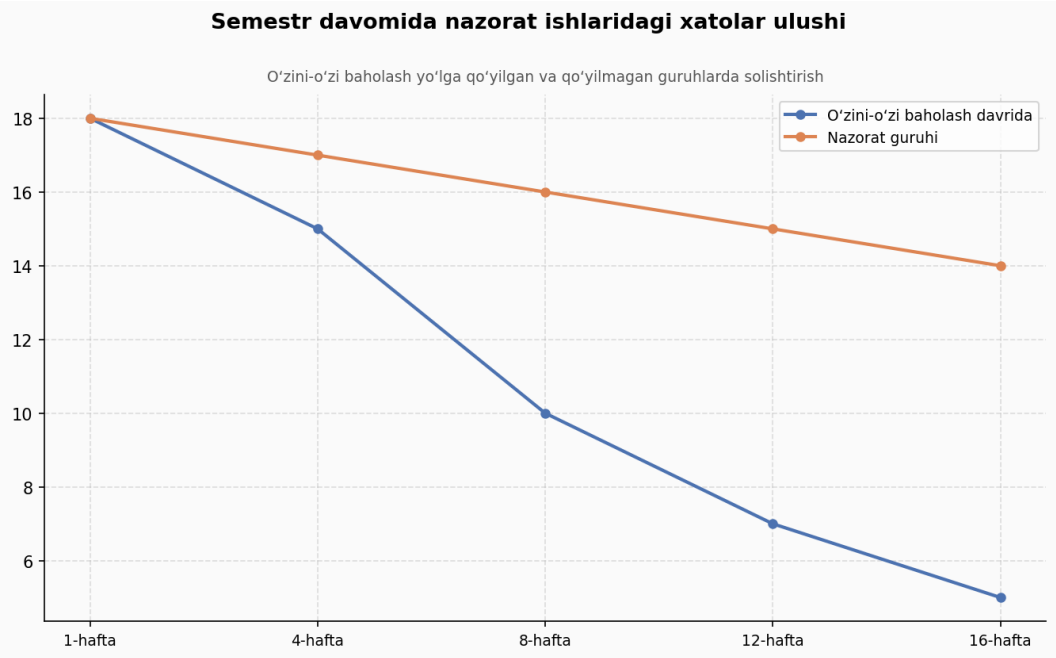
Peer evaluation; peer review and calibration; argumentation and criterion internalization; risk of friendly compromise

Calibration session; comparison of self-assessment and teacher assessment; Δ decrease in difference; time resource requirement

Feedback protocol; direct recommendations; progress on the next task; overloading with extra comments

To establish self-assessment at the institutional level in higher education practice, assessment policy, curriculum, and classroom practice must be mutually compatible; that is, this process is defined not as a separate "method," but as an element of the educational ecosystem. The mechanism begins by clearly articulating learning outcomes, then listing criteria and evidence for each outcome, and then planning reflection and calibration points throughout the semester; as a result, the student perceives assessment as a growth algorithm rather than a "final judgment." For example, self-assessment becomes a continuous process when a "direct" sheet is provided at the end of the module, which lists two strategies and one measurable goal that the student should try in their next work. In the internal monitoring of the quality of education, such an approach is associated with results such as increasing student satisfaction indicators, reducing competence deficits through re-applications, and reducing assessment conflicts. The scientific explanation is that in the context of competency-oriented education, assessment is an integral part of learning, and when self-assessment becomes an internal form of control, stable professional reflection arises [3;].





Assessment indicators according to rubric criteria (pedagogical direction, essay)

Criterion	Minimum level	Average level	Maximum level	Percentage of students (%)

Validity	1.	3.	4.	85
Logical sequence	1.	2.8.	4.	80
Citation culture	1.	2.5.	4.	75
Overall grade	3.	3.1.	4.	100

In conclusion, it can be said that self-assessment is one of the main mechanisms for forming a student's self-directed learning competence in higher education. The proposed approach enhances assessment accuracy, learning motivation, and accountability by integrating rubrics, a reflective portfolio, peer assessment, calibration, and feedback into a unified system. With the help of diagnostic indicators, it is expected that the difference in assessment will decrease, reflection will deepen, and strategic adjustments will increase. This model also increases the transparency of assessment and creates a common criteria language between the teacher and the student. As a result, the student becomes a subject who consciously manages their educational trajectory, learns from their mistakes, and plans for professional growth.

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RAQAMLI ASRDA O‘QUVCHILARNING TANQIDIY TAFAKKURI VA SUN’IY INTELLEKT IMKONIYATLARI

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Annotatsiya. *Ushbu maqola raqamli texnologiyalar, xususan sun’iy intellektning ta’lim sohasiga kirib kelishi munosabati bilan yuzaga kelga dolzarb muammoni – o‘quvchilarda tanqidiy taffakurni shakllantirish masalasini har tomonlama tahlil qilishga bag‘ishlangan. Sun’iy intellekt texnologiyalarining ta’limdagi ahamiyatini ko‘rib chiqadi. Shaxsiylashtrilgan o‘rganish, sokratik muloqot usuli. Maqolaning amaliy qiymatida unda o‘qituvchilar va o‘quvchilar uchun aniq pedagogik model taklif etiladi: mustaqil yondashuv – sun’iy intellektdan foydalanish – sun’iy intellektning javobini tanqidiy baholash. Bu yondashuv “sun’iy intellekt yordamchisi” modelidan “sun’iy intellekt tanqidchisi” modeliga o‘tishni anglatadi.*

Kalit so‘z: *Sun’iy intellekt, tanqidiy tafakkur, raqamli ta’lim, ta’lim texnologiyalari, o‘quvchi, kognitiv texnologiyalar, tanqidiy baholash.*

STUDENTS' CRITICAL THINKING AND THE POSSIBILITIES OF ARTIFICIAL INTELLIGENCE IN THE DIGITAL AGE

Abstract. *This article is devoted to a comprehensive analysis of the urgent problem that has arisen in connection with the introduction of digital technologies, in particular artificial intelligence, into the field of education - the issue of forming critical thinking in students. The article considers the importance of artificial intelligence technologies in education. Personalized learning, Socratic dialogue method. The practical value of the article is that it offers a clear pedagogical model for teachers and students: an independent approach - the use of artificial intelligence - a critical assessment of the response of artificial intelligence. This approach implies a transition from the model of "artificial intelligence assistant" to the model of "artificial intelligence critic".*

Keywords: *Artificial intelligence, critical thinking, digital education, educational technologies, student, cognitive technologies, critical evaluation.*

Kirish. XXI asr ta’lim tizimi o‘zgarishlar girdobida desak adashmagan bo‘lamiz chunki sun’iy intellekt texnologiyalari, mashinali o‘qitish va raqamli platformalar

o‘qituvchi va o‘quvchilar munosabatini tubdan o‘zgartirib bormoqda. Bu ta’limdagi o‘zgarishlar ta’lim sifatini oshirishga qaratilgan bo‘lib o‘quvchilarning tanqidiy fikrlashlariga yanada yordam beradi.

Tanqidiy taffakur – bu shaxsning ma’lumotlarini tahli qilish, baholash va mantiqiy xulosalar chiqarish qarorlar qabul qilishdir. Tanqidiy tafakkur ko‘nikmalarini rivojlantirish o‘quvchilarning muvaffaqiyatli va bilimli shaxs bo‘lishlari uchun juda muhimdir. Tanqidiy fikrlash o‘quvchilarga ma’lumotni tahlil qilish, dalillarni baholash va noto‘g‘ri va taxminlarni aniqlash, mantiqiy mulohaza yuritish xulosalar chiqarish imkonini beradi. O‘quvchilarda tanqidiy tafakkurni rivojlantirish zaruriy ahamiyat kasb etishi quyidagilar bilan izohlanadi desak adashmagan bo‘lamiz.

ᛝ Muammolarni hal qilish ko‘nikmalarini yaxshilaydi: Tanqidiy fikrlash ko‘nikmalari o‘quvchilarga muammolarni aniqlash, dalillarni baholash va yechimlarni ishlab chiqarishga yordam beradi. Tanqidiy fikrlashni qo‘llash orqali o‘quvchilar muqobil yechimlarni aniqlashlari va baholashlari va eng mosini tanlashlari mumkin.

ᛝ Ijodkorlikni rag‘batlantiradi: Tanqidiy fikrlash o‘quvchilarni o‘ylashga va muqobil istiqbollarni ko‘rib chiqishga undaydi, ijodiy yechimlar va g‘oyalarga olib keladi.

ᛝ Qaror qabul qilishda yordam beradi: tanqidiy fikrlash qobiliyatlarni rivojlantirish orqali o‘quvchilar qaror qabul qilishdan oldin bir nechta variantlarni baholashlari va ijobiy va salbiy tomonlarini tortishlari mumkin bo‘ladi. Bu ularga dalillar va mulohazalarga asoslangan ongli qarorlar qabul qilishga yordam beradi.

ᛝ Muloqot ko‘nikmalarini oshiradi: Tanqidiy fikrlash o‘quvchilarga o‘z fikrlari va g‘oyalarini yanada aniqroq va samarali ifodalashga yordam beradi, muloqot ko‘nikmalarini yanada oshiradi.

ᛝ O‘quvchilarni kelajakka tayyorlaydi: O‘quvchilar ta’lim jarayonida va kasbiy hayotlarida o‘sib borishi bilan ular tanqidiy fikrlash qobiliyatlarini talab qiladigan tobora murakkab muammolarga duch kelishadi. Ushbu ko‘nikmalarni erta rivojlantirish ularni kelajakdagi ishlarida muvaffaqiyatga tayyorlaydi.

O‘quvchilarda tanqidiy tafakkurni rivojlantirish, kelajakda ularning har tomonlama rivojlangan, bilimli va muvaffaqiyatli shaxs bo‘lish hamda ijtimoiy munosabatlarga kirisha oladigan, hayotda o‘z o‘rnini topishlari uchun ham muhimligini asoslaydi.

Bloom taksonomiyasida u yuqori kognitiv darajada joylashgan bo‘lib (tahlil, baholash, yaratish), zamonaviy ish bozoridagi talab borgan sari ortib bormoqda (Brookfield, 2012). Ayni paytda, Google, ChatGPT va boshqa SI yordamchilarining keng tarqalishi o‘quvchilarda mustaqil fikrlash tanqidiy fikrlash qobiliyatlarini shakllantirmoqda.

Adabiyotlar tahlili: Tanqidiy tafakkur muammosi ilmiy adabiyotlarda keng va ko‘p qirrali yoritilgan bo‘lib, uning nazariy asoslari G‘arb va Sharq ilmiy an’analari doirasida shakllangan. J.Dewey tanqidiy tafakkurni “reflektiv fikrlash” tushunchasi orqali izohlab, uni muammoli vaziyatlarda dalillarga asoslangan qarorlar qabul qilish jarayoni sifatida talqin etadi [1]. Ushbu yondashuv keyinchalik tanqidiy tafakkur nazariyasining rivojlanishida muhim metodologik asos bo‘lib xizmat qilgan. R. Ennis tanqidiy tafakkurni “nima qilish yoki nimaga ishonishni hal qilishga qaratilgan asoslangan va reflektiv fikrlash” sifatida ta’riflaydi [2]. P.Facione esa, Delphi loyihasi doirasida tanqidiy tafakkurning asosiy komponentlarini - tahlil, interpretatsiya, baholash, inferensiya va o‘z-o‘zini tartibga solish kabi kognitiv ko‘nikmalar sifatida tizimlashtirgan [3]. Facione tadqiqotlari shuni ko‘rsatadiki, tanqidiy tafakkur nafaqat bilim, balki intellektual dispozitsiyalar - ochiqlik, haqiqatga intilish va skeptik yondashuv bilan ham chambarchas bog‘liq. D.Halpern tanqidiy tafakkurni kundalik hayotda muammolarni hal qilish va samarali qarorlar qabul qilishga xizmat qiluvchi yuqori darajadagi fikrlash turi sifatida tavsiflaydi [4]. U tanqidiy tafakkurni rivojlantirish uchun maxsus o‘qitish strategiyalari zarurligini ta’kidlaydi. Shuningdek, Paul va Elder tanqidiy tafakkurni universal intellektual standartlar (aniqlik, mantiqiylik, izchillik va chuqurlik) asosida baholashni taklif etadilar [5]. Mahalliy [13-17] va MDH [8-12] mamlakatlari olimlari tadqiqotlarida esa tanqidiy tafakkur asosan ta’lim samaradorligini oshirish vositasi sifatida ko‘rib chiqiladi. Russell, S. & Norvig, P. o‘zining “Artificial Intelligence: A Modern Approach”[1] asarida sun’iy intellektni

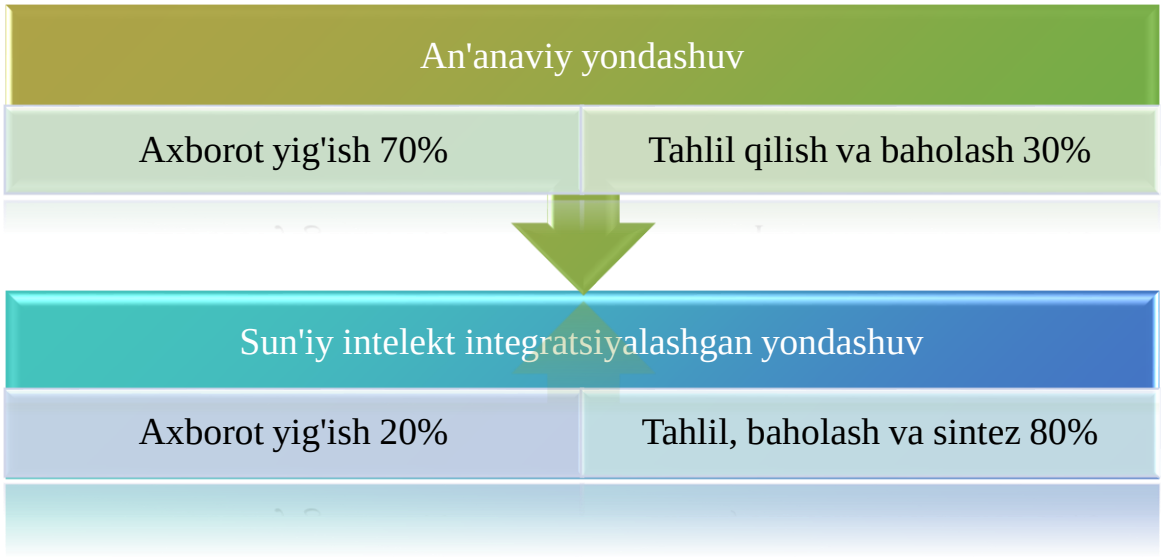
ilg‘or metodlar asosida o‘rganadi, shu jumladan, ekspert tizimlarining tuzilishi va ularning ilmiy va sanoatga qo‘llanilishi yoritilgan. Mahalliy olimlar, xususan, Abduqodirov O.T., Aminov A.M., ShavkatovN.B.[3-5] va boshqa tadqiqotchilar sun’iy intellekt va ekspert tizimlari sohasida o‘z ishlarini olib bormoqda. Ular, asosan, tibbiyot, iqtisodiyot, va sanoat sohalarida sun’iy intellektni qo‘llash imkoniyatlarini o‘rganadilar. Masalan, Abduqodirov O.T. sun’iy intellekt tizimlarining tibbiyotda qo‘llanilishi va ma’lumotlar bazalari asosida qaror qabul qilish jarayonlarini o‘rganish bo‘yicha ko‘plab ilmiy ishlar olib borgan. Ular interfaol metodlar, muammoli ta’lim va klinik fikrlashni rivojlantirish orqali tanqidiy tafakkurni shakllantirish mumkinligini ta’kidlaydilar. Biroq ushbu yo‘nalishda falsafiy-metodologik yondashuvlarni chuqurlashtirish zarurati saqlanib qolmoqda. Buning uchun intellektual tizimlardan ko‘proq foydalanish kerak.

Tatqiqot metodologiyasi va natijalar: Bugungi axborot texnologiyalari asrida o‘qituvchi va o‘quvchidan juda ko‘p bilimga ega bo‘lish talab qilinayabdi. Chunki bugun olingan bilim ertaga eskirayotgan zamonda yashayabmiz. Bugun dunyo bo‘yicha eng ko‘p o‘rganilayotgan sun’iy intellekt texnologiyalari desak adashmagan bo‘lamiz. Sun’iy intellektdan foydalanilgan xolda shaxsiylashtrilgan ta’limlar jadallik bilan rivojlanmoqda bu orqali o‘quvchilarning tanqidiy fikrlash qobiliyatlarini yanada yanada oshirishlari mumkin. Sun’iy intellekt texnologiyalaridan foydalanishning eng samarali usullari bu o‘tilgan vazifalar va berilgan topshiriqlarga o‘quvchilar tezda javob berishlari mumkin. Misol tariqa aytadigan bo‘lsak intellektual tizimlar orqali o‘quvchilarga berilgan topshiriqlarni qay darajada bajara olganliklarini yoki sinfdagi nechta o‘quvchi bugungi o‘tilgan mavzu bo‘yicha qay darajada bilim olishganliklarini bilib olsak bo‘ladi. Bu esa o‘qituvchiga juda katta as qotadi yoki o‘quvchiga bironta savol bilan murojat qilinganda o‘quvchi berilgan savol bo‘yicha tanqidiy fikrlarni bayon qilishlari mumkin. Keling endi sun’iy intellektning o‘quvchilarning tanqidiy fikrlashlariga qanday yordam berishliklarini ko‘rib o‘tamiz. Tadqiqot davomida “Sun’iy intellekt bilan duel” va “Sun’iy intellekt javoblarini mukammallashtirish” kabi amaliy topshiriqlarni o‘tkazdik va ular natijalarini integratsiya qilgan xolda dars

jarayonlarida o‘quvchilarning kognitiv faoliyatida quyidagi ijodiy o‘zgarishlarni kuzatdik.

Rejimsiz ko‘chirishdan faol tahlilga o‘tish: O‘quvchilar suniy intellekt tomonidan berilgan matnlarni shunchaki ko‘chirmasdan, matnlardagi mantiqiy uzilishlar, uslubiy xatolar hamda ushbu mavzudagi noaniqliklarni aniqlash orqali refliksiv fikrlash darajasini namoyon etdilar.

Kognitiv yuklamaning optimallashuvi: Sun’iy intellekt standart va quyi darajadagi axborot yig‘ish vazifalarni o‘ziga olgani sababli, o‘quvchilarning asosiy e’tibori yuqori darajadagi kognitiv jarayonlarga – tahlil qilish baholash va yangi bilimlarni yaratish bosqichlariga yo‘naltiradi.



Olingan natijalar shuni ko‘rsatadiki, sun’iy intellaktning ta’limda roli o‘qituvchining metodik yondashuviga to‘g‘iridan-to‘g‘iri bog‘liq bo‘ladi. Sun’iy intellakt o‘quvchiga tayyor javob oluvchi vosita sifatida berilsa, u tanqidiy fikrlashni susaytrishi mumkin bo‘ladi.

Aksincha esa sun’iy intellektni “intellektual opponent” yoki “ muloqot hamkori” sifatida metodik jihatdan to‘g‘ri yo‘naltirilsa u o‘quvchini doim izlanishga, gipotezalarni ilgari surishga va o‘z fikrini dalillashga majbur qiladi. Bu esa raqamli ta’lim muhitida shaxsga yo‘naltirilgan ta’limni va mustaqil fikrlashni fivojlantirishning samarali mexanizmi ekanini tasdiqlaydi.

Xulosa: Sun’iy intellekt (SI) insoniyat tarixidagi eng qudratli vositalardan biriga aylanmoqda. Uning ma’lumotlarni tez qayta ishlash, naqshlarni aniqlash va murakkab hisob-kitoblarni bajarish kabi imkoniyatlari ilm-fan, tibbiyot, iqtisod va boshqa sohalarda mislsiz yutuqlarga eshik ochmoqda. Biroq, sun’iy intellakt inson aql-zakovati o‘rnini bosa olmaydi, chunki unda tanqidiy tafakkurga xos bo‘lgan asosiy fazilatlar shubhalanish, baholash, kontekstni hisobga olish, qadriyatlarni tortish va axloqiy tanlov qilish kabi jihatlar yo‘q.

Sun’iy intellaktdan foydalanish va tanqidiy tafakkur o'rtasida kuchli teskari bog'liqlik mavjud. 666 nafar ishtirokchining ishtirokida o'tkazilgan katta miqyosli tadqiqotda SI dan foydalanish darajasi yuqori bo'lgan shaxslar tanqidiy tafakkur testlarida ancha past ball to'plagan. Microsoft va Carnegie Mellon Universiteti olimlarining tadqiqotida ham xodimlarning SI ga bo'lgan ishonchi qanchalik katta bo'lsa, tanqidiy tafakkurni shunchalik kam qo'llaganligi aniqlandi.

Tanqidiy tafakkur insonga SI bergan javoblarni shunchaki qabul qilmasdan, balki ularni tahlil qilish, asoslilik darajasini tekshirish va mumkin bo‘lgan xatolar yoki tarafkashliklarni aniqlash imkonini beradi. SI samaradorlik va tezlikni oshirsa, tanqidiy tafakkur esa bu vositalardan ongli, mas’uliyatli va insonparvarlik nuqtai nazaridan to‘g‘ri foydalanishni ta’minlaydi.

Foydalanilgan adabiyotlar

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RAQAMLI DAVLAT BOSHQARUVINI RIVOJLANTIRISHNING HUQUQIY ASOSLARI VA ISTIQBOLLARI

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Annotatsiya. *Ushbu maqolada raqamli davlat boshqaruvini rivojlantirishning huquqiy asoslari va istiqbollari tahlil qilingan. Raqamli transformatsiyaning davlat boshqaruvi tizimidagi o‘rni, elektron hukumat, sun’iy intellekt va zamonaviy axborot-kommunikatsiya texnologiyalarining davlat xizmatlari samaradorligini oshirishdagi ahamiyati yoritilgan. Shuningdek, O‘zbekiston Respublikasida raqamli davlat boshqaruvini rivojlantirishga qaratilgan normativ-huquqiy hujjatlar tahlil qilinib, ushbu sohadagi mavjud muammolar hamda ularni bartaraf etishning istiqbolli yo‘nalishlari yuzasidan ilmiy xulosalar va amaliy takliflar ilgari surilgan.*

Kalit so‘zlar: *raqamli davlat boshqaruvi, raqamli transformatsiya, elektron hukumat, sun’iy intellekt.*

Abstract*. This article analyzes the legal foundations and prospects for the development of digital public administration. It examines the role of digital transformation in the public administration system, as well as the importance of e-government, artificial intelligence, and modern information and communication technologies in improving the efficiency of public services. The article also analyzes the regulatory and legal framework for the development of digital public administration in the Republic of Uzbekistan, identifies existing challenges in this field, and proposes scientific conclusions and practical recommendations for its further improvement.*

Keywords: *digital public administration, digital transformation, e-government, artificial intelligence.*

Bugungi kunda raqamli transformatsiya davlat boshqaruvi tizimini takomillashtirishning eng muhim yo‘nalishlaridan biri hisoblanadi. Zamonaviy huquqiy davlatning asosiy vazifalaridan biri jamiyatning barcha a'zolari uchun munosib turmush sharoitini yaratish va ularning ijtimoiy himoyasini ta'minlashdan iborat. Davlatning ijtimoiy funksiyasi fuqarolarning moddiy boyliklar yaratishda bevosita ishtirok etishi yoki etmasligidan qat'i nazar, ularning munosib hayot kechirishi uchun zarur sharoitlarni yaratishga qaratiladi.

Davlat o‘zining ijtimoiy funksiyasini amalga oshirish jarayonida sog‘liqni saqlash, ta'lim, ijtimoiy himoya, transport, aloqa va boshqa muhim sohalarning uzluksiz faoliyat yuritishini ta'minlaydi. Shu bilan birga, fuqarolarning sog‘liqni saqlash, ta'lim olish, ijtimoiy ta'minot, madaniyat yutuqlaridan foydalanish kabi konstitutsiyaviy huquqlarini ro‘yobga chiqarish uchun zarur shart-sharoitlarni yaratadi. Hozirgi kunda ushbu vazifalarni samarali bajarishda raqamli texnologiyalar va axborot-kommunikatsiya tizimlari muhim vosita sifatida namoyon bo‘lmoqda. [4, 111-bet]

Raqamli transformatsiya davlat xizmatlarini elektron shaklda ko‘rsatish, davlat organlari faoliyatining ochiqligi va shaffofligini ta'minlash, byurokratik to‘siqlarni kamaytirish hamda fuqarolar va davlat o‘rtasidagi munosabatlarni soddalashtirish imkonini bermoqda. Elektron hukumat tizimi, raqamli platformalar va zamonaviy axborot texnologiyalarining joriy etilishi davlatning ijtimoiy funksiyalarini yanada samarali amalga oshirishga, fuqarolarning huquq va qonuniy manfaatlarini ishonchli himoya qilishga xizmat qilmoqda.

Shu sababli raqamli davlat boshqaruvini rivojlantirishning huquqiy asoslarini o‘rganish, amaldagi qonunchilikni tahlil qilish hamda uni zamonaviy texnologiyalar talablariga mos ravishda takomillashtirish bugungi kunda nafaqat ilmiy, balki muhim amaliy ahamiyatga ham ega.

Mamlakatimizda davlat boshqaruvini raqamlashtirish, elektron hukumat tizimini rivojlantirish va davlat xizmatlarini zamonaviy axborot-kommunikatsiya texnologiyalari asosida ko'rsatishga alohida e'tibor qaratilmoqda. Biroq ushbu jarayonning samaradorligi mustahkam huquqiy asoslarning mavjudligi, amaldagi qonunchilikning zamonaviy texnologiyalar rivojiga mosligi hamda ularni amaliyotga samarali tatbiq etilishiga bevosita bog'liq. Shu bois raqamli davlat boshqaruvini rivojlantirishning huquqiy asoslarini tahlil qilish va ularni takomillashtirish bo'yicha ilmiy takliflar ishlab chiqish mazkur tadqiqotning asosiy maqsadini tashkil etadi.

Davlat boshqaruvining yangi milliy tizimining shakllanishi jamiyatning siyosiy, ijtimoiy-iqtisodiy asoslarining tez o'zgarishi sharoitida sodir bo'ldi, bu boshqaruv

tizimining tubdan o'zgarishiga, boshqaruvning eski usullarini keskin rad etishga olib keldi. G'arbning ijtimoiy qadriyatlariga asoslangan xususiylashtirish, raqobat, narxlarni erkinlashtirish kabi islohotlarni o'ziga xos xususiyatlarini, davlat tarixini hisobga olmagan holda amalga oshirish jamiyat ichidagi ziddiyatga, ijtimoiy barqarorlikni yo'qotishiga olib keldi, bu muqarrar ravishda samaradorlikka ta'sir ko'rsatdi. islohotlar. Davlat boshqaruvini isloh qilish, uni aholining aksariyati qabul qilgan va qo'llab-quvvatlagan taqdirdagina samarali deb tan olish mumkin. [5]

Davlat boshqaruvida raqamli texnologiyalarni joriy etishda yana bir manfaatli jihati barcha shaxslarga davlat organlarining faoliyati ustidan nazorat qilish, faoliyatiga doir ma’lumotlarni tanishib borish imkoniyatining kengligidir. O‘zbekiston Respublikasi Prezidentining “Raqamli O‘zbekiston – 2030” strategiyasini tasdiqlash va uni samarali amalga oshirish chora-tadbirlari to‘g‘risida”gi Farmonida ham shunday vaziyat bilan bog‘liq holatga e’tibor qaratilgan holatda quyidagicha belgilab qoyilgan: “iste’molchilar talabidan kelib chiqqan holda ochiq davlat ma’lumotlarini ishlab chiqish, shakllantirish va ulardan foydalanish mexanizmlarini takomillashtirish, shuningdek, “ochiq ma’lumotlar”ga asoslangan davlat mobil ilovalari va dasturlari ulushini oshirish”. Strategiyada belgilangan eng muhim normalaridan biri - davlat ma’lumotlarini boshqarishning yagona tizimini shakllantirish orqali davlat boshqaruvida ma’lumotlarni to‘plash va raqamlashtirish uchun kerak bo‘lgan barcha resurslarni yaratish orqali asoslangan qarorlarni qabul qilishni avtomatik ravishda shakllantirish kabi jarayonning belgilanishi. Bu sun’iy intellekt bilan bog‘liq bo‘lib, inson faktorini kamaytirishga, ma’lum bir subyektlarning manfaatlarini ko‘zlab qaror chiqarish imkoniyatini kamaytiradi. [1]

Sun’iy intellekt dunyodagi hukumatlarning davlat xizmatlarini ko‘rsatish uslubini o‘zgartirishi mumkin hodisadir. O‘z navbatida, bu fuqarolarning davlat boshqaruvidagi ishtirokini sezilarli darajada yaxshilashi mumkin. Hukumatlar samaradorlikni oshirish, vaqt va pulni tejash hamda yaxshi davlat xizmatlarini ko‘rsatish uchun o‘zlarining sun’iy intellektini rivojlantirish borasida muhim qadamlar qo‘ymoqdalar. Shu bilan birgalikda jamiyatda yangi tushuncha bo’lgan su’niy intellektning o’rni haqida ham

fikr yuritish joiz. Sun’iy intellektni davlat va jamiyat hayotiga tadbiq etishdan barcha tomon yutadi, sababi sun’iy intellekt inson mashaqqatlarini yengillatuvchi bir texnik imkoniyatdir. [2]

O‘zbekiston Respublikasi Prezidentining “Sun’iy intellekt texnologiyalarini jadal joriy etish uchun shart-sharoitlarni yaratish chora-tadbirlari to‘g‘risida”gi Qarorida aynan jamiyat hayotining ko‘plab sohasi sanab o‘tilgan bo‘lib, mamlakat iqtisodiyotining asosiy lokomotiv bo‘lgan qishloq xo‘jaligida quyidagilarni amalga oshirish belgilangan: “yerni masofadan zondlash ma’lumotlari asosida tuproq va qishloq xo‘jaligi ekinlari holatini, shuningdek, qishloq xo‘jaligi texnikasi, shu jumladan kombaynlar ishini monitoring qilish” kabi zamonaviy yechimlar bilan eng murakkab jarayonlarga joriy etish bilan har qanday qishloq xo‘jaligi bilan shug‘ullanuvchi shaxslarning mahsuldorligini oshirish mumkin. [2]

Qisqa qilib xulosa qiladigan bo‘lsak, raqamli texnologiyalar nafaqat yuzaga chiqaruvchi, vujudga keltiruvchi, balki, bir vaqtning o‘zida tartibga soluvchi vosita hamdir. Sun’iy intellektni joriy etish va uni amalga oshirish to‘g‘risidagi Prezident qarori davlat va jamiyat manfaatlarini birdek qanoatlantiradi. Uning qanchalik tez amalga oshirilishi esa, barcha subyektlarning raqamli transformatsiya jarayonidagi asosiy yutug‘iga aylanadi. Raqamli huquqni joriy etishda dastlab uning imkoniyatlarini taqdim etuvchi, raqamli huquq hodisasini yuzaga keltiruvchi yutuqlarni davlat va jamiyat hayotiga keng tadbiq qilish kerak. Axborot asrida har qanday kichik detallar ham ahamiyatli hisoblanib, davlat o‘z boshqaruv tizimini, jamiyat hayotini tartibga solishda milliy davlatchilik an’analari orqali uni rivojlantirib borishda ilm-fan yutuqlarini keng joriy etish maqsadga muvofiq.

Xulosa qilib aytganda, raqamli transformatsiya davlat boshqaruvi tizimini modernizatsiya qilishning muhim omillaridan biri hisoblanadi. Raqamli texnologiyalarni davlat boshqaruviga keng joriy etish davlat organlari faoliyatining ochiqligi va shaffofligini ta'minlash, davlat xizmatlari sifatini oshirish, byurokratik to‘siqlarni kamaytirish hamda fuqarolarning davlat boshqaruvidagi ishtirokini yanada faollashtirishga xizmat qiladi. Shu bilan birga, sun'iy intellekt, elektron hukumat va

zamonaviy axborot-kommunikatsiya texnologiyalaridan samarali foydalanish boshqaruv qarorlarining tezkorligi, aniqligi va samaradorligini oshirish imkonini beradi.

Biroq raqamli davlat boshqaruvini rivojlantirish faqat texnologik yangilanish bilan cheklanmay, mustahkam huquqiy asoslarni yaratish va ularni doimiy ravishda takomillashtirib borishni ham talab etadi. Shu sababli raqamli texnologiyalarni qo‘llash bilan bog‘liq huquqiy munosabatlarni tartibga soluvchi qonunchilikni zamonaviy talablar asosida rivojlantirish, shaxsga doir ma'lumotlarni ishonchli himoya qilish, kiberxavfsizlikni ta'minlash hamda sun'iy intellektdan foydalanishning huquqiy mexanizmlarini takomillashtirish dolzarb vazifalardan biri bo‘lib qolmoqda.

Kelgusida davlat boshqaruvi tizimida raqamli transformatsiya jarayonlarini izchil davom ettirish, ilg‘or xorijiy tajribani milliy amaliyotga moslashtirish hamda davlat xizmatchilarining raqamli kompetensiyalarini oshirish orqali davlat boshqaruvining samaradorligi va sifatini yanada yuksaltirish mumkin. Bu esa pirovardida fuqarolarning huquq va erkinliklarini ta'minlashga, davlat va jamiyat o‘rtasidagi o‘zaro ishonchni mustahkamlashga hamda mamlakatning barqaror rivojlanishiga xizmat qiladi.

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BOSHLANG‘ICH TA’LIMDA PIRLS XALQARO BAHOLASH TADQIQOTIGA TAYYORGARLIK: O‘QITUVCHINING KASBIY KOMPETENSIYALARI

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Annotatsiya. *Ushbu maqolada boshlang‘ich ta’limda PIRLS (Progress in International Reading Literacy Study) xalqaro baholash tadqiqotiga tayyorgarlik jarayonida o‘qituvchining kasbiy kompetensiyalarining o‘rni va ahamiyati tahlil qilinadi. PIRLS – 4-sinf o‘quvchilarining matnni o‘qish va tushunish darajasini xalqaro miqyosda baholovchi nufuzli dastur bo‘lib, O‘zbekiston 2021-yilda ushbu tadqiqotda ilk bor ishtirok etdi . Maqolada PIRLS talablariga muvofiq o‘qituvchi ega bo‘lishi zarur bo‘lgan bilim, ko‘nikma va kompetensiyalar, shuningdek, ularni rivojlantirish yo‘llari yoritilgan.*

Kalit so‘zlar: *PIRLS, xalqaro baholash, boshlang‘ich ta’lim, o‘qituvchi kompetensiyalari, o‘qish savodxonligi, metodik tayyorgarlik.*

Abstract. *This paper examines the role and importance of teacher professional competencies in preparing for the PIRLS (Progress in International Reading Literacy Study) international assessment in primary education. PIRLS is a reputable international program that evaluates the reading and comprehension skills of 4th-grade students. Uzbekistan took part in this study for the first time in 2021. The article discusses the knowledge, skills, and competencies required of teachers in line with PIRLS standards, as well as strategies for their further development.*

Key words: *PIRLS, international assessment, primary education, teacher competencies, reading literacy, methodological training.*

Kirish. Jahon ta’lim tizimida xalqaro baholash tadqiqotlari ta’lim sifati va samaradorligini ob’ektiv baholashning muhim vositasi sifatida tobora katta ahamiyat kasb etmoqda. O‘zbekiston Respublikasi Prezidentining 2019-yil 29-apreldagi “O‘zbekiston Respublikasi Xalq ta’limi tizimini 2030-yilgacha rivojlantirish konsepsiyasini tasdiqlash to‘g‘risida”gi PF-5712-son Farmonida 2030-yilga kelib xalqaro baholash reytingida jahonning birinchi 30 ta ilg‘or mamlakati qatoriga kirish vazifasi belgilangan . Shu nuqtai nazardan, PIRLS, PISA, TIMSS kabi xalqaro

dasturlarda muntazam ishtirok etish va ulardan o‘quv jarayonida samarali foydalanish davlat siyosati darajasidagi muhim vazifaga aylandi .

PIRLS (Progress in International Reading Literacy Study) – Xalqaro Ta’lim Yutuqlarini Baholash Assotsiatsiyasi (IEA) tomonidan har 5 yilda bir marta o‘tkaziladigan, 4-sinf o‘quvchilarining o‘qish savodxonligi, ya’ni matnni o‘qish va tushunish darajasini baholovchi xalqaro tadqiqotdir . 2021-yilda 57 mamlakat ishtirok etgan mazkur tadqiqotda O‘zbekiston ham ilk bor qatnashdi . Ushbu tadqiqotning muvaffaqiyati bevosita boshlang‘ich sinf o‘qituvchisining kasbiy kompetensiyasiga, uning xalqaro baholash dasturlari talablarini bilishi va o‘quv jarayonini shu talablar asosida tashkil eta olish mahoratiga bog‘liq .

PIRLS tadqiqotining maqsadi – turli mamlakatlardagi boshlang‘ich sinf o‘quvchilarining matnni o‘qish va tushunish darajasini baholash, shuningdek, o‘quvchilarning turli yutuqlarga erishishiga sabab bo‘luvchi ta’lim tizimidagi o‘ziga xos xususiyatlarni aniqlashdan iborat . Tadqiqotning konseptual asosini to‘rtta tushunish jarayoni tashkil etadi: (1) aniq berilgan ma’lumotni topish, (2) matndan kelib chiqib xulosalar chiqarish, (3) ma’lumotlarni umumlashtirish va izohlash, (4) matn mazmuni, tuzilishi va tilini baholash . PIRLS topshiriqlari o‘quvchidan nafaqat matnni yuzaki o‘qish, balki uni tahlil qilish, baholash va kreativ fikrlashni talab etadi .

Zamonaviy boshlang‘ich sinf o‘qituvchisi xalqaro baholash dasturlarini bilishi va ularni amaliyotda qo‘llay olishi zarur . Bo‘lajak boshlang‘ich sinf o‘qituvchilarining PIRLS asosida o‘qitishga metodik tayyorgarligi quyidagi yo‘nalishlarni o‘z ichiga oladi: PIRLS dasturining nazariy asoslarini bilish: O‘qituvchi PIRLS tadqiqotining maqsadi, vazifalari, baholash mezonlari va topshiriq turlari haqida yetarlicha ma’lumotga ega bo‘lishi kerak. Bunda xalqaro baholash dasturlari asosida integratsiyalashgan ta’limni tashkil etish masalalari alohida ahamiyatga ega . O‘quv topshiriqlarini loyihalash kompetensiyasi: Har bir o‘qituvchi dars jarayonini xalqaro baholash tadqiqotlari talablari asosida loyihalashi va o‘quv topshiriqlarini ishlab chiqishi kerak . O‘quv topshiriqlari taksonomiyasidan foydalanib, xotirada saqlashdan tortib ijodiy fikrlashgacha bo‘lgan turli darajadagi topshiriqlarni shakllantirish

muhimdir. O‘qish savodxonligini rivojlantirish metodikasini egallash: PIRLS talablariga muvofiq, o‘quvchilarning matn bilan ishlash kompetensiyalarini rivojlantirish, jumladan, axborotni izlab topish, xulosa chiqarish, matn elementlarini integratsiya qilish va tanqidiy baholash qobiliyatlarini shakllantirish zarur . Tadqiqotlar shuni ko‘rsatadiki, eng samarali usullar qatoriga muammoli ta’lim, loyiha usuli, reflektiv tahlil va hamkorlikdagi ta’lim kiradi. Integrativ yondashuvni qo‘llash: Xalqaro baholash dasturlarini o‘quv jarayoniga integratsiya qilish, fanlararo aloqadorlikni ta’minlash va o‘quvchilarning kreativ hamda tanqidiy fikrlashini rivojlantirish o‘qituvchining ustuvor vazifalaridandir .

Bo‘lajak boshlang‘ich sinf o‘qituvchilarining PIRLS xalqaro baholash dasturi asosida o‘qitishga metodik tayyorgarligini takomillashtirish quyidagi jihatlarni o‘z ichiga oladi: Xalqaro baholash dasturlarining metodik tayyorgarlikdagi o‘rnini kuchaytirish; Nazariy bilimlarni amaliyot bilan bog‘lash, tarbiya va rivojlantiruvchi ta’lim tamoyillarini uyg‘unlashtirish; Noan’anaviy kommunikativ metodlar va elektron didaktik vositalardan foydalanish; O‘qituvchining kreativ qobiliyatlarini rivojlantiruvchi topshiriqlarni ishlab chiqish.

O‘quvchilarni PIRLSga tayyorlashda o‘qituvchi o‘quv jarayoniga kompleks yondashishi, o‘quvchilarning imkoniyatlari, ehtiyojlari va hamkorlikdagi faoliyatini e’tiborga olgan holda topshiriqlar ishlab chiqishi lozim . Bunda matnning badiiy yoki informatsion turidan qat’i nazar, o‘quvchining matnni mushohadali o‘qishi va ijodiy fikrlashiga erishish muhim .

Xulosa

PIRLS xalqaro baholash tadqiqotiga tayyorgarlik jarayoni boshlang‘ich ta’lim o‘qituvchisining kasbiy kompetensiyalariga yangi, zamonaviy talablarni qo‘ymoqda. O‘qituvchi nafaqat PIRLS dasturining mazmun-mohiyatini chuqur bilishi, balki uni o‘quv jarayoniga integratsiya qilish, samarali metod va texnologiyalarni qo‘llay olish ko‘nikmasiga ham ega bo‘lishi zarur. O‘zbekistonning xalqaro baholash dasturlaridagi ishtiroki muvaffaqiyati va raqobatbardoshligi bevosita boshlang‘ich sinf o‘qituvchilarining kasbiy-metodik tayyorgarlik darajasiga bog‘liq. Shu sababli,

pedagog kadrlar tayyorlash tizimida PIRLS va boshqa xalqaro baholash dasturlari asosida o‘qituvchilarning kasbiy kompetensiyalarini rivojlantirishga alohida e’tibor qaratish dolzarb vazifa hisoblanadi.

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PEDAGOGIK FAOLIYATDA SUN'IY INTELLEKT TEXNOLOGIYALARIDAN FOYDALANISHNING PSIXOLOGIK MAZMUNI VA XORIJIY ILMIY TADQIQOTLARDA O'RGANILISH HOLATI

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Annotatsiya: *Mazkur maqolada pedagogik faoliyatda sun'iy intellekt (SI) texnologiyalaridan foydalanishning psixologik mazmuni ilmiy jihatdan tahlil qilingan hamda bu masalaning xorijiy ilmiy tadqiqotlarda o'rganilish holati tizimlashtirilgan. Tadqiqotning maqsadi o'qituvchilarning SI texnologiyalarini pedagogik faoliyatga joriy etishga bo'lgan tayyorligini belgilovchi psixologik omillarni — o'z-o'ziga ishonch, tashvish, ishonch, motivatsiya va professional farovonlikni — texnologik qabul qilish (TAM, TAM3) va yagona qabul qilish nazariyasi (UTAUT) modellari asosida umumlashtirishdan iborat. Tadqiqotda tizimli adabiyotlar tahlili, kontent-tahlil hamda mavzuiy-qiyosiy tahlil metodlaridan foydalanildi; 2019–2026 yillar oralig'ida chop etilgan 19 ta xorijiy ilmiy manba tanlab olindi. Natijalar shuni ko'rsatdiki, o'qituvchilarning SI texnologiyalarini qabul qilishida o'z-o'ziga ishonch va texnologik tashvish markaziy psixologik omillar sifatida namoyon bo'ladi, ular ish bilan bandlik, ijtimoiy qo'llab-quvvatlash va kasbiy farovonlik bilan uzviy bog'liqdir. Xorijiy tadqiqotlarda mazkur yo'nalish tobora kengayib, o'qituvchi shaxsi psixologiyasining alohida tadqiqot predmeti sifatida shakllanib bormoqda, biroq mahalliy ilmiy adabiyotda bu boshqichlar hali yetarlicha yoritilmagan. Maqola natijalari o'qituvchilarni SI texnologiyalariga psixologik jihatdan tayyorlash tizimini takomillashtirish uchun ilmiy-amaliy ahamiyatga ega.*

Kalit so'zlar: *sun'iy intellekt, pedagogik faoliyat, psixologik tayyorlik, o'z-o'ziga ishonch, texnologik tashvish, texnologik qabul qilish modeli, UTAUT, o'qituvchi psixologiyasi, kasbiy farovonlik, xorijiy tadqiqotlar.*

Аннотация: *В статье научно проанализировано психологическое содержание использования технологий искусственного интеллекта (ИИ) в педагогической деятельности и систематизировано состояние изученности этого вопроса в зарубежных научных исследованиях. Цель исследования заключалась в обобщении психологических факторов — самоэффективности, тревожности, доверия, мотивации и профессионального благополучия, — определяющих готовность педагогов к внедрению технологий ИИ, на основе моделей*

принятия технологий (TAM, TAM3) и единой теории принятия и использования технологий (UTAUT). В исследовании применялись методы систематического анализа литературы, контент-анализа и сравнительно-тематического анализа; было отобрано 19 зарубежных научных источников, опубликованных в 2019–2026 годах. Результаты показали, что самоэффективность и технологическая тревожность выступают центральными психологическими факторами принятия ИИ педагогами и тесно связаны с вовлечённостью в работу, социальной поддержкой и профессиональным благополучием. В зарубежных исследованиях данное направление постепенно расширяется и формируется как самостоятельный предмет изучения психологии личности педагога, тогда как в отечественной научной литературе эти аспекты пока недостаточно освещены. Результаты статьи имеют научно-практическое значение для совершенствования системы психологической подготовки педагогов к использованию технологий искусственного интеллекта.

Ключевые слова: *искусственный интеллект, педагогическая деятельность, психологическая готовность, самоэффективность, технологическая тревожность, модель принятия технологий, UTAUT, психология педагога, профессиональное благополучие, зарубежные исследования.*

Abstract: This article provides a scientific analysis of the psychological content of using artificial intelligence (AI) technologies in pedagogical activity and systematizes the current state of this issue in foreign scientific research. The study aimed to synthesize the psychological factors — self-efficacy, anxiety, trust, motivation, and professional well-being — that determine teachers' readiness to integrate AI technologies into pedagogical practice, drawing on technology acceptance models (TAM, TAM3) and the Unified Theory of Acceptance and Use of Technology (UTAUT). The research employed systematic literature review, content analysis, and comparative-thematic analysis methods; 19 foreign scientific sources published between 2019 and 2026 were selected. The findings reveal that self-efficacy and technological anxiety act as central psychological determinants of teachers' AI acceptance and are closely linked to work engagement, social support, and professional well-being. Foreign research on this direction is steadily expanding and forming an independent field within teacher personality psychology, whereas domestic scientific literature has not yet sufficiently addressed these dimensions. The findings have

scientific and practical significance for improving the system of psychologically preparing teachers for the use of artificial intelligence technologies.

Keywords: artificial intelligence, pedagogical activity, psychological readiness, self-efficacy, technological anxiety, technology acceptance model, UTAUT, teacher psychology, professional well-being, foreign research.

Kirish: 2020–2026 yillarda ta’lim tizimida sun’iy intellekt (SI) texnologiyalarining — moslashuvchan o‘quv platformalari, avtomatik baholash tizimlari, o‘quv analitikasi va suhbat-botlarning — tez sur’atlarda joriy etilishi pedagogik faoliyatning mazmun-mohiyatini tubdan o‘zgartirmoqda [1]. Ushbu texnologiyalarning samarali qo‘llanilishi, birinchi navbatda, o‘qituvchining texnik bilim darajasiga emas, balki uning SI bilan ishlashga psixologik tayyorligiga — ya’ni o‘z-o‘ziga ishonchi, texnologiyaga nisbatan tashvish darajasi, motivatsiyasi va kasbiy ishonchiga bog‘liq ekanligi xorijiy tadqiqotlarda tobora ko‘proq ta’kidlanmoqda [1; 2]. Shu bois pedagogik faoliyatda SI texnologiyalaridan foydalanishning psixologik mazmunini ilmiy asoslash dolzarb muammoga aylandi. Mavjud xorijiy adabiyotlarda o‘qituvchilarning SI texnologiyalarini qabul qilishi asosan texnologik qabul qilish nazariyalari (TAM, TAM3, UTAUT) doirasida o‘rganilgan, biroq bu tadqiqotlar ko‘pincha alohida-alohida omillarga — faqat o‘z-o‘ziga ishonchga yoki faqat tashvishga — qaratilgan, ularning yaxlit psixologik tizim sifatida umumlashtirilishi yetarli emas [11; 15]. Bundan tashqari, mahalliy pedagogik-psixologik adabiyotda ushbu yo‘nalishning xorijiy tadqiqotlardagi holati tizimli tahlil qilinmagan. Shu sababli ikki ilmiy bo‘shliq saqlanib qolmoqda: SI texnologiyalarini qabul qilishning psixologik mexanizmlarini yaxlit modelga birlashtirish va bu borada xorijiy tadqiqotlar tajribasini mahalliy kontekstga moslashtirish. Tadqiqotning maqsadi pedagogik faoliyatda SI texnologiyalaridan foydalanishning psixologik mazmunini ochib berish hamda bu masalaning xorijiy ilmiy tadqiqotlarda o‘rganilish holatini tizimli tahlil qilishdan iborat. Vazifalar: 1) SI texnologiyalarini qabul qilishning asosiy psixologik omillarini aniqlash; 2) xorijiy tadqiqotlardagi nazariy yondashuvlarni tasniflash; 3) tanlangan manbalar asosida mavzuiy-qiyosiy tahlil o‘tkazish; 4) natijalarni mahalliy ta’lim tizimi

kontekstida talqin qilish. Tadqiqot tizimli adabiyotlar sharhi va sifatiy kontent-tahlil yondashuviga tayandi [6].

Adabiyotlar sharhi: SI texnologiyalarini pedagogik faoliyatga joriy etishning psixologik asoslari, birinchi navbatda, texnologik qabul qilish nazariyalari doirasida o‘rganiladi. Devis tomonidan asoslangan texnologik qabul qilish modeli (TAM) [16] idrok etilgan foydalilik va idrok etilgan qulaylikni texnologiyani qabul qilishning asosiy omillari sifatida belgilaydi, Venkatesh va Bala esa TAM3 modelida bu qatorga o‘z-o‘ziga ishonch va tashvishni ham qo‘shgan [17]. Venkatesh va hamkasblari tomonidan ishlab chiqilgan yagona qabul qilish va foydalanish nazariyasi (UTAUT) [18] ijtimoiy ta’sir va faoliyat samaradorligi kutilmalarini ham hisobga oladi, biroq bu nazariyalarning barchasi dastlab umumiy texnologiyalar uchun mo‘ljallangan bo‘lib, ularning pedagogik faoliyatning o‘ziga xos psixologik jihatlariga moslashtirilishi so‘nggi yillarda faollashdi. O‘z-o‘ziga ishonch va tashvish mexanizmini o‘rganuvchi tadqiqotlar alohida yo‘nalish sifatida ajralib turadi. Vang va hamkasflari o‘qituvchilarning SI vositalarini joriy etishga bo‘lgan niyatini tashvish, o‘z-o‘ziga ishonch, SI ga nisbatan munosabat, idrok etilgan qulaylik va foydalilik orqali bashorat qilgan [12], Choi va hamkasflari esa o‘qituvchilarning SI ta’lim vositalariga ishonchini alohida o‘rgangan [12]. Bandiraning o‘z-o‘ziga ishonch nazariyasi [19] ushbu tadqiqotlarning nazariy negizini tashkil etadi, chunki u shaxsning texnologik vazifani bajarish qobiliyatiga bo‘lgan ishonchi uning xatti-harakatini belgilovchi asosiy mexanizm ekanligini asoslaydi. 1-jadvalda xorijiy tadqiqotlardagi asosiy nazariy yo‘nalishlar qiyosiy tarzda taqdim etilgan.

1-jadval. Xorijiy tadqiqotlardagi nazariy yo‘nalishlarning qiyosiy tavsifi

Yo‘nalish	**Asosiy psixologik omil**	**Vakil tadqiqotlar**
Texnologik qabul qilish (TAM/TAM3)	idrok etilgan foydalilik, qulaylik, o‘z-o‘ziga ishonch	Devis [16]; Venkatesh, Bala [17]; Wang va boshq. [12]
Yagona qabul qilish nazariyasi (UTAUT)	ijtimoiy ta’sir, faoliyat samaradorligi kutilmasi	Venkatesh va boshq. [18]; PMC11118801 [9]

Tashvish va o‘z-o‘ziga ishonch mexanizmi	texnologik tashvish, ish bilan bandlik	Springer 2026 [14]; PMC12913393 [15]
Kasbiy farovonlik va ijtimoiy qo‘llab-quvvatlash	hissiy charchash, ijtimoiy qo‘llab-quvvatlash	PMC8639499 [10]; Michigan Virtual [13]

1-jadvaldagi tasnif shuni ko‘rsatadiki, xorijiy tadqiqotlar bosqichma-bosqich rivojlanib, dastlab texnologik omillardan o‘qituvchi shaxsining ichki psixologik resurslariga — o‘z-o‘ziga ishonch, tashvish va kasbiy farovonlikka — qarab siljigan. Bu esa SI texnologiyalarini pedagogik faoliyatga joriy etish masalasi endilikda sof texnologik emas, balki psixologik-pedagogik muammo sifatida talqin qilinayotganini anglatadi [13; 15].

Tadqiqot materiallari va metodlari: Tadqiqot tizimli adabiyotlar sharhi (systematic literature review) metodologiyasiga asoslandi. Manbalarni izlash Frontiers, ScienceDirect, SpringerLink, PubMed Central (PMC) va arXiv ilmiy bazalarida 2019–2026 yillar oralig‘ida amalga oshirildi; qidiruv so‘z birikmalari sifatida “artificial intelligence teacher psychological readiness”, “AI self-efficacy anxiety teachers”, “technology acceptance model AI education” tanlandi. Dastlabki qidiruv natijasida aniqlangan manbalar orasidan mavzuga bevosita mos, retsenziyadan o‘tgan 19 ta ilmiy maqola tanlab olindi; tanlash mezonlari sifatida manbaning pedagogik faoliyatdagi SI texnologiyalari bilan bog‘liq psixologik omillarni o‘rganganligi, empirik yoki tizimli sharh xarakteriga ega ekanligi hisobga olindi. Tanlangan manbalar Mayring usulidagi kontent-tahlil [6] yordamida to‘rtta mavzuiy yo‘nalishga — texnologik qabul qilish, o‘z-o‘ziga ishonch/tashvish, ijtimoiy-emotsional omillar va motivatsion omillar — guruhlandi, so‘ngra har bir yo‘nalish bo‘yicha qiyosiy-mazmuniy tahlil o‘tkazildi.

Natijalar: Tahlil natijalari shuni ko‘rsatdiki, o‘qituvchilarning SI texnologiyalarini pedagogik faoliyatga qabul qilishida to‘rtta o‘zaro bog‘liq psixologik omil markaziy o‘rin tutadi: o‘z-o‘ziga ishonch, texnologik tashvish, ishonch (trust) va idrok etilgan foydalilik. Frontiers jurnalida chop etilgan tadqiqot fan va matematika o‘qituvchilarining SI integratsiyalashgan ta’lim muhitiga psixologik tayyorligini texnofiliya, o‘qitish samaradorligiga bo‘lgan ishonch va treningga bo‘lgan ehtiyoj

asosida modellashtirgan [1]. Turkiyada o‘tkazilgan sifatiy tadqiqotda 66 nafar o‘qituvchi ishtirokida SI vositalari samaradorligi, interaktivligi va moslashuvchanligi ijobiy baholangani, biroq texnik muammolar, o‘quv dasturiga mosligi va madaniy to‘siqlar jiddiy cheklov sifatida qayd etilgani aniqlandi [2]. 2-jadvalda tahlil qilingan asosiy xorijiy tadqiqotlarning qiyosiy natijalari umumlashtirilgan.

2-jadval. Tahlil qilingan xorijiy tadqiqotlarning qiyosiy natijalari

Mualliflar / manba	**Namuna**	**Asosiy psixologik topilma**
Frontiers, 2026 [1]	fan/matematika o‘qituvchilari	texnofiliya va treningga ehtiyoj tayyorlikni belgilaydi
Springer, 2025 [2]	66 nafar o‘qituvchi, Turkiya	samaradorlik va moslashuvchanlik ijobiy, madaniy to‘siqlar cheklovchi
Springer, 2026 [14]	550 o‘qituvchi, Xitoy	texnologik tashvish ish bilan bandlik orqali o‘z-o‘ziga ishonchni pasaytiradi
Frontiers, 2025 [11]	bo‘lajak o‘qituvchilar	ayollarda SI tashvishi yuqoriroq, bu qabul qilishni susaytiradi
PMC, 2026 [15]	Turkiya, o‘qituvchilar	o‘z-o‘ziga ishonch tashvish va qabul qilish o‘rtasida vositachi omil

2-jadvaldagi natijalar tashvish va o‘z-o‘ziga ishonch o‘rtasidagi bog‘liqlikning barqaror namoyon bo‘lishini tasdiqlaydi: tashvish darajasi yuqori bo‘lgan o‘qituvchilarda o‘z-o‘ziga ishonch va, natijada, SI texnologiyalarini qabul qilish darajasi pasayadi [14; 15]. Ayni paytda, ijtimoiy qo‘llab-quvvatlash va institutsional sharoit ushbu bog‘liqlikni yumshatuvchi omil sifatida namoyon bo‘lgan [10; 14]. Gender jihatidan farqlar ham qayd etilgan: ayol o‘qituvchilarda SI ga nisbatan tashvish darajasi nisbatan yuqori bo‘lib, bu ularning idrok etilgan qulayligiga salbiy ta’sir ko‘rsatgan [11]. Bundan tashqari, o‘qituvchining texnologik kompetentligi va o‘z-o‘ziga ishonchi generativ SI ga munosabatning eng kuchli bashoratchisi sifatida

aniqlangan, bu esa yosh va ta’lim darajasi kabi demografik omillarning nisbiy ahamiyati pastroq ekanligini ko‘rsatadi [13].

Muhokama: Yuqorida keltirilgan natijalar SI texnologiyalarini pedagogik faoliyatga joriy etishning muvaffaqiyati, birinchi navbatda, texnik ta’minot emas, balki o‘qituvchi shaxsining psixologik resurslari bilan belgilanishini tasdiqlaydi. Bandiraning o‘z-o‘ziga ishonch nazariyasi [19] shu nuqtai nazardan alohida ahamiyat kasb etadi: shaxsning muayyan vazifani bajara olish qobiliyatiga bo‘lgan ishonchi uning xatti-harakati va sabot-matonatini belgilaydi, bu mexanizm xorijiy tadqiqotlarda SI kontekstiga muvaffaqiyatli ko‘chirilgan [15; 18]. Devis va Venkateshning texnologik qabul qilish modellari [16; 17] esa idrok etilgan foydalilik va qulaylikning tashvish hamda o‘z-o‘ziga ishonch bilan uzviy bog‘liqligini ko‘rsatib, nazariy asosni yanada kengaytirdi. Tahlil shuni ham ko‘rsatdiki, xorijiy tadqiqotlarda so‘nggi yillarda psixologik omillar tarkibi kengayib, ular endi individual darajadan tashkiliy darajaga — ijtimoiy qo‘llab-quvvatlash, kasbiy farovonlik va institutsional muhitga — ko‘chmoqda [10; 13; 14]. Bu, o‘z navbatida, SI texnologiyalariga psixologik tayyorlikni faqat shaxsiy xususiyat sifatida emas, balki ta’lim tizimining tashkiliy-psixologik muhiti bilan uzviy bog‘liq hodisa sifatida talqin qilish zaruriyatini ko‘rsatadi. Tadqiqotning cheklovi shundaki, tahlil qilingan manbalarning katta qismi G‘arbiy Yevropa, AQSh va Sharqiy Osiyo kontekstiga tegishli bo‘lib, Markaziy Osiyo, jumladan O‘zbekiston sharoitida o‘qituvchilarning SI texnologiyalariga psixologik tayyorligi bo‘yicha empirik ma’lumotlar deyarli mavjud emas.

Xulosa va takliflar: O‘tkazilgan tahlil pedagogik faoliyatda SI texnologiyalaridan foydalanishning psixologik mazmuni o‘z-o‘ziga ishonch, texnologik tashvish, ishonch va kasbiy farovonlik kabi bir-biri bilan uzviy bog‘liq omillar tizimidan iborat ekanligini tasdiqladi. Shu asosda birinchi vazifa bajarildi: ushbu omillar TAM, TAM3 va UTAUT nazariyalari doirasida yaxlit tizim sifatida umumlashtirildi. Ikkinchi va uchinchi vazifalar ham amalga oshirildi, chunki xorijiy tadqiqotlardagi nazariy yo‘nalishlar tasniflandi va mavzuiy-qiyosiy tahlil natijasida ularning o‘zaro bog‘liqligi aniqlandi. Ilmiy hissa shundan iboratki, pedagogik

faoliyatda SI texnologiyalarini qabul qilishning psixologik mexanizmlari birinchi marta yaxlit tizim sifatida mahalliy ilmiy muhitga taqdim etildi va bu masalaning xorijiy tadqiqotlardagi rivojlanish bosqichlari izchil ko‘rsatib berildi. Shu asosda quyidagi tavsiyalar ishlab chiqildi: birinchidan, o‘qituvchilarni malaka oshirish tizimida SI texnologiyalari bo‘yicha nafaqat texnik, balki psixologik tayyorgarlik dasturlarini joriy etish; ikkinchidan, o‘qituvchilarning o‘z-o‘ziga ishonchini oshirish va texnologik tashvishini kamaytirishga qaratilgan maxsus treninglar tashkil etish; uchinchidan, ta’lim muassasalarida ijtimoiy qo‘llab-quvvatlash muhitini mustahkamlash; to‘rtinchidan, O‘zbekiston sharoitida o‘qituvchilarning SI texnologiyalariga psixologik tayyorligini o‘rganuvchi mahalliy empirik tadqiqotlarni yo‘lga qo‘yish. Navbatdagi bosqichda ushbu omillarni O‘zbekiston ta’lim tizimi namunasida empirik tekshirish maqsadga muvofiqdir.

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ROALD DAL ASARLARI ASOSIDA MAKTAB O‘QUVCHILARIGA INGLIZ TILINI O‘QITISHDA O‘QITUVCHILARNING INTERFAOL METODLARNI QO‘LLASH KO‘NIKMALARINI RIVOJLANTIRISH

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Annotatsiya. *Maqolada Roald Dal asarlari asosida maktab o‘quvchilariga ingliz tilini o‘qitishda interfaol metodlarni qo‘llash bo‘yicha o‘qituvchilarning metodik ko‘nikmalarini rivojlantirish masalasi tahlil qilinadi. Adibning Matilda, Charlie and the Chocolate Factory, The BFG, Fantastic Mr Fox va James and the Giant Peach asarlarining kommunikativ kompetensiya, lug‘at boyligi, tasavvur, tanqidiy fikrlash va motivatsiyani rivojlantirish imkoniyatlari yoritiladi. Rolli o‘yin, guruhli muhokama, hikoya qilish, ijodiy yozuv, loyiha ishi va lug‘at o‘yinlariga asoslangan, o‘qishdan oldingi, o‘qish jarayonidagi hamda o‘qishdan keyingi bosqichlarni qamrab oluvchi metodik model taklif etiladi.*

Kalit so‘zlar: *Roald Dal, interfaol ta’lim, ingliz tilini o‘qitish, bolalar adabiyoti, o‘qituvchi kompetensiyasi, kommunikativ kompetensiya, rolli o‘yin, ijodiy yozuv, loyiha ishi*

Abstract. *This article examines the development of teachers’ methodological skills in applying interactive methods to teach English to schoolchildren through Roald Dahl’s works. It discusses the pedagogical potential of Matilda, Charlie and the Chocolate Factory, The BFG, Fantastic Mr Fox, and James and the Giant Peach for developing communicative competence, vocabulary, imagination, critical thinking, and motivation. Particular attention is given to role-play, group discussion, storytelling, creative writing, project work, and vocabulary games. A three-stage model comprising pre-reading, while-reading, and post-reading activities is proposed.*

Keywords: *Roald Dahl, interactive teaching, English language teaching, children’s literature, teacher competence, communicative competence, role-play, creative writing, project work.*

KIRISH

Globallashuv va madaniyatlararo muloqotning kengayishi ingliz tilini o‘qitishga yangi talablarni qo‘ymoqda. Ta’lim grammatik qoidalar, so‘z yodlash va tarjima bilan cheklanmay, o‘quvchining real muloqot qilishi, fikr bildirish, munozarada qatnashish va hamkorlikda muammo yechish qobiliyatini rivojlantirishi lozim. Shu bois

o‘quvchiga yo‘naltirilgan interfaol yondashuvlar til ta’limining asosiy tamoyiliga aylandi (Council of Europe, 2020).

Interfaol ta’lim o‘qituvchi va o‘quvchilarning hamkorligiga asoslanadi. Juftlik va guruhda ishlash, rolli o‘yin, muhokama, loyiha, hikoya qilish va ijodiy yozuv o‘quvchini faol ishtirokchiga aylantiradi. O‘qituvchi esa bilim beruvchi bilan birga faoliyatni tashkil etuvchi, yo‘naltiruvchi va rag‘batlantiruvchi vazifani bajaradi (Richards & Rodgers, 2014).

Badiiy matnlar interfaol dars uchun tabiiy til namunalari, hissiy mazmun, madaniy ma’lumot va axloqiy masalalarni beradi. Ular til sezgirligi, talqin qilish ko‘nikmasi va shaxsiy munosabatni rivojlantiradi (Lazar, 1993; Collie & Slater, 1987). Bolalar adabiyoti o‘quvchilarning yoshi, qiziqishi va emotsional rivojlanishiga mosligi bilan ayniqsa muhimdir.

Ko‘plab darslarda badiiy matn hanuz o‘qish, tarjima va mazmunni tekshirish savollari bilan cheklanadi. Bunda uning kommunikativ imkoniyatlari to‘liq ochilmaydi va o‘quvchi passiv bo‘lib qolishi mumkin. Matn rolli o‘yin, munozara, loyiha yoki ijodiy topshiriqqa aylantirilganda esa haqiqiy muloqot manbai vazifasini bajaradi. Shu sababli o‘qituvchining matnni tanlash, moslashtirish va faoliyat tizimiga aylantirish kompetensiyasi dolzarbdir.

Roald Dalning *Matilda*, *Charlie and the Chocolate Factory*, *The BFG*, *Fantastic Mr Fox* va *James and the Giant Peach* asarlari sarguzasht, yumor, fantastika va yorqin obrazlarni birlashtiradi. Ular sahnalashtirish, muhokama, ijodiy yozuv va loyiha uchun qulay materialdir. Maqolaning maqsadi ushbu asarlar asosida interfaol metodlarni qo‘llash bo‘yicha o‘qituvchilarning metodik ko‘nikmalarini rivojlantirish yo‘llarini tahlil qilishdir.

MATERIALLAR VA METODLAR

Tadqiqot nazariy-metodik xususiyatga ega bo‘lib, interfaol va kommunikativ til o‘qitish, topshiriqqa asoslangan ta’lim, bolalar adabiyoti hamda o‘qituvchi kompetensiyasiga doir manbalar tahliliga tayandi. Material sifatida Roald Dalning

besh asari tanlanib, ularning syujeti, dialoglari, obrazlari, axloqiy muammolari va sinf muhokamasiga mos epizodlari o‘rganildi.

Nazariy, matniy va qiyosiy tahlil, pedagogik modellashtirish hamda metodik umumlashtirish usullari qo‘llandi. An’anaviy o‘qish-tarjima yondashuvi interfaol yondashuv bilan qiyoslanib, matnni faol kommunikativ resursga aylantirish imkoniyatlari va o‘qituvchiga zarur tanlash, moslashtirish, topshiriq tuzish, boshqarish, baholash hamda refleksiya ko‘nikmalari tizimlashtirildi.

Maqola tajriba-sinov tadqiqotiga emas, nazariy va metodik umumlashtirishga asoslangan. Shu bois natijalar tavsiya etilayotgan modelning konseptual imkoniyatlarini ifodalaydi; uning amaliy samaradorligini dars kuzatuvi, o‘qituvchi so‘rovnomasi va o‘quv natijalari orqali keyingi tadqiqotlarda tekshirish lozim.

NATIJALAR VA MUHOKAMA

Tahlil Roald Dal asarlarining interfaol ta’lim uchun yuqori pedagogik salohiyatga ega ekanini ko‘rsatdi. Yoshga mos mazmun, yumor, kutilmagan voqealar, esda qolarli qahramonlar va dialoglar o‘qib tushunish bilan birga gapirish, yozish, tinglash, lug‘at boyligi, tasavvur hamda tanqidiy fikrlashni rivojlantiradi.

Interfaol ta’lim o‘quvchiga yo‘naltirilganlik, hamkorlik, muloqot, ijodkorlik va refleksiyaga asoslanadi. O‘quvchilar savol beradi, fikrini dalillaydi, rol bajaradi va g‘oyasini taqdim etadi. Shu orqali suhbatni boshlash, muloyim tarzda rozi bo‘lish yoki e’tiroz bildirish, voqeani izchil bayon etish va guruhda ishlashni o‘rganib, gapirishga ishonchi ortadi.

Har bir asar muayyan metodik vazifani bajaradi. *Charlie and the Chocolate Factory* oilaviy qadriyat, mehribonlik, ochko‘zlik va intizomni; *Matilda* kitobxonlik, adolatsizlik, jasorat hamda yaxshi o‘qituvchi rolini muhokama qilishga imkon beradi. *The BFG* tasavvur, yangi so‘z yaratish va hikoya tuzishga, *Fantastic Mr Fox* topqirlik va mas’uliyatga, *James and the Giant Peach* esa sarguzashtli bayon, qahramon tavsifi va ijodiy yozuvga mos keladi.

Rolli o‘yinda o‘quvchilar qahramonlarni gavdalantirib, talaffuz, intonatsiya, emotsional ifoda va spontan nutqni mashq qiladi. *Charlie and the Chocolate Factory*

asosida Charli va Villi Vonka suhbati yoki fabrika mehmoni bilan intervyu, *Matilda* bo‘yicha esa *Matilda* va Miss Honey dialogi yoxud Miss Trunchbull ishtirokidagi sinf sahnasi tashkil etilishi mumkin.

Guruhli muhokama qahramon xatti-harakatini baholash va fikrni asoslashni o‘rgatadi. O‘quvchilar *Matilda*ning o‘zini himoya qilishi, Charlining mukofotga loyiqligi yoki boshqa bolalar olgan saboqni muhokama qiladi. Hikoya qilishda voqea boshqa qahramon nuqtayi nazaridan qayta bayon etiladi, davom ettiriladi yoki yakuni o‘zgartiriladi; bu nutq ravonligi va izchilligini rivojlantiradi.

Loyiha ishi bir nechta ko‘nikmani birlashtiradi: o‘quvchi matnni o‘qiydi, ma’lumot tanlaydi, yozadi, guruh bilan kelishadi va natijani og‘zaki taqdim etadi. “Mening sevimli Roald Dal qahramonim”, “*Matilda* asaridan olingan saboqlar” yoki “Mening xayoliy shokolad fabrikam” kabi mavzular hamkorlik, tadqiqot va taqdimot ko‘nikmalarini rivojlantiradi.

Ijodiy yozuvda o‘quvchi *Matilda*ga maktub yozadi, o‘z shokolad fabrikasini tasvirlaydi yoki qahramon nomidan kundalik yaratadi. Loyiha ishida plakat, taqdimot, qahramon xaritasi, kitob taqrizi yoxud kichik sahna ko‘rinishi tayyorlanadi. Lug‘at o‘yinlari so‘zni ta’rif bilan moslashtirish, qahramonni sifatlar bilan tasvirlash, so‘z xaritasi va Dal uslubida yangi so‘z yaratishni qamrab olib, birliklarni kontekstda qo‘llashga yordam beradi.

Badiiy matnning samaradorligi o‘qituvchining metodik kompetensiyasiga bog‘liq. U o‘quvchining yoshi, qiziqishi, til darajasi va dars maqsadiga mos epizodni tanlashi, murakkab so‘z va madaniy ishoralarni badiiy mazmunga zarar yetkazmay soddalashtirishi hamda turli til ko‘nikmalarini birlashtiradigan, aniq kommunikativ natijaga yo‘naltirilgan topshiriqlar tuzishi lozim.

O‘qituvchi juftlik va guruhlarni shakllantirishi, rollarni taqsimlashi, aniq ko‘rsatma berishi, ishtirokni kuzatishi va kuchsizroq o‘quvchilarni qo‘llashi kerak. Baholash grammatik to‘g‘rilikdan tashqari hamkorlik, ijodkorlik, ravonlik, talaffuz, mazmun va fikr ifodasini qamrab oladi. Darsdan keyingi refleksiya muvaffaqiyat va qiyinchiliklarni aniqlab, keyingi mashg‘ulotni takomillashtiradi (Burns, 2010).

Uch bosqichli metodik model taklif etildi. O‘qishdan oldin avvalgi bilimlar faollashtiriladi, tayanch so‘zlar beriladi va taxmin uyg‘otiladi. Masalan, *Charlie and the Chocolate Factory* oldidan «Orzuingizdagi shokolad fabrikasi qanday bo‘lardi?» savoli qo‘yiladi. O‘qish jarayonida o‘quvchilar rollarga bo‘lib o‘qiydi, asosiy g‘oya va his-tuyg‘ularni aniqlaydi, voqealarni tartiblaydi hamda qahramonlarni qiyoslaydi. O‘qishdan keyin rolli o‘yin, muhokama, ijodiy yozuv, muqobil yakun, loyiha va intervyu tashkil etiladi. Model tushunishdan muloqotga, muloqotdan ijodkorlikka olib boradi.

Yondashuv o‘qituvchida metodik moslashuvchanlik, ijodkorlik va adabiyotdan ko‘p funksiyali resurs sifatida foydalanish qobiliyatini rivojlantiradi. O‘quvchilarda motivatsiya va faol ishtirok ortadi, o‘qib tushunish, og‘zaki va yozma nutq, tinglab tushunish hamda lug‘at boyligi takomillashadi. Qahramonlar va axloqiy tanlovlarni tahlil qilish tanqidiy fikrlashni, guruhli faoliyat esa hamkorlik, boshqalarni tinglash va turli qarashlarni hurmat qilishni shakllantiradi.

XULOSA

Roald Dal asarlari ingliz tilini interfaol o‘qitish uchun samarali pedagogik resursdir. Yorqin syujet, yumor, fantastika, axloqiy masalalar va dialoglar muhokama, sahnalashtirish, hikoya qilish, ijodiy yozuv, loyiha hamda lug‘at ishiga imkon yaratib, darsni passiv o‘qishdan o‘quvchiga yo‘naltirilgan faol jarayonga aylantiradi.

Natija o‘qituvchining matn tanlash va moslashtirish, topshiriq yaratish, hamkorlikni boshqarish, baholash va refleksiya ko‘nikmalariga bog‘liq. Uch bosqichli model ishni izchil tashkil etadi; kelgusida uni tajriba-sinovdan o‘tkazib, amaliy metodik qo‘llanma ishlab chiqish zarur.

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TBLT VA PBL SINTEZI: NOFILOLOGIK YO‘NALISHLARDA TIL KOMPETENSIYASINI OSHIRISH MODELI

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Annotatsiya. *Ushbu maqola vazifaga asoslangan o‘qitish (TBLT) va loyihaga asoslangan o‘qitish (PBL) yondashuvlarini integratsiyalab, nofilologik yo‘nalishlarda (moliya, iqtisod, IT va muhandislik) talabalar til kompetensiyasini oshirishga xizmat qiladigan amaliy modelni taklif etadi. TBLT o‘quv faoliyatini real kommunikativ maqsadga yo‘naltirilgan mikro-vazifalar orqali tez-tez “chiqish” (output)ga undasa, PBL esa uzoqroq siklli, birlashtiruvchi loyiha orqali mazmuniy chuqurlik va ko‘p manbali hamkorlikni ta’minlaydi. Taklif etilayotgan sintezda darslar “micro-to-macro” printsipida tashkil etiladi: (1) TBLT mikro-vazifalari orqali zarur til birliklari, diskurs markyorlari va strategiyalarini tezkor mashq qilish; (2) PBL loyihasi doirasida ularni integratsiyalash. Baholash analitik rubrika asosida quriladi: mazmun aniqligi, nutq izchilligi, dalillash sifati, hamkorlik va auditoriyaga mos ohang. Model dizayni akademik halollikni topshiriq variativligi, shaxsiylashtirilgan kiritmalar va oraliq “milestone”lar orqali qo‘llab-quvvatlaydi. Pilot qo‘llash natijalari sifatida kutilayotgan o‘zgarishlar: vizualdan-matnga transformatsiya aniqligi, ehtiyotkor ifodalash va muhokama paytida interaktivlikning ortishi. Maqola o‘qituvchilar uchun dars-sikllari, vazifa va loyiha namunalarini, baholash rubrikalarini hamda sintezni joriy etish bo‘yicha bosqichma-bosqich ko‘rsatmalarni taqdim etadi.*

Kalit so‘zlar: *TBLT, PBL, ESP, Business English, nofilologik yo‘nalishlar, vazifa dizayni, loyiha sikli, analitik rubrika, hedging.*

Abstract. *This article presents an integrated instructional model combining Task-Based Language Teaching (TBLT) and Project-Based Learning (PBL) to develop the language competence of students in non-philological disciplines, including finance, economics, information technology, and engineering. The proposed model follows a micro-to-macro approach, in which TBLT micro-tasks provide systematic practice of language forms and communication strategies, while PBL enables learners to apply these skills in a meaningful project context. Student performance is assessed using an analytic rubric focusing on content accuracy, coherence, argumentation, collaboration, and*

audience awareness. The model also supports academic integrity through task variation, personalised learning, and staged project milestones. Its implementation is expected to improve learners' communicative competence, the effective use of hedging strategies, and interaction in academic discussions. The article offers practical guidelines, sample tasks, project activities, and assessment tools for integrating TBLT and PBL in ESP instruction.

Keywords: *Task-Based Language Teaching (TBLT), Project-Based Learning (PBL), English for Specific Purposes (ESP), Business English, non-philological disciplines, task design, project cycle, analytic rubric, hedging.*

Kirish. Nofilologik yo‘nalishlarda o‘qiyotgan talabalar uchun ingliz tili ko‘pincha alohida grammatik qoidalar majmuasi sifatida emas, balki real o‘quv va ish vaziyatlarida kerak bo‘ladigan kommunikativ vosita sifatida qadriyat kasb etadi. Ammo dars jarayonida til bilimini amaliy vazifaga bog‘lash doimo ham oson kechmaydi. Talabalar ko‘pincha aniq topshiriq va vaziyat yetishmaganda nutqni mantiqiy qurish, dalil keltirish, professional ohangni saqlash hamda jamoada hamkorlikda ishlashda qiynaladilar. Shu bois tilni o‘rgatishda mazmun va faoliyat birlashgan metodik yechimlarga ehtiyoj ortib bormoqda. Vazifaga asoslangan o‘qitish TBLT tilni muloqot maqsadiga xizmat qiladigan aniq vazifalar atrofida o‘zlashtirishni rag‘batlantiradi. Loyiha asosidagi o‘qitish PBL esa uzoqroq siklli ishlar orqali chuqur tahlil, hamkorlik va yakuniy natija yaratish tajribasini beradi (Thomas, 2000; Hmelo-Silver, 2004). Amaliyot shuni ko‘rsatadiki, bu ikki yondashuv birgalikda qo‘llanganda til va mazmun o‘rtasida tabiiy ko‘prik hosil bo‘ladi (Karimova, 2022). Talaba avval kichik tajribalar orqali zarur til birliklarini ishlatib ko‘radi, so‘ng jamoaviy loyiha doirasida ularni kengroq va murakkabroq kontekstda qo‘llaydi. Natijada bilim izolyatsiyada qolmaydi, balki real vaziyatda ishlay boshlaydi.

Ushbu maqola TBLT va PBL sinteziga tayanib, nofilologik yo‘nalishlar uchun amaliy dars modeli taklif etadi. Model “kichikdan kattaga” tamoyiliga quriladi. Avval TBLT asosidagi mikro vazifalar orqali maqsadga muvofiq iboralar, diskurs markyorlari va ehtiyotkor ifodalar mashq qilinadi. Keyin PBL bosqichida ushbu til vositalari jamoaviy muammo yechish, qisqa taqdimot, yozma hisobot yoki mijozga

yo‘naltirilgan matn kabi faoliyatlarda qo‘llanadi. Mazkur ketma ketlik talabaning og‘zaki va yozma chiqishlarida izchillik, dalillash sifati va professional ohangni mustahkamlashga xizmat qiladi (Djurayeva, 2025). Baholash o‘quvchiga tushunarli va shaffof bo‘lishi lozim. Shu sabab analitik rubrika qo‘llanadi. Unda mazmun aniqligi, muloqotning izchilligi, dalillash va hamkorlik kabi mezonlar alohida baholanadi. Formativ fikr mulohaza qisqa va tezkor usullarda beriladi. Loyiha jarayonida akademik halollikni ta’minlash uchun vazifalar variativ stsenariylar bilan shaxsiylashtiriladi, oraliq bosqichlarda individual hissalar ko‘rinadigan qilib rejalashtiriladi. Bu yondashuv talabaning mas’uliyatini oshiradi va ko‘chirish ehtimolini kamaytiradi.

Maqolaning maqsadi o‘qituvchiga sinovdan o‘tadigan amaliy yo‘l xaritasini taqdim etishdan iborat. Unda haftalik dars sikli, mikro vazifalar to‘plami, loyiha namunasi va baholash uchun qulay rubrikalar keltiriladi. Shuningdek, sintezning darsga joriy etilishi chog‘ida uchrashi mumkin bo‘lgan qiyinchiliklar ham muhokama qilinadi va ularni yengish bo‘yicha aniq tavsiyalar beriladi. Kutilayotgan natija shuki, talabalar tilni faqat o‘rganiladigan predmet emas, balki muammoni hal qilish, fikrni asoslash va jamoa bilan samarali muloqot qilish uchun ishlatiladigan vosita sifatida qabul qila boshlaydilar.

Tadqiqot usullari va materiallari

Ushbu tadqiqot dars amaliyotiga yaqin sharoitda olib borildi: ishtirokchilar sifatida nofilologik yo‘nalishlarda o‘qiyotgan ikkinchi–uchinchi bosqich talabalari tanlandi (moliya, iqtisod, IT va muhandislik guruhlari). Haftasiga ikki marotaba o‘tkazilgan mashg‘ulotlar uchta ketma-ket modulni qamrab oldi: avval TBLT asosidagi mikro vazifalar bilan til vositalarini “tezkor mashq qilish”, keyin PBL loyihasi doirasida shu vositalarni real kommunikativ vaziyatda qo‘llash, oxirida esa yakuniy chiqishlar va refleksiya. Darslar odatdagi auditoriya resurslari va oddiy raqamli vositalar (LMS, umumiy hujjatlar, onlayn taymer) bilan tashkil etildi; bu

tanlov ixtisoslashgan laboratoriya talab qilmasdan ham modelni joriy etish mumkinligini ko‘rsatish uchun ataylab qilindi (Nunan, 2004).

Materiallar talabalarga tanish va kasbiy muloqotga yaqin bo‘lishiga e’tibor berildi: qisqa xizmat yozishmalari, mijozga javob namunalaridan parcha, kichik bozor sharhi bo‘yicha brifing, loyiha topshirig‘i uchun texnik talablar, uchrashuv kun tartibi, mini-hisobot va taqdimot slaydlari. Har bir matn “o‘qishdan darhol foydalanish” tamoyiliga tayandi: talabalar o‘qiganini darrov og‘zaki muhokama, roli bo‘lingan muomala yoki qisqa yozma javobda sinab ko‘rdi (Azizova, 2024). Til fokuslari haddan tashqari grammatik izohlar bilan emas, balki vazifa chegaralarida ko‘rinadigan ehtiyojlar orqali boshqarildi: mantiqiy bog‘lovchilar, diskurs markyorlari, muloyim rad etish va muqobil taklifni ifodalovchi andazalar, auditoriyaga mos ohang va qisqa dalillash zanjiri.

Tadqiqot dizayni amaliyotga yo‘naltirilgan bo‘lsa-da, natijalarni ishonchli qayd etish uchun bir necha usul uyg‘unlashtirildi. Dars boshida va yakunida ekvivalent vazifalar asosida qisqa diagnostik yozma va og‘zaki chiqishlar yig‘ildi; ular analitik rubrika bilan baholandi. Rubrikada mazmun aniqligi, nutq izchilligi, dalillash sifati, strategik til birliklari (hedging, muomala andazalari) hamda auditoriyaga mos ohang alohida ko‘rsatkich sifatida aks etdi. Ikki o‘qituvchi mustaqil baholadi, farq sezilarli bo‘lsa, birgalikda muhokama qilib, baholar yaqinlashtirildi - shunday qilib, interrater ishonchliligi amaliy “kalibrlash” yo‘li bilan ta’minlandi. Dars jarayonida kuzatuvchilar varaqalari yordamida guruhdagi ishtirok, navbat almashinuvi, muhokama dinamika va vaqtni boshqarish kabi ko‘rsatkichlar qayd etildi; bu ko‘rsatkichlar yakuniy natijalar bilan taqqoslanib, vazifa dizaynidagi kuchli va zaif nuqtalarni aniqlashga yordam berdi. Talabalar qisqa anonim so‘rovlar orqali o‘zlarini qanday his qilayotgani, qaysi vazifalar ko‘proq foyda bergani va qaysi joylarda qiynalganini ochiq yozib bordilar; bu fikrlar keyingi iteratsiyada materiallarni sayqallashga asos bo‘ldi.

Ma’lumotlar tahlili aralash uslubda olib borildi. Rubrika ballari oddiy statistik ko‘rinishda solishtirildi, lekin diqqat markazi quruq sonlarda emas, o‘zgarish tendensiyasini mantiqan tushuntirishda bo‘ldi: masalan, dalillash bandida ko‘tarilish

kuzatilsa, aynan qaysi vazifalar buni rag‘batlantirgani dars yozuvlari va talabalar chiqishlari asosida ko‘rsatildi. Yozma hamda og‘zaki namunalar ichki kodlash orqali o‘rganildi: diskurs markyorlaridan foydalanish, muloyim rad etish formulalari, muqobil taklifning tuzilishi, auditoriyani ishontirishga xizmat qiladigan qisqa asoslar. Talabalar ishlari—draft, qayta ko‘rib chiqilgan versiya, yakuniy variant—o‘zaro taqqoslanib, formatif fikr-mulohazaning real ta’siri aks ettirildi. Etik jihatdan rozilik oldindan tushuntirilgan tilda olindi, shaxsiy ma’lumotlar yashirildi, baholar o‘quv jarayonidan tashqarida reytingga ta’sir qilmasligi kafolatlandi.

Ahamiyatlisi, bu bo‘lim “ideal sharoitlar”ni emas, ko‘pchilik auditoriyalar uchun real imkoniyatlarni tasvirlaydi: murakkab jihozlarsiz, lekin aniq vazifalar, tushunarli rubrika va muntazam fikr-mulohaza bilan TBLT va PBLni uyg‘unlashtirish mumkin. Shunday yondashuv o‘qituvchiga o‘z darsini bosqichma-bosqich boyitish, materiallarni kontekstga moslab yangilash va talabalar ehtiyojiga qarab murakkablikni boshqarish imkonini beradi; talaba esa tilni bevosita vazifa ichida ishlatib, og‘zaki va yozma chiqishlarida izchillik va ishontirish kuchini tabiiy ravishda oshira boradi.

Natijalar va muhokamalar

Natijalar shuni ko‘rsatdiki, TBLT va PBL sintezi qo‘llangan guruhlarda til bilan mazmun o‘rtasidagi ko‘prik ancha barqarorlashdi. O‘quvchilar og‘zaki va yozma chiqishlarda gapni boshlab qo‘yishdan oldin maqsadini qisqa aniqlab oladi, keyin dalillarni ketma ket joylaydi va yakunda qisqa xulosa beradi. Oldingi ishlarda tez-tez uchragan sakrashlar, ortiqcha takror va mavzudan chetga chiqish kamaydi. Ko‘plab mini taqdimotlarda muhokama zanjiri ko‘rinadigan bo‘ldi, ya’ni dalil keltirish va ularning o‘zaro bog‘liqligi eshituvchiga aniq seziladi. Diskurs markyorlari va bog‘lovchi birliklardan foydalanish ko‘paydi. Avval birikmalar kam va bir xil edi, endi esa o‘quvchilar fikrni tartibga soluvchi so‘zlar bilan ishlashga odatlandi. Masalan, fikrni ochish, taqqoslash, cheklash, ehtiyotkor xulosa keltirish vaziyatlarida mos signallar paydo bo‘ldi. Bu kichik o‘zgarishlar butun matnning ohangini kattaroq kuchaytirdi, chunki auditoriya qayerda dalil, qayerda muhokama, qayerda ehtimoliy xulosa borligini oson ajrata boshladi.

Ehtiyotkor ifodalash vositalari ham odatiy amaliyotga aylandi. Dars boshida ko‘proq qat’iy hukmlar ishlatilgan bo‘lsa, sintez joriy etilgach may, might, seems, suggests tipidagi namunalarga mos o‘zbekcha va inglizcha konstruksiyalar o‘z o‘rnini topdi. Bu ayniqsa muzokara stsenariylarida foyda berdi, chunki o‘quvchilar muloyim rad etish, muqobil taklif taklif qilish va yuzni saqlash strategiyalarini til vositalari bilan uyg‘un qo‘llay oldi (Karimova, 2022**)**. Natijada muloqotdagi taranglik kamaydi, ishontirish kuchi esa oshdi. Hamkorlik sifati haqida kuzatuvlar ijobiy bo‘ldi. Jamoa ichida rollar aniqroq taqsimlandi, masalan vaqtni boshqaruvchi, hujjatni tartibga soluvchi, taqdimotchi kabi vazifalar oldindan kelishildi. Bu taqsimot jismonan faol bo‘lmagan talabalarning ham hissa qo‘shishini osonlashtirdi. O‘qituvchi tomonidan berilgan oraliq bosqichlar hisoboti va tezkor fikr mulohaza natijasida yakuniy ishda tarqoq bo‘limlar bir xil ohang va uslubga keldi. Akademik halollik bo‘yicha ham sezilarli siljish kuzatildi, stsenariylarning variativligi va individual kiritmalar shaffofligi ko‘chirish ehtimolini pasaytirdi, guruh ichidagi mas’uliyat oshdi (Dudley-Evans & St John, 1998).

Baholash rubrikasidagi o‘zgarishlar ko‘zga tashlanarli bo‘ldi. Mazmun aniqligi bandida keraksiz tafsilotlar kamaydi va dalil fakt bilan bog‘langan holda berildi. Izchillik bandida mantiqiy o‘tishlar yaxshilandi, ayniqsa kirishdan muammo bayoniga, muhokamadan xulosaga o‘tishda uzilishlar kamaydi. Dalillash sifatida manba va misolga tayanish ko‘paydi va qisqa memo hamda og‘zaki pitchlar ancha ixcham bo‘ldi. Til vositalarining maqsadga muvofiqligi bo‘yicha ham siljish bor, rasmiy ohang saqlangan, lekin sun’iylik kamaygan, iboralar vaziyatga mos tanlangan. Talabalarning o‘z fikrlari bilan o‘rtoqlashishlari sintez yondashuvining motivatsion ta’sirini ko‘rsatdi. Ular kichik vazifalarda tez yutuqni ko‘rishi bilan kattaroq loyihaga kirishda ishonch ortishini ta’kidladi. Ayniqsa real kommunikativ mahsulotlar berilishi, masalan qisqa xizmat xati, uchrashuv bayoni, mini taqdimot, o‘zlari uchun ma’noli bo‘ldi. Shu bilan birga, murakkab stsenariylar paytida vaqtni boshqarish hamon chaqiriq bo‘lib qoldi, ayrim guruhlarda bir nechta bosqichni kechiktirish holatlari kuzatildi. Bu

muammo oraliq tekshiruv nuqtalarini yanada aniqroq belgilash va vazifa hajmini guruh darajasiga moslash orqali yumshatildi.

Umuman aytganda, sintez yondashuvi tilni o‘rganishni amaliy faoliyat bilan bog‘lab, kichikdan kattaga o‘tish tamoyili orqali barqaror natija beradi. Mikro vazifalarda o‘rgatilgan birliklar katta loyihada tabiiy qo‘llanadi, bu esa bilimning ko‘chishini tezlashtiradi (Azizova, 2024). O‘qituvchi uchun eng muhim dars shuki, aniq vazifa, tushunarli rubrika va muntazam fikr mulohaza bo‘lsa, murakkab nazariya talab qilinmaydi, odatiy sharoitning o‘zida ham o‘quvchilar nutqiy izchillik, dalillash va professional ohang bo‘yicha ko‘zga ko‘rinarli o‘sishga erisha oladi.

Xulosa

TBLT va PBL sinteziga tayangan dars modeli nofilologik yo‘nalishlarda tilni “o‘rganiladigan predmet”dan ko‘ra “ishlaydigan vosita” sifatida qabul qilishni tezlashtirdi. Kichikdan kattaga tamoyili asosida avval mikro vazifalarda zarur iboralar, diskurs markyorlari va ehtiyotkor ifodalar mashq qilinib, so‘ng ularning yirikroq loyiha kontekstida qo‘llanishi og‘zaki va yozma chiqishlarda izchillik, dalillash va professional ohangni sezilarli mustahkamladi. Bu natija TBLTning kommunikativ vazifa markazidagi afzalliklari hamda PBLning hamkorlik va yakuniy mahsulotga yo‘naltirilgan kuchli tomonlari o‘zaro to‘ldiruvchi ekanini yana bir bor tasdiqladi. ESP kontekstida, ya’ni talabalar kasbiy faoliyatga tayyorlanayotgan sharoitda, aynan shu sintez til-mazmun ko‘prigini barqarorlashtirdi va real kommunikativ vazifalarga chiqishni osonlashtirdi (Bygate, 2015).

Baholash strategiyasi ham amaliy foyda berdi: analitik rubrika orqali mazmun aniqligi, nutq izchilligi, dalillash sifati va strategik til birliklarining qo‘llanishi aniq ko‘rinib bordi, o‘qituvchilararo kalibrlash esa baholashni ishonchliroq qildi. Talabalar fikrida kichik vazifalardagi tez yutuq yirik loyihaga kirishda ishonchni oshirgani, real mahsulotlar — xizmat xati, uchrashuv bayoni, mini taqdimot — o‘zlariga ma’noli bo‘lgani ta’kidlandi (Azizova, 2024). Shu bilan birga, murakkab stsenariylar paytida vaqtni boshqarish ayrim guruhlar uchun chaqiriq bo‘lib qoldi; buni aniq

“milestone”lar, vazifa hajmini moslashtirish va jamoa rollarini oldindan belgilash orqali yumshatish mumkinligi ko‘rindi (Thomas, 2000).

Umuman, mazkur yondashuv oddiy resurslarda ham joriy etilishi mumkin bo‘lgan, o‘qituvchiga qulay va talaba markazidagi modelni taklif qiladi. Amaliy tavsiya sifatida quyidagilarni saqlash lozim: har darsda aniq kommunikativ vazifa, rubrika asosida muntazam formatif fikr-mulohaza va akademik halollikni dizayn orqali ta’minlovchi variativ stsenariylar. Kelgusida tadqiqotni ko‘proq guruh va uzoqroq muddatda kengaytirish, shuningdek, og‘zaki va yozma ko‘nikmalarning uzoq muddatli saqlanishini hamda ish joyi ko‘rsatkichlariga ko‘chishini kuzatish maqsadga muvofiq bo‘ladi (Ellis, 2009; Bygate, 2015). Eng muhimi, TBLT va PBL sintezi talabaning tilni vazifa ichida ishlatishiga turtki beradi va ESP/Business English darslarida kasbiy muloqotga tayyorgarlikni sezilarli ravishda oshiradi.

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BO‘LAJAK TARIX FANI O‘QITUVCHILARINI TAYYORLASHDA TARIXIY TAFAKKUR TUSHUNCHASINING NAZARIY-METODOLOGIK ASOSLARI

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Annotatsiya. Mazkur maqolada bo‘lajak tarix fani o‘qituvchilarida tarixiy tafakkurni rivojlantirish muammosining nazariy-metodologik asoslari tahlil qilingan. Tadqiqotning ilmiy-nazariy poydevorini tashkil etuvchi to‘rt yondashuv — sistemli, faoliyatga asoslangan, kompetensiyaviy va konstruktivistik yondashuvlar — alohida-alohida ko‘rib chiqilib, ularning har biri tarixiy tafakkur fenomenini tushunish va rivojlantirishga qanday hissa qo‘shishi asoslab berilgan. Maqolada bu to‘rt yondashuvning o‘zaro uyg‘unlashtirilgan holda qo‘llanilishi tarixiy tafakkurni komponentlar, faoliyat va natija birligida ko‘rib chiqish imkonini berishi ko‘rsatilgan.

Kalit so‘zlar. Tarixiy tafakkur, nazariy-metodologik yondashuv, sistemli yondashuv, faoliyatga asoslangan yondashuv, kompetensiyaviy yondashuv, konstruktivistik yondashuv, bo‘lajak tarix o‘qituvchisi, kasbiy tayyorgarlik.

ТЕОРЕТИКО-МЕТОДОЛОГИЧЕСКИЕ ОСНОВЫ ПОНЯТИЯ ИСТОРИЧЕСКОГО МЫШЛЕНИЯ В ПОДГОТОВКЕ БУДУЩИХ УЧИТЕЛЕЙ ИСТОРИИ

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Аннотация. В данной статье проанализированы теоретико-методологические основы проблемы развития исторического мышления у будущих учителей истории. Отдельно рассмотрены четыре подхода, составляющие научно-теоретический фундамент исследования — системный, деятельностный, компетентностный и конструктивистский, — и обосновано, какой вклад каждый из них вносит в понимание и развитие феномена исторического мышления. Показано, что взаимосвязанное применение этих четырёх подходов позволяет рассматривать историческое мышление в единстве компонентов, деятельности и результата.

Ключевые слова. Историческое мышление, теоретико-методологический подход, системный подход, деятельностный подход, компетентностный подход, конструктивистский подход, будущий учитель истории, профессиональная подготовка.

THEORETICAL AND METHODOLOGICAL FOUNDATIONS OF THE CONCEPT OF HISTORICAL THINKING IN THE TRAINING OF PRE-SERVICE HISTORY TEACHERS

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Annotation. This article analyzes the theoretical and methodological foundations of the problem of developing historical thinking in pre-service history teachers. Four approaches forming the scientific-theoretical basis of the study — systemic, activity-based, competency-based, and constructivist — are examined separately, and the contribution of each to understanding and developing the phenomenon of historical thinking is substantiated. The article shows that the interconnected application of these four approaches allows historical thinking to be considered as a unity of components, activity, and outcome.

Keywords. Historical thinking, theoretical-methodological approach, systemic approach, activity-based approach, competency-based approach, constructivist approach, pre-service history teacher, professional training.

Kirish. Har qanday pedagogik tadqiqot, xususan, tarixiy tafakkurni rivojlantirish kabi murakkab, ko‘p qatlamli pedagogik hodisani o‘rganishga qaratilgan tadqiqot, avvalo aniq nazariy-metodologik poydevorga tayanishi lozim. Ushbu poydevorning noaniq yoki eklektik tarzda belgilanishi tadqiqot mantiqining izchilligiga, qo‘llaniladigan tushunchalar tizimining bir xilligiga va, natijada, olingan xulosalarning ilmiy asoslanganligiga putur yetkazadi. Ko‘pgina pedagogik tadqiqotlarda nazariy yondashuvlar ro‘yxati sifatida keltiriladi, biroq ularning aynan tadqiqot predmeti — mazkur holatda tarixiy tafakkur — bilan qanday bog‘lanishi ochib berilmay qoladi. Ushbu maqolaning maqsadi — bo‘lajak tarix o‘qituvchilarida tarixiy tafakkurni rivojlantirish muammosini o‘rganishning nazariy-metodologik asosini tashkil etuvchi to‘rt yondashuvni tizimli tahlil qilish va ularning o‘zaro bog‘liqligini asoslashdir.

Adabiyotlar sharhi. L.fon Bertalanffi tomonidan asoslangan umumiy tizimlar nazariyasi [1] istalgan murakkab hodisani, jumladan pedagogik jarayonlarni, o‘zaro bog‘liq elementlardan tashkil topgan yaxlit tizim sifatida tahlil qilish zaruratini ilgari

suradi. Bu yondashuv tarixiy tafakkurni alohida-alohida ko‘nikmalar yig‘indisi emas, balki bir-biri bilan bog‘liq komponentlardan iborat yaxlit tizim sifatida ko‘rish imkonini beradi. L.Vygotskiy [2] va A.Leontiev [3] tomonidan ishlab chiqilgan faoliyat nazariyasi bilimning faoliyat jarayonida shakllanishini asoslaydi — bu tarixiy tafakkurni ham faqat bilim sifatida emas, balki manba bilan ishlash, tahlil qilish, loyihalash kabi faoliyat turlari orqali rivojlanadigan sifat sifatida talqin etish uchun nazariy zamin yaratadi. I.Zimnyaya [4] va A.Xutorskoy [5] tomonidan rivojlantirilgan kompetensiyaviy yondashuv ta’lim natijasini mavhum bilim emas, balki aniq faoliyatda namoyon bo‘ladigan kompetentlilik sifatida belgilash zarurligini ta’kidlaydi. J.Piaje [6] va J.Bruner [7] asoslagan konstruktivizm nazariyasi esa bilimning tashqaridan tayyor holda uzatilmasligini, balki bilim oluvchining o‘zi tomonidan faol tarzda quriлishini ko‘rsatadi. S.Uaynburg [8] va P.Seyshas bilan T.Morton [9] tomonidan ishlab chiqilgan tarixiy tafakkur nazariyalari mazkur to‘rt yondashuvning tarixiy ta’lim kontekstidagi amaliy ifodasi sifatida qaralishi mumkin.

Mazmuni. Har bir yondashuvning tarixiy tafakkur rivojlantirishga qo‘llanilishini aniqroq ko‘rsatish maqsadida quyidagi jadval tuzilgan:

Yondashuv	**Asosiy vakillari**	**Tarixiy tafakkur rivojlantirishga qo‘llanilishi**
Sistemli yondashuv	L.fon Bertalanffi [1]	Ta’lim jarayonini va tarixiy tafakkurning o‘zini o‘zaro bog‘liq komponentlardan iborat yaxlit tizim sifatida ko‘rish; tarixiy voqealarni izolyatsiyalangan emas, tizim ichidagi elementlar sifatida tahlil qilish
Faoliyatga asoslangan yondashuv	L.Vygotskiy [2], A.Leontiev [3]	Tarixiy tafakkur tayyor bilim sifatida emas, balki manba bilan ishlash, tahlil qilish va loyihalash faoliyati jarayonida shakllanadigan sifat sifatida talqin etiladi
Kompetensiyaviy yondashuv	I.Zimnyaya [4], A.Xutorskoy [5]	Tarixiy tafakkur alohida bilim emas, balki kasbiy-pedagogik kompetentlilikning integrativ

Yondashuv	Asosiy vakillari	Tarixiy tafakkur rivojlantirishga qo‘llanilishi
		tarkibiy qismi sifatida, aniq faoliyat natijasi orqali baholanadigan sifat sifatida qaraladi
Konstruktivistik yondashuv	J.Piaje [6], J.Bruner [7]	Talaba tarixiy bilimni tayyor holda qabul qilmaydi, balki manbalar, tajriba va ijtimoiy muloqot orqali mustaqil quradi; virtual muzey resurslari bu qurilish jarayoni uchun boy muhit yaratadi

Yuqoridagi tahlildan ko‘rinib turibdiki, to‘rt yondashuv bir-birini istisno qilmaydi, aksincha, bir-birini to‘ldiradi. Sistemli yondashuv tarixiy tafakkurning tuzilishini (komponentlarini) belgilashga, faoliyatga asoslangan yondashuv uning qanday shakllanishini (mexanizmini) tushuntirishga, kompetensiyaviy yondashuv uning qanday baholanishini (natijasini) aniqlashga, konstruktivistik yondashuv esa bilim oluvchining bu jarayondagi faol rolini asoslashga xizmat qiladi. Mazkur to‘rt yondashuvning uyg‘unlashtirilgan qo‘llanilishi tarixiy tafakkurni rivojlantirishga qaratilgan pedagogik modelni loyihalashning ilmiy-nazariy zaminini tashkil etadi.

Natijalar. O‘tkazilgan nazariy tahlil natijasida quyidagilar aniqlandi: birinchidan, tarixiy tafakkurni rivojlantirish muammosi bitta emas, balki bir-birini to‘ldiruvchi to‘rt ilmiy yondashuv asosida o‘rganilishi lozim; ikkinchidan, har bir yondashuv tarixiy tafakkurning alohida bir jihatini (tuzilishi, mexanizmi, natijasi yoki sub’ekti) ochib berishga xizmat qiladi; uchinchidan, bu yondashuvlarning uyg‘unlashtirilgan qo‘llanilishi virtual muzey resurslari asosidagi pedagogik model uchun ilmiy jihatdan asoslangan nazariy poydevor yaratadi.

Xulosa va takliflar. Tarixiy tafakkurni rivojlantirish muammosini o‘rganishda nazariy-metodologik asoslarning aniq va tizimli belgilanishi tadqiqotning ilmiy asoslanganligini ta’minlaydigan muhim shartdir. Shu munosabat bilan quyidagi takliflar ilgari suriladi:

1. Pedagogika yo‘nalishidagi dissertatsiya va maqolalarda nazariy yondashuvlarni sodda ro‘yxat sifatida emas, balki tadqiqot predmeti bilan bog‘lab, ularning har birining aniq vazifasini ko‘rsatgan holda taqdim etish.

2. Sistemli, faoliyatga asoslangan, kompetensiyaviy va konstruktivistik yondashuvlarni tarix o‘qitish metodikasi fani dasturida nazariy blok sifatida alohida yoritish.

3. Ushbu to‘rt yondashuv asosida ishlab chiqilgan nazariy modellarni amaliy pedagogik modellar (masalan, virtual muzeylar asosidagi to‘rt blokli model) bilan bog‘lab, nazariya va amaliyot o‘rtasidagi izchillikni ta’minlash.

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DIFFERENTSIATSIYALASHGAN TA’LIM: ZAMONAVIY PEDAGOGIK YONDASHUV

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Annotatsiya. *Maqolada zamonaviy ta'lim tizimida muhim ahamiyatga ega bo'lgan differentsiatsiyalashgan ta'lim konseptsiyasi tahlil qilingan. Differentsiatsiyalashgan ta'lim o'quvchilarning turli xil ehtiyojlariga, qobiliyatlariga va o'rganish uslublariga moslashtirilgan pedagogik yondashuv sifatida qaralgan. Tadqiqotda bu yondashuvning nazariy asoslari, amaliy qo'llanish shakllari va ta'lim samaradorligini oshirishdagi roli yoritilgan.*

Kalit so'zlar: *differentsiatsiyalashgan ta'lim, pedagogik texnologiya, individual yondashuv, o'qitish metodlari, ta'lim samaradorligi*

Annotation. *This article analyzes the concept of differentiated instruction, which holds significant importance in the modern education system. Differentiated instruction is viewed as a pedagogical approach adapted to students' diverse needs, abilities, and learning styles. The study examines the theoretical foundations of this approach, its practical forms of application, and its role in enhancing the effectiveness of education.*

Keywords: *differentiated instruction, pedagogical technology, individual approach, teaching methods, educational effectiveness*

Kirish.

Hozirgi zamon ta'lim tizimi tez sur'atlarda rivojlanib borayotgan jamiyat talablariga javob berishi kerak. Har bir o'quvchi o'ziga xos qobiliyat, qiziqish va o'rganish tezligiga ega. An'anaviy "bir o'lcham hamma uchun" yondashuvi endi samarasiz hisoblanadi. Aynan shu muammolarni hal qilish uchun differentsiatsiyalashgan ta'lim kontseptsiyasi pedagogikada keng qo'llanilmoqda.

Jahon ta'lim tajribasida differentsiatsiyalashgan ta'lim eng samarali pedagogik yondashuvlardan biri sifatida tan olingan. Carol Ann Tomlinson kabi taniqli pedagoglar ushbu yondashuvni har bir o'quvchining o'quv potentsialini maksimal darajada oshirish imkoniyati sifatida tavsiflaydilar.

Differentsiatsiyalashgan ta'limning mohiyati va ta'rifi

Differentsiatsiyalashgan ta'lim - bu o'qituvchilarning turli qobiliyat va ehtiyojlarga ega o'quvchilar guruhiga bir xil dars doirasida o'qitish texnikasi va dars moslashuvlarining keng doirasi. Bu yondashuv o'quvchilarning individual o'rganish ehtiyojlari, qiziqishlari va qobiliyatlariga asoslanib, ta'lim jarayonini moslashtirishni o'z ichiga oladi.

Skandinaviya pedagogika maktabida bu tushuncha “pedagogik differentsiatsiya” nomi bilan tanilgan va o’quvchi xilma-xilligiga mos ravishda o’qitish va o’rganishga yondashuvni qabul qilish asosida qurilgan. Differentsiatsiyalashgan ta’lim o’quvchilarning turli xil o’rganish usullari, turli xil qiziqishlari va turli xil javob berish usullarini tan olgan holda, har bir o’quvchining o’sishini maksimal darajada oshirishga intiladi.

Differentsiatsiyaning asosiy yo’nalishlari

1. Mazmun differentsiatsiyasi

Mazmun differentsiatsiyasi o’quvchilarning nimani o’rganishlari yoki qanday qilib bilimga ega bo’lishlari bilan bog’liq. O’qituvchilar o’quvchilarning individual imkoniyatlariga qarab turli xil o’quv materiallaridan foydalanadilar. Masalan:

- Turli darajadagi o’qish materiallaridan foydalanish
- Vizual vositalar, xaritalar, grafik tashkilotchilarni taqdim etish
- Moslashuvchan guruhlar va audio kitoblardan foydalanish
- Turli internet manbalariga kirish imkoniyatini berish

2. Jarayon differentsiatsiyasi

Jarayon differentsiatsiyasi o’quvchilarning qanday o’rganishi bilan bog’liq. Bu o’quvchilarga o’zlari o’rgangan narsalarni tushunishga yordam beradigan faoliyatlardir:

- Strategik guruhlashtirish
- Vizual, eshitish yoki kinestik darslarni taqdim etish
- Turli ko’nikma va qobiliyatga ega o’quvchilar bilan ishlashda turli xil qo’llab-quvvatlash darajasini taklif qiluvchi scaffolding usulidan foydalanish

3. Mahsulot differentsiatsiyasi

Bu yondashuv o’quvchilarga o’zlari bilgan narsalarini namoyish qilishda moslashuvchanlik beradi:

- Og’zaki tushuntirish imkoniyati
- Yozma hisobot tayyorlash
- Ijodiy loyihalar

- Turli baholash shakllari (testlar, loyihalar, taqdimotlar, portfellar)

4. O'quv muhiti differentsiatsiyasi

O'quv muhitini moslashtirish o'quvchilarning o'zlarini qulayroq his qilishlariga yordam beradi:

- Muqobil o'tirish variantlarini taklif qilish
- Sinfdagi o'quvchilarning madaniy xilma-xilligini aks ettiruvchi materiallar
- Mustaqil ish uchun ko'rsatmalar yaratish

Pedagogik asoslari va nazariy yondashuvlar

Differentsiatsiyalashgan ta'limning pedagogik asoslari har bir o'quvchining noyob o'rganish ehtiyojlari, qiziqishlari va qobiliyatlariga ega ekanligiga ishonchdan kelib chiqadi. Bu yondashuv konstruktivizm tamoyillariga asoslangan bo'lib, o'quvchining faol bilim egallashiga xizmat qiladi.

B.L. Farberman pedagogik texnologiyani o'qitishga o'ziga xos yangicha innovatsion yondashuv sifatida tavsiflab, uni barkamol insonni shakllantirish faoliyati deb ta'riflagan. Differentsiatsiyalashgan ta'lim ham ana shu tamoyillarni qo'llab-quvvatlab, har bir o'quvchining individual o'sish yo'lini yaratishga qaratilgan.

Amaliy qo'llash va samaradorligi

Zamonaviy tadqiqotlar differentsiatsiyalashgan ta'limning samaradorligini tasdiqlaydi. Masalan, aralash ta'lim usullarining an'anaviy ta'lim shakllariga nisbatan samaradorligi 198 ta tadqiqot asosida 33,678 talaba ishtirokida o'tkazilgan meta-tahlil natijasiga ko'ra, o'rtacha 0.50 effekt o'zgarishi bilan belgilangan.

Differentsiatsiyalashgan ta'limni amalga oshirishda quyidagi prinsiplarga rioya qilish zarur:

1. **Doimiy baholash** - diagnostik, formativ va yig'ma baholash orqali o'quvchi ehtiyojlarini aniqlash
2. **Moslashuvchan guruhlash** - o'quvchilarni vazifa va maqsadga qarab turli guruhlarga ajratish
3. **O'qituvchi tajribasi** - o'qituvchilar professional rivojlanishi va refleksiya qilishi

4. **Texnologiyadan foydalanish** - zamonaviy raqamli vositalarni qo'llash

Qiyinchiliklar va yechimlar

Differentsiatsiyalashgan ta'limni joriy etishda bir qator qiyinchiliklar mavjud:

- **O'qituvchi tayyorgarligi** - samarali differentsiatsiya yanada murakkab va yuqori ixtisoslashtirilgan o'qitish metodlarini talab qiladi
- **Katta sinflar** - ko'p sonli o'quvchilarga individual yondashuv qiyinchilik tug'dirishi mumkin
- **Resurslar etishmasligi** - turli xil o'quv materiallarini tayyorlash vaqt talab qiladi

Biroq, bu muammolarni to'g'ri qo'llab-quvvatlash, professional rivojlanish va hamkorlik orqali hal qilish mumkin. Muhimi, differentsiatsiyalashgan ta'lim har bir o'quvchi uchun alohida kurs yaratish emas, balki turli xil o'quvchilarni samarali o'qitish uchun o'qitish texnikasini o'zgartirish ekanligini tushunishdir.

O'zbekiston ta'lim tizimida qo'llash imkoniyatlari

O'zbekiston ta'lim tizimida ham differentsiatsiyalashgan yondashuvdan foydalanish katta istiqbolga ega. Davlat ta'lim standartlari va zamonaviy pedagogik texnologiyalarni joriy etish bo'yicha olib borilayotgan islohotlar bu yondashuvni qo'llash uchun qulay sharoit yaratmoqda.

Ta'lim jarayonida interfaol metodlardan foydalanish, guruhlar bilan ishlash, munozara, muammoli o'qitish, aqliy hujum kabi metodlar o'quvchilar faolligini oshiradi va differentsiatsiyalashgan yondashuvni amalga oshirishga yordam beradi. Bu metodlar asosida olib borilgan darslar vaqt tejamkorligi bilan birga, yangi bilimlarni o'quvchilarga samarali yetkazib beradi.

Xulosa

Differentsiatsiyalashgan ta'lim - bu zamonaviy pedagogikaning eng muhim yondashuvlaridan biri bo'lib, har bir o'quvchining individual ehtiyojlariga, qobiliyatiga va o'rganish uslubiga mos ta'lim jarayonini tashkil etishni ta'minlaydi. Bu yondashuv nafaqat ta'lim sifatini oshiradi, balki o'quvchilarning motivatsiyasini, faolligini va muvaffaqiyatini ham oshiradi.

Differentsiatsiyalashgan ta’limni samarali amalga oshirish uchun o’qituvchilarning professional tayyorgarligi, doimiy baholash tizimi, moslashuvchan guruhlash va zamonaviy texnologiyalardan foydalanish zarur. O’zbekiston ta’lim tizimida bu yondashuvni keng joriy etish orqali har bir o’quvchining individual potentsialini ro’yobga chiqarish va barkamol avlod tarbiyalash mumkin.

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BO‘LAJAK PEDAGOGLARDA INGLIZ TILIDA YOZMA NUTQ KOMPETENSIYASINI SHAKLLANTIRISHDA PSIXOLOGIK-PEDAGOGIK OMILLARNING O‘RNI

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Annotatsiya:*Mazkur maqolada bo‘lajak pedagoglarda ingliz tilida yozma nutq kompetensiyasini shakllantirishga ta'sir etuvchi psixologik-pedagogik omillar tahlil qilingan. Xususan, motivatsiya, refleksiya, tanqidiy fikrlash, kognitiv jarayonlar, pedagogik hamkorlik hamda zamonaviy ta'lim texnologiyalarining yozma nutqni rivojlantirishdagi o‘rni ilmiy-nazariy jihatdan asoslangan. Shuningdek, yozma nutq kompetensiyasini shakllantirishda o‘qituvchi faoliyati, talabaning mustaqil ta'limi va interfaol metodlardan foydalanishning didaktik imkoniyatlari yoritilgan. Tadqiqot natijalari psixologik va pedagogik omillarni hisobga olgan holda tashkil etilgan ta'lim jarayoni yozma nutq sifatini oshirishda muhim ahamiyat kasb etishini ko‘rsatadi.*

Kalit so‘zlar: *yozma nutq kompetensiyasi, psixologik omillar, pedagogik omillar, motivatsiya, refleksiya, tanqidiy fikrlash, ingliz tili, kompetensiyaviy yondashuv.*

Abstract. *This article analyzes the psychological and pedagogical factors influencing the development of English written communication competence in pre-service teachers. In particular, the study provides a theoretical and scientific justification for the role of motivation, reflection, critical thinking, cognitive processes, pedagogical collaboration, and modern educational technologies in the development of written communication skills. Furthermore, it highlights the didactic potential of teachers' professional activities, students' independent learning, and the use of interactive teaching methods in fostering written communication competence. The findings indicate that an educational process organized with due consideration of psychological and pedagogical factors plays a significant role in improving the quality of students' written communication.*

Keywords: *written communication competence, psychological factors, pedagogical factors, motivation, reflection, critical thinking, English language, competency-based approach*

Kirish. Bugungi kunda oliy ta'lim tizimini modernizatsiya qilish, xalqaro ta'lim standartlariga mos mutaxassislarni tayyorlash hamda xorijiy tillarni o‘qitish sifatini oshirish davlat siyosatining ustuvor yo‘nalishlaridan biri hisoblanadi. Ayniqsa, bo‘lajak pedagoglarning ingliz tilida og‘zaki va yozma muloqot kompetensiyasini

rivojlantirish ularning kelgusidagi kasbiy faoliyatini samarali tashkil etishda muhim omil bo‘lib xizmat qiladi.

Yozma nutq kompetensiyasi xorijiy tilni o‘qitishning eng murakkab va ko‘p bosqichli tarkibiy qismlaridan biridir. Mazkur kompetensiya grammatik va leksik bilimlarni egallash bilangina cheklanmaydi. U mantiqiy fikrlash, axborotni tahlil qilish, ijodiy yondashish, tanqidiy baholash va fikrni yozma shaklda aniq hamda izchil ifodalash kabi murakkab intellektual faoliyatni ham o‘z ichiga oladi.

Shu sababli yozma nutq kompetensiyasini shakllantirishda psixologik va pedagogik omillarni chuqur o‘rganish dolzarb ilmiy muammolardan biri hisoblanadi.

Psixologik omillarning yozma nutqni shakllantirishdagi ahamiyati

Yozma nutqni egallash avvalo talabaning psixologik tayyorgarligi bilan chambarchas bog‘liq. Psixolog olimlar fikriga ko‘ra, har qanday nutq faoliyati motivatsiya, tafakkur, xotira, diqqat, tasavvur va emotsional holatlarning uyg‘un faoliyati natijasida shakllanadi.

Yozma nutqni rivojlantirishga ta'sir etuvchi asosiy psixologik omillar quyidagilardan iborat:

- ichki va tashqi motivatsiya;
- tanqidiy fikrlash;
- refleksiv faoliyat;
- ijodiy tafakkur;
- kognitiv strategiyalar;
- o‘z-o‘zini nazorat qilish;
- o‘ziga bo‘lgan ishonch.

Talabaning ingliz tilini o‘rganishga bo‘lgan ichki qiziqishi qanchalik yuqori bo‘lsa, yozma topshiriqlarni bajarish sifati ham shunchalik yuqori bo‘ladi. Ichki motivatsiyaga ega bo‘lgan talabalar yangi lug‘at birliklarini faol o‘zlashtiradi, grammatik qoidalardan samarali foydalanadi va mustaqil ravishda matn yaratishga intiladi.

Shuningdek, refleksiya yozma nutqni rivojlantirishning ajralmas tarkibiy qismi hisoblanadi. Talabaning o‘z yozgan matnini qayta o‘qib chiqishi, undagi uslubiy va grammatik kamchiliklarni aniqlashi hamda ularni mustaqil tuzatishi yozma kompetensiyaning rivojlanishiga xizmat qiladi.

Pedagogik omillarning ahamiyati

Bo‘lajak pedagoglarda yozma nutq kompetensiyasini shakllantirish ko‘p jihatdan ta'lim jarayonining qanday tashkil etilishiga bog‘liq.

Pedagogik omillar quyidagilarni o‘z ichiga oladi:

- kompetensiyaga asoslangan ta'lim;
- kommunikativ yondashuv;
- interfaol metodlardan foydalanish;
- differensial ta'lim;
- individual yondashuv;
- formatif baholash;
- muntazam teskari aloqa (feedback).

O‘qituvchi zamonaviy ta'lim jarayonida bilim beruvchi emas, balki ta'lim jarayonini tashkil etuvchi, yo‘naltiruvchi va motivatsiya beruvchi shaxs sifatida faoliyat yuritadi. Ayniqsa, yozma topshiriqlarni bajarishda o‘qituvchining konstruktiv tavsiyalari talabalar rivojlanishida muhim o‘rin tutadi.

Motivatsiyani shakllantirishning metodik yo‘llari

Yozma nutqni rivojlantirish uchun motivatsion muhit yaratish zarur.

Buning uchun:

- real hayotiy vaziyatlarga asoslangan topshiriqlar berish;
- kasbiy faoliyat bilan bog‘liq esse va hisobotlar yozdirish;
- elektron portfoliolar yuritish;
- xalqaro til imtihonlari formatidagi mashqlarni qo‘llash;
- guruhli loyihalar tashkil etish maqsadga muvofiqdir.

Mazkur usullar talabalarni mustaqil fikrlashga undaydi hamda yozma faoliyatga nisbatan ijobiy munosabatni shakllantiradi.

Interfaol metodlarning imkoniyatlari

Yozma nutq kompetensiyasini rivojlantirishda quyidagi metodlar samarali hisoblanadi:

- Brainstorming;
- Think–Pair–Share;
- Peer Review;
- Collaborative Writing;
- Case Study;
- Project Based Learning;
- Problem Based Learning;
- Fishbone;
- SWOT tahlili.

Ayniqsa, **Peer Review** usuli orqali talabalar bir-birining yozma ishlarini baholab, mavjud kamchiliklarni aniqlashni va ilmiy asoslangan tavsiyalar berishni o‘rganadilar. Bu esa tanqidiy fikrlashni rivojlantirish bilan bir qatorda akademik yozuv madaniyatini ham shakllantiradi.

Zamonaviy raqamli texnologiyalarning o‘rni

Bugungi raqamli ta'lim muhiti yozma nutq kompetensiyasini rivojlantirish uchun keng imkoniyatlar yaratmoqda.

Google Classroom, Moodle, Microsoft Teams, Padlet, Google Docs kabi platformalar orqali talabalar hamkorlikda matn yaratish, tahrirlash va muhokama qilish imkoniyatiga ega bo‘ladilar.

Bundan tashqari, Grammarly, Cambridge Write & Improve hamda sun'iy intellekt asosidagi vositalardan oqilona foydalanish grammatik aniqlikni, uslubiy mukammallikni va yozma nutq sifatini oshirishga xizmat qiladi.

Yozma nutq kompetensiyasini baholash

Yozma nutqni baholash quyidagi mezonlar asosida amalga oshirilishi tavsiya etiladi:

- mazmunning to‘liqligi;

- mantiqiy izchillik;
- grammatik to‘g‘rilik;
- lug‘at boyligi;
- uslubiy moslik;
- imlo va punktuatsiya;
- kommunikativ maqsadga muvofiqlik.

Mazkur mezonlar asosida olib borilgan formatif baholash talabaga o‘z ustida muntazam ishlash imkoniyatini beradi.

Xulosa

Tadqiqot natijalari shuni ko‘rsatadiki, bo‘lajak pedagoglarda ingliz tilida yozma nutq kompetensiyasini shakllantirish murakkab va ko‘p omilli pedagogik jarayondir. Ushbu jarayonning muvaffaqiyati talabaning psixologik tayyorgarligi, ichki motivatsiyasi, tanqidiy va ijodiy fikrlashi, refleksiv faoliyati hamda ta'lim jarayonining zamonaviy pedagogik texnologiyalar asosida tashkil etilishiga bevosita bog‘liq.

Shuningdek, kompetensiyaga asoslangan ta'lim, kommunikativ yondashuv, interfaol metodlar va raqamli ta'lim vositalaridan kompleks foydalanish yozma nutq kompetensiyasini samarali rivojlantirishga xizmat qiladi. Shu bois oliy ta'lim muassasalarida ingliz tilini o‘qitish jarayonida psixologik-pedagogik omillarni hisobga olgan metodik tizimni joriy etish bo‘lajak pedagoglarning kasbiy kompetentligini oshirishning muhim sharti hisoblanadi.

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ADAPTIV TA‘LIMNING PEDAGOGIK NAZARIYALARI VA ZAMONAVIY RIVOJLANISH TENDENSIYALARI

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Annotatsiya. *Mazkur maqolada adaptiv ta'limning pedagogik nazariyalari, uning shakllanish bosqichlari hamda zamonaviy rivojlanish tendensiyalari ilmiy-pedagogik nuqtai nazardan tahlil qilingan. Adaptiv ta'limning behaviorizm, kognitivizm, konstruktivizm, sotsiokonstruktivizm va kompetensiyaviy yondashuv kabi nazariy asoslari yoritilib, ularning o'quv jarayonini individuallashtirishdagi o'rni ochib berilgan. Shuningdek, sun'iy intellekt, katta ma'lumotlar (Big Data), o'quv analitikasi (Learning Analytics), mashinali o'qitish (Machine Learning) hamda raqamli ta'lim platformalari asosida adaptiv ta'limning zamonaviy rivojlanish yo'nalishlari tahlil etilgan. Tadqiqot natijalari adaptiv ta'lim texnologiyalarining ta'lim sifati, talabalarning individual ta'lim trayektoriyasini shakllantirish va shaxsga yo'naltirilgan ta'limni rivojlantirishdagi ilmiy-amaliy ahamiyatini asoslaydi.*

Kalit so'zlar: *adaptiv ta'lim, pedagogik nazariya, behaviorizm, kognitivizm, konstruktivizm, kompetensiyaviy yondashuv, sun'iy intellekt, o'quv analitikasi, shaxsga yo'naltirilgan ta'lim, raqamli ta'lim.*

Abstract. *This article analyzes the pedagogical theories of adaptive learning, its stages of development, and contemporary development trends from a scientific and pedagogical perspective. It explores the theoretical foundations of adaptive learning, including behaviorism, cognitivism, constructivism, social constructivism, and the competency-based approach, highlighting their roles in the individualization of the learning process. Furthermore, the study examines the contemporary directions of adaptive learning development based on artificial intelligence, Big Data, Learning Analytics, Machine Learning, and digital learning platforms. The findings substantiate the scientific and practical significance of adaptive learning technologies in improving the quality of education, developing students' individualized learning trajectories, and advancing learner-centered education.*

Keywords: *adaptive learning, pedagogical theory, behaviorism, cognitivism, constructivism, competency-based approach, artificial intelligence, Learning Analytics, learner-centered education, digital learning.*

Kirish. Jahon ta'lim tizimida raqamli transformatsiya jarayonlarining jadallashuvi ta'limni tashkil etishning yangi pedagogik yondashuvlarini ishlab chiqishni taqozo etmoqda. An'anaviy bir xil mazmundagi ta'lim modeli o'rnini tobora shaxsning individual ehtiyojlari, qobiliyati, bilim darajasi va o'rganish sur'atini hisobga oluvchi adaptiv ta'lim tizimlari egallamoqda. Bunday yondashuv o'quvchilarning ta'lim natijalarini yaxshilash, mustaqil ta'lim faoliyatini rivojlantirish hamda ta'lim samaradorligini oshirishning muhim omili sifatida e'tirof etilmoqda.

Adaptiv ta'lim g'oyasi uzoq tarixiy rivojlanish yo'lini bosib o'tgan bo'lib, uning ilmiy asoslari behaviorizm, kognitivizm, konstruktivizm va sotsiokonstruktivizm nazariyalari bilan uzviy bog'liqdir. Mazkur nazariyalar ta'lim jarayonida o'quvchining individual xususiyatlarini hisobga olish, faol bilim hosil qilish, refleksiya va hamkorlikda o'qitish tamoyillarini shakllantirishga xizmat qilgan. XXI asrga kelib esa sun'iy intellekt, o'quv analitikasi, katta ma'lumotlar texnologiyalari va mashinali o'qitish algoritmlarining rivojlanishi adaptiv ta'limni yangi bosqichga olib chiqdi. Natijada ta'lim mazmunini, topshiriqlar murakkabligini, baholash mezonlarini va o'quv trayektoriyasini real vaqt rejimida moslashtirish imkoniyati yuzaga keldi.

Bugungi kunda UNESCO, OECD va boshqa xalqaro tashkilotlar ta'limni individuallashtirish, inklyuzivlikni ta'minlash hamda raqamli kompetensiyalarni rivojlantirishni zamonaviy ta'lim siyosatining ustuvor yo'nalishlari sifatida belgilamoqda. Shu nuqtai nazardan adaptiv ta'lim nafaqat pedagogik texnologiya, balki shaxsga yo'naltirilgan ta'lim paradigmasining muhim tarkibiy qismi sifatida ham qaralmoqda.

Mazkur maqolaning maqsadi adaptiv ta'limning pedagogik nazariyalarini tizimli tahlil qilish, uning ilmiy-metodologik asoslarini ochib berish hamda sun'iy intellekt va raqamli texnologiyalar ta'sirida shakllanayotgan zamonaviy rivojlanish tendensiyalarini ilmiy jihatdan asoslashdan iborat.

Adaptiv ta'limning pedagogik nazariyalari va zamonaviy rivojlanish tendensiyalari

Adaptiv ta'lim nazariyasi pedagogika, psixologiya, informatika va sun'iy intellektning kesishgan nuqtasida shakllangan integrativ ilmiy yo'nalish hisoblanadi. Uning metodologik asoslari turli pedagogik nazariyalarga tayangan holda rivojlanib, zamonaviy axborot-kommunikatsiya texnologiyalari bilan boyitilgan.

Adaptiv ta'limning pedagogik nazariyalari

Behaviorizm

Adaptiv ta'limning dastlabki nazariy poydevori behaviorizm bilan bog'liq.

Ushbu nazariyaga ko'ra, o'qitish jarayoni tashqi ta'sir va rag'batlantirish orqali boshqariladi. B. F. Skinnerning dasturlashtirilgan ta'lim modeli individual sur'atda o'qitish, tezkor qayta aloqa va bosqichma-bosqich o'zlashtirish tamoyillarini ilgari surgan. Mazkur tamoyillar keyinchalik adaptiv elektron ta'lim tizimlarini yaratishda muhim metodologik asos bo'lib xizmat qildi.

Kognitivizm

Kognitivizm nazariyasi o'quvchining axborotni qabul qilish, qayta ishlash va saqlash jarayonlariga alohida e'tibor qaratadi. Ushbu yondashuvga ko'ra, adaptiv ta'lim tizimlari talabaning bilim darajasi, fikrlash strategiyasi va kognitiv rivojlanish xususiyatlarini aniqlashi hamda o'quv materiallarini shunga mos ravishda taqdim etishi zarur.

Konstruktivizm

Konstruktivistik yondashuvga ko'ra, bilim tayyor holda berilmaydi, balki o'quvchi tomonidan faol ravishda quriladi. Adaptiv ta'lim platformalari aynan shu tamoyilga asoslanib, interaktiv topshiriqlar, muammoli vaziyatlar va refleksiya vositalari orqali individual bilimlarni shakllantirishga xizmat qiladi.

Konnektivizm

Raqamli ta'lim muhitining rivojlanishi natijasida konnektivizm nazariyasi vujudga keldi. Ushbu nazariya bilimlarni raqamli tarmoqlar, internet resurslari va sun'iy intellekt tizimlari bilan o'zaro aloqada egallashni ta'kidlaydi. Zamonaviy adaptiv platformalar bulutli texnologiyalar, tavsiya tizimlari va generativ sun'iy intellekt yordamida uzluksiz o'qitishni qo'llab-quvvatlaydi.

Kompetensiyaviy yondashuv

Kompetensiyaga asoslangan ta'lim adaptiv pedagogikaning eng muhim nazariy asoslaridan biridir. Bu yondashuvda asosiy mezon o'quv materialini tugatish emas, balki talabaning zarur kompetensiyalarni egallashidir. Adaptiv tizimlar o'quvchining natijalarini tahlil qilib, keyingi o'quv faoliyatini individual ravishda rejalashtiradi.

Zamonaviy rivojlanish tendensiyalari

So'nggi yillarda adaptiv ta'lim sun'iy intellekt texnologiyalarining rivojlanishi natijasida yangi bosqichga ko'tarildi. Zamonaviy platformalar nafaqat o'quvchining bilim darajasini baholaydi, balki uning o'qish uslubi, motivatsiyasi va kelajakdagi o'quv natijalarini ham prognoz qilishi mumkin.

Learning Analytics

Learning Analytics adaptiv ta'limning muhim tarkibiy qismi bo'lib, talabalarning elektron ta'lim muhitidagi faoliyatiga oid ma'lumotlarni yig'ish, qayta ishlash va tahlil qilishga xizmat qiladi. Ushbu ma'lumotlar asosida talabaning o'zlashtirish darajasi, qiyinchiliklari va ehtimoliy muvaffaqiyati aniqlanadi.

Machine Learning

Mashinali o'qitish algoritmlari adaptiv platformalarga katta hajmdagi ma'lumotlardan o'rganish imkonini beradi. Natijada tizim har bir talaba uchun eng maqbul o'quv materiali, topshiriqlar murakkabligi va baholash usullarini avtomatik tanlay oladi.

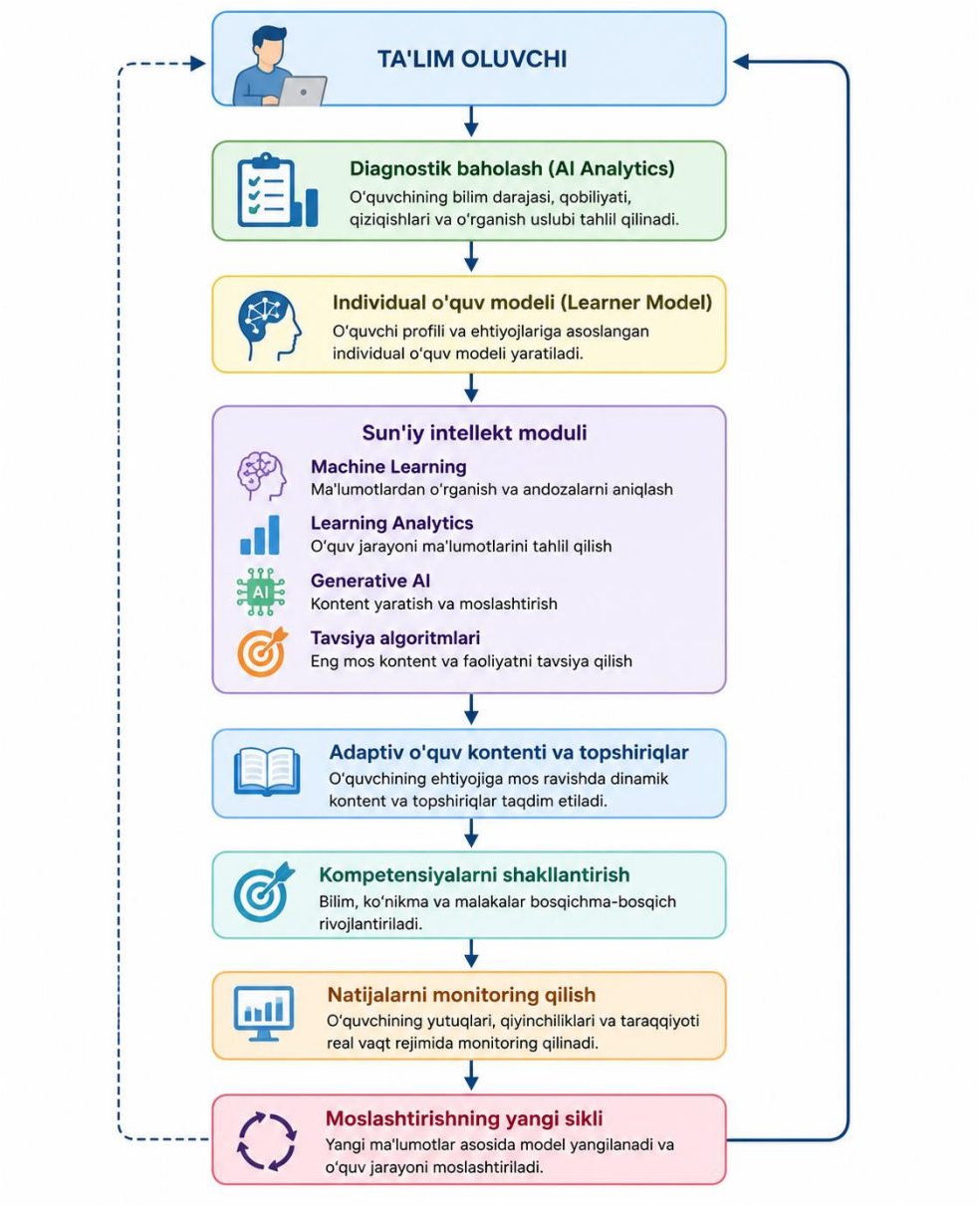
Generativ sun'iy intellekt

Generativ sun'iy intellekt (Generative AI) adaptiv ta'lim rivojlanishining yangi bosqichini boshlab berdi. Ushbu texnologiyalar o'quv materiallarini yaratish, testlar tuzish, individual tavsiyalar berish, murakkab mavzularni soddalashtirib tushuntirish va talaba bilan tabiiy tilda muloqot qilish imkoniyatini yaratmoqda. Shu bilan birga, o'qituvchining pedagogik faoliyatini qo'llab-quvvatlovchi intellektual yordamchi sifatida ham xizmat qilmoqda.

Explainable Artificial Intelligence (XAI)

Sun'iy intellektning ta'limga keng joriy etilishi qarorlarning shaffofligi masalasini ham dolzarb qilmoqda. Explainable AI texnologiyalari adaptiv tizim tavsiyalarining qanday ma'lumotlar va mezonlar asosida shakllanganini tushuntirish imkonini beradi. Bu esa tizimga bo'lgan ishonchni oshirishga xizmat qiladi.

Pedagogical Evolution of Adaptive Learning Model



Ushbu modelning ilmiy mohiyati: Ushbu model adaptiv ta'limni uzluksiz sikl sifatida tavsiflaydi. Unda sun'iy intellekt o'quvchini diagnostika qilish, individual o'quv yo'lini shakllantirish, moslashtirilgan kontent yaratish va natijalarni qayta tahlil qilish orqali ta'lim jarayonining uzluksiz takomillashuvini ta'minlaydi.

Xulosa. Tahlillar shuni ko'rsatadiki, adaptiv ta'lim dasturlashtirilgan o'qitishdan boshlab sun'iy intellekt asosidagi intellektual pedagogik ekotizimlargacha bo'lgan murakkab evolyutsion rivojlanish yo'lini bosib o'tgan. Bugungi kunda adaptiv ta'lim faqat texnologik yechim emas, balki shaxsga yo'naltirilgan ta'limni ta'minlovchi zamonaviy pedagogik paradigma sifatida qaralmoqda.

Sun'iy intellekt, Learning Analytics va generativ AI texnologiyalarining integratsiyasi o'quv jarayonini individuallashtirish, ta'lim sifati va samaradorligini oshirish hamda kompetensiyaviy yondashuvni amaliyotga joriy etishda muhim omil bo'lib xizmat qiladi.

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INKLYUZIV TA'LIM SHAROITIDA MAXSUS PEDAGOG FAOLIYATI SAMARADORLIGINI OSHIRISHNING PEDAGOGIK SHART-SHAROITLARI

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Annotatsiya. *Ushbu maqolada inklyuziv ta'lim sharoitida maxsus pedagoglar faoliyati samaradorligini oshirishning pedagogik shart-sharoitlari tadqiq etilgan. Tadqiqotda korreksion-adaptiv texnologiyalar asosida ishlab chiqilgan metodik ta'minotning maxsus pedagoglarning kasbiy kompetensiyalarini rivojlantirishdagi samaradorligi tajriba-sinov ishlari orqali asoslangan. Tajriba-sinov ishlari Namangan, Andijon va Farg'ona viloyatlaridagi umumta'lim maktablarida faoliyat yuritayotgan 366 nafar maxsus pedagog ishtirokida amalga oshirildi. Tadqiqot jarayonida motivatsion-qadriyatli, kognitiv-mazmuniy, faoliyatli-texnologik va refleksiv-baholash kompetensiyalari mezonlari asosida baholash ishlari olib borildi. Olingan natijalar korreksion-adaptiv texnologiyalar asosida tashkil etilgan metodik yondashuv maxsus pedagoglar faoliyati samaradorligini oshirishda samarali ekanligini ko'rsatdi. Statistik tahlil natijalari tajriba guruhi ko'rsatkichlarining nazorat guruhiga nisbatan ishonchli darajada yuqori ekanligini tasdiqladi.*

Kalit so'zlar: *inklyuziv ta'lim, maxsus pedagog, korreksion-adaptiv texnologiyalar, pedagogik shart-sharoitlar, kasbiy kompetensiya, alohida ta'lim ehtiyojlari, metodik ta'minot, tajriba-sinov, pedagogik samarador*lik.

Abstract. *This article examines the pedagogical conditions for improving the effectiveness of special educators' activities in an inclusive education environment. The study substantiates the effectiveness of methodological support developed on the basis of corrective-adaptive technologies in improving the professional competencies of special educators through experimental research. The experimental study was conducted with the participation of 366 special educators working in general education schools of Namangan, Andijan, and Fergana regions. During the research, the respondents' motivational-value, cognitive-content, activity-technological, and reflective-evaluative competencies were assessed according to established criteria. The obtained results demonstrated that the methodological approach based on corrective-adaptive technologies effectively contributes to improving the professional*

activity of special educators. Statistical analysis confirmed that the indicators of the experimental group were significantly higher compared to the control group.

Keywords: *inclusive education, special educator, corrective-adaptive technologies, pedagogical conditions, professional competence, students with special educational needs, methodological support, experimental research, educational effectiveness.*

Jahon ta’lim tizimida bugungi kunda inklyuziv ta’limni rivojlantirish, alohida ta’lim ehtiyojlari bo‘lgan o‘quvchilarga sifatli ta’lim va korreksion-pedagogik yordam ko‘rsatish dolzarb yo’nalishlardan biri sifatida namoyon bo’lmoqda. Ayniqsa, inklyuziv ta’lim muhitida ta’lim jarayonini samarali tashkil etishda maxsus pedagoglarning kasbiy faoliyati hamda ular tomonidan qo‘llaniladigan korreksion-adaptiv texnologiyalar muhim ahamiyat kasb etadi. Ushbu yondashuvlar alohida ta’lim ehtiyojlari bo‘lgan bolalarni umumta’lim muassasalarida samarali ta’lim jarayoniga jalb etish imkonini beradi.

O‘zbekiston Respublikasida inklyuziv ta’limni joriy etish va takomillashtirishga qaratilgan islohotlar maxsus pedagoglar faoliyatiga yangi talablarni qo‘ymoqda. Ulardan yuqori darajadagi kasbiy kompetentlik, innovatsion yondashuvlardan foydalanish, korreksion-rivojlantiruvchi ishlarni samarali tashkil etish hamda ta’lim jarayoni ishtirokchilari bilan hamkorlik qilish talab etiladi. Shu bilan birga, amaliyot tahlillari inklyuziv ta’lim muhitida korreksion-adaptiv texnologiyalarni tizimli va ilmiy asoslangan holda qo‘llash mexanizmlarini yanada takomillashtirish zarurligini ko‘rsatmoqda.

Inklyuziv ta’lim muhitida maxsus pedagoglardan individual yondashuv, ta’lim mazmunini moslashtirish, korreksion ishlarni ta’lim jarayoni bilan uyg‘unlashtirish va zamonaviy pedagogik texnologiyalardan foydalanish talab etiladi. Biroq mavjud tadqiqotlarda maxsus pedagoglar faoliyati samaradorligini oshirishning kompleks modeli, mezonlari va pedagogik shart-sharoitlari yetarlicha ochib berilmagan.

Ushbu tadqiqotning maqsadi inklyuziv ta’lim muhitida korreksion-adaptiv texnologiyalar asosida maxsus pedagoglar faoliyati samaradorligini oshirishga qaratilgan metodik ta’minot samaradorligini tajriba-sinov orqali asoslashdan iborat.

Tadqiqot 2024–2026-yillarda Namangan, Andijon va Farg‘ona viloyatlaridagi umumta’lim maktablarida faoliyat yuritayotgan maxsus pedagoglar ishtirokida amalga oshirildi. Tajriba-sinov ishlari aniqlovchi, shakllantiruvchi va yakunlovchi bosqichlarda tashkil etildi. Tadqiqotda jami **366 nafar** respondent qatnashdi. Shundan **185 nafari tajriba guruhi**, **181 nafari nazorat guruhi**ga jalb etildi.

1-jadval

Tadqiqot ishtirokchilarining tajriba va nazorat guruhlariga taqsimlanishi

Tr	Tajriba-sinov ob`yektlari	Ishtirok etgan **respondentlar** soni		Hammasi
		Tajriba guruhlari	Nazorat guruhlari	
1.	Namangan viloyati	62	60	122
2.	Andijon viloyati	62	61	123
3.	Farg‘ona viloyati	61	60	121
Jami		185	181	366

Tajriba guruhi uchun inklyuziv ta’lim muhitida korreksion-adaptiv texnologiyalar asosida ishlab chiqilgan metodik ta’minot amaliyotga joriy etildi. Nazorat guruhi esa an’anaviy o‘quv jarayoni asosida faoliyat olib bordi. Tadqiqot davomida respondentlarning motivatsion-qadriyatli, kognitiv-mazmuniy, faoliyatli-texnologik va refleksiv-baholash kompetensiyalari baholandi.

Ma’lumotlar kirish va yakuniy diagnostika natijalari asosida yig‘ildi. Statistik tahlilda Microsoft Excel dasturi, Student t-mezoni hamda Pearson χ^2 mezonidan foydalanildi. Statistik ahamiyatlilik darajasi $\mathbf{p < 0,05}$ deb qabul qilindi.

Tajriba yakunida tajriba guruhi respondentlarida ijobiy o‘zgarishlar kuzatildi. Yuqori darajadagi ko‘rsatkichga ega respondentlar ulushi 17 % dan 29 % gacha oshdi, past darajadagi ko‘rsatkichlar esa 45 % dan 34 % gacha kamaydi. Nazorat guruhida esa o‘zgarishlar nisbatan past bo‘ldi.

Statistik tahlil natijalariga ko‘ra, tajriba guruhi o‘rtacha ko‘rsatkichi 1,95 ni, nazorat guruhi esa 1,72 ni tashkil etdi. Student mezoni natijasi ($t=3,2857$; $p<0,05$) va Pearson χ^2 mezoni guruhlar o‘rtasidagi farq statistik jihatdan ishonchli ekanligini

ko‘rsatdi. Ishlab chiqilgan metodikaning samaradorlik ko‘rsatkichi 13,4 % ni tashkil etdi.

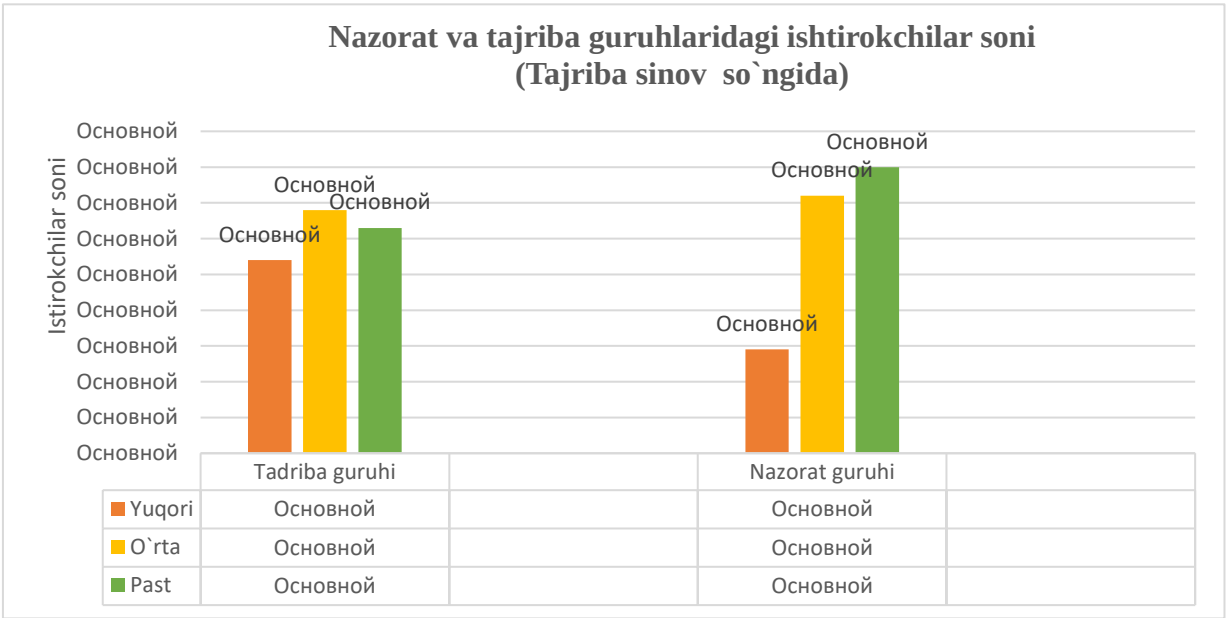
2-jadval

Tajriba-sinov yakunidagi natijalar taqsimoti

Guruhlar	Respondentlar soni	O‘zlashtirish natijalari (% da)		
		yuqori	o‘rta	past
Tajriba guruhi	185	54 29	68 37	63 34
Nazorat guruhi	181	29 16	72 40	80 44

Tajriba yakunida tajriba guruhida yuqori darajadagi respondentlar ulushi 29 % ni tashkil etdi, nazorat guruhida esa 16 % bo'ldi. Past darajadagi respondentlar ulushi tajriba guruhida 34 % gacha kamaydi, nazorat guruhida esa 44 % ni tashkil etdi. Ushbu natijalar korreksion-adaptiv texnologiyalar asosida tashkil etilgan metodikaning samaradorligini ko'rsatdi.

Bu diagrammada quyidagi ko‘rinishni oldi:



1-rasm. Tajriba-sinov yakunidagi natijalar taqsimoti

3-jadval.

Miqdoriy mezonlar ko‘rsatkichlari

№	Ko‘rsatkichlar	Tajriba avvalida	Tajriba oxirida

		Tajriba-guruhi n=185	Nazorat guruhi m=181	Tajriba-guruhi n=185	Nazorat guruhi m=181
1.	O‘rtacha qiymati	1,72	1,68	1,95	1,72
2.	Samaradorlik ko‘rsatkichi	1,023		1,134	
3.	Variasiya koeffisienti(%)	3,16	3,23	2,97	3,11
3.	O‘rtacha qiymatning ishonshlilik oralig‘i	[1,61;1,83]	[1,57;1,79]	[1,84;2,06]	[1,62;1,82]
4.	O‘rtacha qiymat standart xatolik	0,74	0,73	0,79	0,72
5	Pirson statistikasi	0,3832		9,6228	
6.	Styudent statistikasi (T)	0,5195 (0,5195 < 1,96)		3,2857 (3,2857> 1,96)	
7.	Ko‘rsatkichlar xulosasi	H0 faraz rad etiladi		H1 faraz qabul qilinadi	

Statistik tahlil natijalariga ko'ra tajriba guruhi o'rtacha ko'rsatkichi 1,95 ni, nazorat guruhi esa 1,72 ni tashkil etdi. Student mezoni ($t=3,2857$; $p<0,05$) va Pearson χ^2 mezoni natijalari guruhlar o'rtasidagi farq statistik jihatdan ishonchli ekanligini tasdiqladi. Tadqiqot yakunida ishlab chiqilgan metodika samaradorlik ko’rsatkichi 13,4 % ni tashkil etdi.

Olingan natijalar inklyuziv ta’lim muhitida korreksion-adaptiv texnologiyalarni tizimli qo‘llash maxsus pedagoglarning kasbiy kompetensiyalarini rivojlantirishga sezilarli ta’sir ko‘rsatishini tasdiqladi. Ayniqsa motivatsion, kognitiv va faoliyatli kompetensiyalar bo‘yicha kuzatilgan ijobiy dinamikalar ishlab chiqilgan metodik ta’minotning amaliy samaradorligini ko‘rsatdi.

Statistik tahlil natijalari tajriba guruhi ko‘rsatkichlarining nazorat guruhiga nisbatan ishonchli darajada yuqori ekanligini tasdiqladi. Bu esa ishlab chiqilgan metodikaning inklyuziv ta’lim amaliyotida qo‘llanishi maxsus pedagoglar faoliyatini takomillashtirishga xizmat qilishini ko‘rsatadi.

Natijalar tadqiqot boshida ilgari surilgan ilmiy farazni tasdiqladi hamda ishlab chiqilgan metodik yondashuvni malaka oshirish kurslari, oliy ta’lim muassasalari va umumta’lim maktablari amaliyotiga joriy etish imkoniyatini ko‘rsatdi.

Tadqiqot natijalari inklyuziv ta’lim muhitida korreksion-adaptiv texnologiyalar asosida ishlab chiqilgan metodik ta’minot maxsus pedagoglar faoliyati samaradorligini oshirishda samarali ekanligini ko‘rsatdi. Tajriba guruhi respondentlarining bilim, ko‘nikma va kompetensiya ko‘rsatkichlari nazorat guruhiga nisbatan statistik jihatdan ishonchli darajada yuqori bo‘ldi ($p<0,05$). Tadqiqot davomida aniqlangan **13,4 %** lik o‘sish ishlab chiqilgan metodikaning amaliy samaradorligini tasdiqlaydi. Mazkur metodik yondashuvni inklyuziv ta’lim tizimida maxsus pedagoglarni tayyorlash va ularning malakasini oshirish jarayonlarida qo‘llash tavsiya etiladi.

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HAYOTGA MOSLASHISH YOKI ALOHIDA YONDASHUV BILAN IJTIMOIY HAYOTGA MOSLASHISH

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Annotatsiya: *Ushbu maqolada autizm tushunchasi, uning klinik belgilari va rivojlanish tarixi yoritiladi. Autizmga chalingan bolalar atrof-muhitni o‘ziga xos tarzda qabul qiladi, tashqi ta’sirlarga sezgir bo‘ladi va ijtimoiy muloqotda qiyinchiliklarga duch keladi. Maqolada autizm spektrining ilk klinik tavsiflari, shuningdek, bu holatning shveytsariyalik psixiatr Eygen Bleyler, avstriyalik pediatr Gans Asperger va amerikalik bolalar psixiatr Leo Kanner tomonidan o‘rganilishi batafsil bayon etiladi.Ushbu maqola autizm haqida umumiy tushuncha berish bilan birga, uning tashxislanishi va zamonaviy yondashuvlar asosida tuzatish usullarini ham yoritadi.*

Kalit so'zlar: *autizm , shizofreniya, psixik buzilish, kognitiv funksiyalar, kompleks, muloqot, simptomlar, yuqori funktsional, statik xususiyatlar, dinamik xususiyatlar, emotsional*

Abstract:*This article explores the concept of autism, its clinical symptoms, and its historical development. Children with autism perceive the surrounding world in a unique way, have heightened sensitivity to external stimuli, and face difficulties in social interaction. The article provides a detailed overview of the first clinical descriptions of the autism spectrum and examines the contributions of Swiss psychiatrist Eugen Bleuler, Austrian pediatrician Hans Asperger, and American child psychiatrist Leo Kanner in studying this condition.In addition to providing a general understanding of autism, this article also discusses its diagnosis and modern correction methods based on contemporary approaches.*

Keywords: *autism, schizophrenia, mental disorder, cognitive functions, complex, communication, symptoms, high-functioning, static characteristics, dynamic characteristics, emotional*

KIRISH

Autizm- bu rivojlanishning kompleks buzilishi bo‘lib, ijtimoiy o‘zaro munosabatlar, tilni o‘zlashtirish va emotsional, kognitiv, harakatli va sensor qobiliyatlar hamda bu qobiliyatlarning rivojlanishida orqada qolishning butun bir qator muammolarini o‘z ichiga oladi. Bu bilan bir qatorda ko‘pincha xulqning o‘ziga xos shakllari: bir nuqtada aylanish, o‘yinchoqlarni bir qatorga tizish, so‘zlarni maqsadsiz va ma’nosiz takrorlash. Bunday simptomlar munosabatga kirish, muloqot qilish va fikrlash qobiliyati bilan bog‘liq juda asosiy muammolarning oqibati hisoblanadi. Autizmi bor yoki

autistik sohasida buzilishlari bor bolada til, fikrlash va ijtimoiy ko‘nikmalar, undagi buzilishlar shu spektorning qaysi qismiga tegishli ekaniga bog‘liq.

ASOSIY QISM

Autizmning kelib chiqish sabablari shu kungacha aniqlanmagan. Ta’kidlab o‘tilganidek, ba’zi tadqiqodlar natijasiga ko‘ra 166 kishiga 1 ta autistik sohasida buzilishi bo‘lgan shaxs to‘g‘ri kelmoqda. Ko‘pgina tadqiqotlar shuni ko‘rsatadiki so‘ngi o‘n yillik ko‘rsatkichlar tahliliga ko‘ra autistik sohasida buzilishi bo‘lganlar soni ko‘paygan. Ba’zi tadqiqotlar buning sababini diagnostikaning rivojlanib borayotgani bilan bog‘liqdesa, ko‘pchilik buni autizm va autistik sohasida buzilishi bo‘lganlar soni ortgani sababli deb hisoblaydi. Autizmning sabablari Autizm va autistik sohasidagi buzilishlarning sabablari, aniqlanmagan. Ko‘pgina tadqiqotlar esa genetik faktorlarning rolini tasdiqlaydi (masalan, bunday buzilish bir tuxumli egizaklarda har xil tuxumli egizaklarga nisbatan ko‘proq uchraydi). Bundan, genetik omillar (yoki biologik omillar) autizm va autistik sohasidagi buzilishlar bilan bog‘liq simptomlar majmuini keltirib chiqaradi degan xulosaga kelish mumkin. Bundan tashqari, immun tizim bilan bog‘liq bo‘lgan faktorlar, moddalar almashinuvi va atrof muhitning holatini ham inobatga olish kerak. Shunga qaramay shu kungacha aytizmni keltirib chiqaruvchi yagona sabab aniqlanmadi. Shuning uchun biz autizmning sabablarini ko‘pgina omillarning mutanosibligi deb hisoblaymiz. Genetik yoki perinatal omillar, masalan, bolaning jismoniy zo‘riqish natijasidagi stressga, infeksion kasalliklarga yoki zaharli moddalar ta’siriga moyillikka olib kelishi mumkin. Sabablarni anglashga bunday yangicha yondashuv genetik omillar ta’sirini tan oladi, lekin kasallikning rivojlanish yo‘llarini ko‘p bosqichli jarayon sifatida, o‘zaro bog‘liq muammolarning asta-sekin to‘planib borishi sifatida, ularning og‘irlik darajasini inobatga oladi. Muammolarning keng doirasi Muloqot (kontakt), aloqaning rivojlanishi (jest, so‘z, belgilar bilan), tafakkurning rivojlanishi - autizm va autistik spektorining buzilishida muammoli ekani bilan xarakterlanadi. Rivojlanishning bunday kompleks muammolari turlicha va turli holatlarda namoyon bo‘lishi mumkin. Bir xil tashxisli har bir bolada ham bunday muammolar bir xil darajada namoyon bo‘lavermaydi. Masalan Asperger sindromiga ega bolalar ko‘pincha katta lug‘at boyligiga ega bo‘lib, o‘qishni erta boshlaganlari bilan, so‘zni tushunib o‘rnida, emotsional to‘g‘ri qo‘llay olishda qiynaladilar. Ular so‘zni shunchaki takrorlashlari, yoki uni to‘g‘ridan-to‘g‘ri lug‘aviy ma’noda tushunishlari mumkin. Bundan tashqari, ularga odamlar bilan emotsiya va imo-ishora bilan birga boruvchi muloqot jarayoniga kirishish qiyin kechadi. Muammoning bunday ko‘rinishi motorika sohasida muammosi bo‘lgan bolalarda uchraydi. Nutqiy motorikasida buzilishi bo‘lgan bolalarda: so‘zlarning talaffuzida til va og‘iz muskullari harakati qiyin kechadi. Nutqida va umumiy motorikasida jiddiy muammolari bo‘lgan ba’zi bolalarda kognitiv funktsiyalarda nuqsonlar va

ijtimoiy ko‘nikmalar bo‘lmaganday ko‘rinishi mumkin, aslida esa motorikadagi nuqsonlar mavjud qobiliyatlar va ko‘nikmalarni ro‘yobga chiqarishga imkon bermaydi.

Autizm – bu ruhiy buzilish bo‘lib, u bolalar psixiatriyasi sohasi hisoblanadi. Xalqaro tasniflarda ham autistik spektr buzilishlari bolalar yoshidagi ruhiy buzilishlar qatoriga kiritilgan. Bu ma’lumotni bilish juda muhim. Agar mutaxassislar yoki ota-onalar bolaning xulq-atvorida autistik belgilarni payqasa, ular qayerga murojaat qilish kerakligini aniq bilishlari lozim. Autistik buzilishlar, odatda, bolaning ilk uch yilida paydo bo‘ladi, lekin bu holatni bir yoshdan katta bo‘lgan bolada tashxislash mumkin. Agar bu haqiqiy autistik buzilish bo‘lsa, uch yoshga yetganida bu tashxis tasdiqlanishi kerak. Shuningdek, autizm faqat bolalar yoshida uchraydigan buzilish degan qarash noto‘g‘ri. Bu fikr xalqaro tasniflarda “bolalar autizmi” deb nomlanishi bilan bog‘liq. Ilgari autizm faqat shizofreniya bilan bog‘liq deb hisoblangan va bolalar 18 yoshga yetganidan so‘ng ularga “shizofreniya” tashxisi qo‘yilgan. Lekin bu xato ekanligi keyingi tadqiqotlar bilan isbotlangan.

Hozirgi kunda ma’lumki, autizm va shizofreniya – bir-biriga bog‘liq bo‘lmagan, alohida ruhiy buzilishlardir. Autistik belgilar inson butun umri davomida saqlanishi mumkin. Yana bir keng tarqalgan noto‘g‘ri tushuncha – autizm bolaning tarbiyasiga bog‘liq degan fikr. Ilgari “sovuq onalar” nazariyasi mavjud bo‘lib, unga ko‘ra, ona bolasiga yetarlicha mehr ko‘rsatmasa, bolada autizm rivojlanadi deb o‘ylangan. Lekin bu ilmiy jihatdan isbotlanmagan. Autizm bolaning tarbiyasi, yashash joyi yoki millatiga bog‘liq emas. Hozirgi kunda olimlar autizmning kelib chiqishi genetik mutatsiyalar bilan bog‘liqligini aniqlagan. Bir necha genlar bu jarayonda ishtirok etadi va natijada bosh miya neyronlarining rivojlanishi buziladi. Ya’ni bola autistik buzilish bilan tug‘iladi. Bu holat, asosan, dunyoni idrok qilish, bilish jarayonlari va ijtimoiy xulq-atvorida namoyon bo‘ladi. So‘nggi yillarda autistik spektr buzilishiga chalingan bolalar soni ortib borayotgani kuzatilmoqda. Bu faqat tashxislash yaxshilangani bilan izohlanmaydi. Masalan, AQShdagi Kasalliklarni nazorat qilish va oldini olish markazi ma’lumotlariga ko‘ra, har 84 boladan bittasi autizm spektri buzilishiga chalingan. Shuningdek, o‘g‘il bolalarda autizm qiz bolalarga nisbatan 4-5 barobar ko‘proq uchraydi. 20 yil oldin autizm 500 boladan bittasida uchragan bo‘lsa, hozir bu ko‘rsatkich ancha yuqori. Olimlar bu holatni “autizm pandemiyasi” deb ham atamoqda.Bu raqamlar autizm haqida to‘g‘ri tushunchaga ega bo‘lish va uni erta aniqlash qanchalar muhim ekanini ko‘rsatadi.

Autizmni davolashning iloji bormi? Farzandida autizm tashxisi qo‘yilgan ota-onalar ko‘pincha shunday savol berishadi: bu kasallikni butunlay davolash mumkinmi? Hozircha autizmni to‘liq davolashning aniq usuli yo‘q, ammo turli korreksiya metodlari yordamida bolaning hayot sifati sezilarli darajada yaxshilanishi va uning atrof-muhitga moslashuvchanligi oshirilishi mumkin. Bunda nafaqat shifokor, balki o‘qituvchilar va ota-onalar ham faol ishtirok etishi, uzoq muddatli va tizimli yondashuv asosida ishlashi kerak. Bunday harakatlar orqali muhim natijalarga erishish mumkin.

Davolash usullari. Autizmli bolalar bilan ishlashda quyidagi usullar qo‘llaniladi: Dori vositalari bilan davolash – simptomlarni yengillashtirish uchun ishlatiladi. Musiqaterapiya – bolada hissiy bog‘lanish va kommunikatsiya ko‘nikmalarini rivojlantirishga yordam beradi. Delfinoterapiya – delfinlar bilan muloqot qilish orqali bolaning ijtimoiylashuvini yaxshilash usuli. Floortime terapiya – bolaning rivojlanish bosqichlariga mos keladigan o‘yin va muloqot usullari orqali autizm belgilarini yumshatish. Art-terapiya – rasm chizish va boshqa san’at shakllari orqali his-tuyg‘ularni ifodalashga yordam beradi. Mikropolyarizatsiya, Tomatis terapiyasi, refleksoterapiya – neyropsixologik yondashuvlar.ABA terapiya (Applied Behavior Analysis) – xulq-atvorni boshqarish va yaxshilash uchun qo‘llaniladigan keng tarqalgan metod. Autizm atamasining kelib chiqishi "Autizm" atamasi ilk bor shveytsariyalik psixiatr Eygen Bleyler tomonidan qo‘llanilgan. U bu atamani shizofreniya bilan og‘rigan bemorlarning tashqi dunyodan o‘zini chetga olish xususiyatini tavsiflash uchun ishlatgan. Bola psixiatriyasida "autizm" tushunchasi ikkita mashhur shifokor – Gans Asperger va Leo Kanner nomlari bilan bog‘liq. Gans Asperger – 1938 yilda autizm belgilari haqida birinchi bo‘lib yozgan avstriyalik pediatr. Keyinchalik yuqori funksional autizm (Asperger sindromi) aynan uning nomi bilan atalgan.Leo Kanner – 1943 yilda AQShda "Affective Contact Disorders" (Aloqadorlik buzilishlari) nomli ishida autizm simptomlarini aniq bayon qilgan bolalar psixiatridir. Kanner va Asperger tasvirlagan bolalar autizm spektr buzilishining asosiy mezonlarini belgilab bergan. Ularning tadqiqotlari natijasida autizm alohida psixiatriya bo‘limi sifatida tan olingan. Bugungi kunda autizmni to‘liq davolash imkoni bo‘lmasa-da, turli terapiya usullari orqali autizmli bolalarning rivojlanishini qo‘llab-quvvatlash va ularning hayotini yaxshilash mumkin.

Xulosa

Autizm spektr buzilishi (ASB) – bu neyro-rivojlanish xususiyati bo‘lib, uni to‘liq davolashning imkoni yo‘q, ammo turli terapevtik va pedagogik yondashuvlar orqali bolalarning hayot sifatini yaxshilash mumkin. Tadqiqotlar shuni ko‘rsatadiki, autizmga chalingan bolalarda harakat va proprioseptiv buzilishlar keng tarqalgan bo‘lib, bu ularning motorik rivojlanishiga ham ta’sir qiladi. Zamonaviy korreksiya usullari, jumladan, ABA terapiya, musiqaterapiya, delfinoterapiya va san’at terapiyasi, autistik bolalarning ijtimoiy va kommunikativ ko‘nikmalarini rivojlantirishda muhim rol o‘ynaydi. Shu bilan birga, mayda va umumiy motorikani rivojlantirishga qaratilgan mashg‘ulotlar ham ularning jismoniy faolligini oshirish va kundalik hayotga moslashishiga yordam beradi. Shunday qilib, autizm kasallik emas, balki shaxsning o‘ziga xos rivojlanish turi bo‘lib, to‘g‘ri yondashuv va qo‘llab-quvvatlash orqali autistik bolalar jamiyatga muvaffaqiyatli moslasha oladilar. Kelajakda bu sohadagi tadqiqotlarni davom ettirish, yangi reabilitatsiya usullarini ishlab chiqish va amaliyotga joriy etish autizmli shaxslarning yanada yaxshiroq hayot kechirishiga xizmat qiladi.

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BEHBUDIY IJODIDA XOTIN – QIZLARNING TA'LIM VA TARBIYA MASALALARI

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Annotatsiya. *Muallif tomonidan Mahmudxo'ja Behbudiyning ijodida xotin – qizlarning ta'lim va tarbiya masalalari tahlilga tortilgan. Taraqqiyparvarning "Padarkush" dramasidan tortib, "Oq yelpog'ichli chinli xotun", "Turk adami markaziyat (federalist) firqasining maromnomasi (qomusiy hujjat N.A), "Kiyim va tashabbuh masalasi", "Hifzi sihhati oila", "Xotun olmoqni kerakligi", "Qiz bolalarni tarbiyasi" , "Uylanmaslikni zarari"kabi asarlarida bevosita oila va nikoh, ayollarning ijtimoiy hayoti, kiyinish bilan bog'liq masalalar urganilgan.*

Kalit so'zlar*: millat, milliyat, o'lka, ilm, ma'rifat, talqin, g'aflat, muammo, istiqlol.*

Аннотация. *Автор анализирует вопросы образования и воспитания женщин и девочек в творческом наследии Махмудходжи Бехбуди. На примере произведений, охватывающих широкий спектр тем — от драмы прогрессивного мыслителя «Падаркуш» («Отцеубийца») до таких работ, как «Китаянка с белым веером», «Программа Тюркской федералистской партии», «Вопрос об одежде и подражании», «Сохранение здоровья семьи», «Необходимость брака», «Воспитание девочек» и «Вред безбрачия», — автор непосредственно рассматривает вопросы семьи и брака, положения женщин в обществе и проблемы, связанные с одеждой.*

Ключевые слова: *нация, национальность; страна; наука; просветление; интерпретация, небрежность; проблема; перспектива, умение*

Annotation. *The author analyzed women's issues in the works of Mahmudhoja Behbudi. From Tarakiparvar's drama "Padarkush", "Chinese Woman with a White Scarf", "Memorandum of the Turkic Centralist (Federalist) Party" (encyclopedic document N.A), "The Question of Clothing and Initiative", "Health Protection "Family", "The Need to Get Married", "Raising Girls" and "The Harm of Not Getting Married" directly examine issues related to family and marriage, women's social life and clothing.*

Keywords: *nation, nationality; country; science; enlightenment; interpretation, negligence; problem; perspective, skill*

Mahmudxo'ja Behbudiy taraqqiyparvar, millatning ulug' karvonboshisi sifatida XX asrning boshida o'lkada mavjud bo'lgan muammolarni hal qilish uchun butun

umrini baxshida qildi. U Turkiston o'lkasida millatni ma'rifatli, erkin va ozod bo'lishini istadi. Shuning uchun bor kuchini, e'tiborini milliy taraqqiyotga qaratdi. Uning ijodida badiiy asarlar, badiiy publitsistik, adabiy – tanqidiy, ijtimoiy-siyosiy va ma'rifiy, iymon – e'tiqodga oid maqolalar, sayohat xotiralari, xatlar va boshqa ko'plab janrdagi ijod namunalari o'z aksini topgan.

Behbudiy yozuvchi, publitsist va noshir bo'lish bilan bir qatorda katta qonunshunos, mufti va qozi olim edi. U huquqiy, mulkiy, iqtisodiy, ma'muriy, fuqarolik, oila – nikoh, savdo – sodiq, jinoiy ishlarni ko'rgan, kuzatgan, fatvo bergan, hukmlar chiqargan. Behbudiy dastlab mufti sifatida Samarqand hududida xalqning og'irini yengil qilish maqsadida, ko'pgina amaliy hujjatlarni ishlab chiqib joriylantirgan ham edi. Jumladan, narx – navolar, to'ylar, nikoh, ta'ziya, jinoyat sodir qilingan holatlarga oid huquqiy normalar: "Ittifoqnoma"[1:343] "Qarornoma" [2:476]lar Behbudiy tamonidan ishlab chiqilgan.

Behbudiy xotin – qizlar masalalari hamda ularning huquqlari, ijtimoiy normalari to'g'risida badiiy va ijtimoiy maqolalar yozdi. Uning "Padarkush" dramasi, "Oq yelpog'ichli chinli xotun" hikoyasi[3:106-109], "Bir vafolik zaifani xususida hikoya"si, "Turk adami markaziyat (federalist) firqasining maromnomasi (qomusiy hujjat N.A), "Kiyim va tashabbuh masalasi", "Hifzi sihhati oila", "Xotun olmoqni kerakligi", "Qiz bolalarni tarbiyasi" , "Uylanmaslikni zarari" [4:510]kabi asarlari shular jumlasidandir.

Behbudiy ""Padarkush" yoxud o'qimagan bolaning holi" dramasi bilan dramaturgiyaga asos soldi. Dramada Mahmudxo'ja Behbudiyning sevmli mavzusi – barchani ilm ma'rifatli bo'lishga chaqirish, ilmsizlik balosidan qutulishni qalamga olgan. Ya'ni muallif ilmsizlik, jaholat, axloqsizlik kabi illatlarni sahna orqali ko'rsatib, xalqni ma'naviy inqirozdan qutqarish kerak degan g'oyani bosh masala qilib qo'yadi. Asar xotin – qizlar obrazlaridan holi emas.

Dramada xotin – qizlar obrazidan Liza rus xotini va boyning xotini – boyvuchcha kiritilgan.

Dramada boyning xotini asarning ikkita tasvirlangan joyidagina personaj sifatida uchraydi. Ya'ni, boyning o'g'li otasini o'ldirganda o'g'lini "He, juvonmarg Toshmurod! Qon qus!Koshki, chechakda ketsayding! Voy, padarkush! Toshmurod! Voy, dod-ey!" deydi. Shu bilan birga, keyingi epizodda ham u eridan va bolasidan ajraganiga achingan bir mushtupar ona obrazi obrazi sifatida ko'ringan bo'lsa, Liza obrazida XX asr boshida Turkiston o'lkasida armani Artun mayxona ochib, ma'naviy buzuqlikka yetaklayotgan ayol obrazi ochib berilgan.

Behbudiyning "Oq yelpog'ichli chinli xotun", hikoyasida Xitoy mamlakatida sodir bo'lgan voqeani tasvirlaydi. Ya'ni, ayni paytda muallif mustamlakachilik tuzumi natijasida voqeani boshqa mamlakatga ko'chiradi. O'z eriga sadoqatli bo'lgan Lu ismlik xonim obrazi orqali sadoqatli ayol obrazi gavdalantiriladi. Hikoya "Turkiston viloyatining gazetasi"da 1909 yil 5 fevralь sonida chop qilingan.

Behbudiy Turkiston o'lkasi tarixida juda muhim hujjatni ishlab chiqishga erishgan. "Turk adami markaziyat (federalist) firqasining maromnomasi" [5:156-162]hisoblanadi. Ushbu qomusiy hujjatda xotin – qizlarning huquqlari ham himoya qilinadi. Jumladan, hujjatning birinchi bob, 4-moddasida: "Mamlakatning yigirma yoshig'a yetub ahliyat paydo qilg'on har bir fardi: er bo'lsin, xotun bo'lsun – sinf, din va mazhab ayirmasig'a boqmasdan – saylamak va saylanmak haqina molikdur". Shuningdek, ushbu moddaga ilova ham kiritib, "musulmon xotunlarining saylovga ishtiroklari doirai shar'iya doxilinda (shariat doirasida) bo'lur" deb qayd etilgan. Ma'lumngizki, Behbudiy ishlab chiqqan hujjat nihoyatda demokratik normalarni o'zida mujassamlashtirgan.

Behbudiy ayni paytda boshqa rivojlangan millatlarning o'g'il – qizlarini tahsil olayotganlarini ko'rib havas qiladi, o'lka xalqining ilmsizlikdan orqaga ketayotganligidan achinadi va buning amaliy yo'llarini qidiradi. "Hamshahar yahud, armani, rus bolalari oppoq kiyinib, qo'ltuq – qo'ltuq kitob ila maktablarg'a ketar ekan, bizning bolalarimizni na uchun kir va yirtiq kiyim, oyoqyalang bir holda eshikba – eshik mehnat axtarur, inson bu holatlarg'a diqqat ila boqsa, istiqboldan ma's o'lur...Endi bizlarg'a ikki ishdan biri qolur, ya'ni yo alardek zamonani ilm va

hunarlarig'a yopishmoq va yoyinki, borliq nimarsalarimizni ham qo'limizdan berib, to'y – ma'raka va behudalikg'a sarf etib, alarg'a xizmatkor bo'lmoq". Shuning uchun ham Behbudiy ma'rifatsizlikdan qutilishning barcha yo'llarini qidirdi. Yangi usuldagi maktablarni joriy etdi. Ular uchun darsliklar yaratdi. Turkiston o'lkasida barcha bolalar: o'g'il va qizlarning teng huquqda o'qishlarini, savodli bo'lishlarini istadi.

Hujjatda ushbu masalani qonuniylashtirdi.Ya'ni, hujjatning 9-bobi: "Maorif ishlari" deb nomlanib, uning 1-moddasida: "Ilm va maorif ishlarida jumla aholi din va millatga ayrilmasdan, erkak va xotunlar barobardur". Yuqorida ko'rilayotgan moddalardagi qoidalar ya'ni er va xotinlarning tengligi masalasi ayni kundagi O'zbekiston Respublikasi Konstitutsiyasining moddalari bilan hamohangdir. Ya'ni, Konstitutsiyaning 58- moddasida berilgan: "xotin-qizlar va erkaklar teng huquqlidirlar" normalarini ayni paytda Behbudiy kiritib, jahon huquq normalariga tenglashtirgan edi. Shuningdek, ushbu hujjatda Behbudiy xususiy maktablarning ham mavjud bo'lishini, unga hech kimning to'sqinlik qilmasligi masalasini qonuniylashtirgan edi. U hujjatning "Maorif ishlari" bobining 2 - moddasida: "Maktablar ishlarinda xususiy shaxslarning g'ayrati va mahalliy idoralarning tashabbusi ila ishlanmish ishlarda hech vajh ila tahdid qilinmas" deyilgan.

Behbudiy o'lkada mahalliy hududlarimiz bilan bog'liq muammolar va fuqarolarning huquqlarini himoya qilish borasida ko'p ijobiy ishlarni amalga oshirdi. To'ylarni o'tkazish, ta'ziya marosimlari, nikoh masalalari borasida ham "Ittifoqnoma" ishlab chiqib, joriylantirgan. Shuningdek, "Sag'irlar haqinda" maqolasida qayd etilganidek, sag'irlarning huquqlarini himoya qilish maqsadida mufti sifatida qoidlarni keltiradi. Ya'ni, sag'irlar uchun qozilarning mas'ulligini ta'kidlab, muhimi shundaki, sag'irga vasiy tayinlanatganda sog'irlar ichida qiz bolalarning ham borligini hisobga olib, vasiy sifatida ayollardan ham tayinlanishini aytib o'tadi: "Sag'irni onasi va yoyinki, ayoli sinfidan ham vasiy tayinlanmoq joizdur".

Behbudiyning barcha harakatlari millatni taraqqiy ettirish g'oyalari bilan bog'liq. U millatning ilm olishi va hayotda oila qurishidan tortib, milliy ozodlik tomon borishigacha bo'lgan harakatlarini o'z ichiga oladi. Behbudiyning "Xotun olmoqni

kerakligi" to'g'risidagi o'g'itli va nasihatli maqolasi bevosita Kaykavusning "Qobusnoma"sini eslatadi. Qobusnomada agar "Xotin olmoq zikrida": "Ammo xotinni pokdil, farzandingni farmonbardor va mehribon tutg'il, bu ish sening qo'lingdadir...Debdurlarki, yaxshi xotin erining va umrning rohati bo'lur"[6:103].

Behbudiy ham Kaykovusning yo'lidan borib, pand va nasihatlarni aytadi. Shuning bilan bir qatorda er va xotinning vazifalarini tushuntiradi: "Insonlarg'a xotun olmoq tabiiydur. Xotun olmasdan yolg'iz yashamoq insonlarg'a mumkin yo'q. Har bir erkak va ayol bir – birini yordam va ionati va birga yashamog'iga muhtojdir.Erkak ila ayol shar'iy nikoh ila er va xotun bo'lub ro'zg'or tuzamasa, jamiyati bashariyai hozir va madaniyatni soyasig'a raxna paydo bo'lub, inqiroz va xarob bo'lmoqg'a yo'l tutar" deb erkak va ayolllarni shar'iy nikoh asosida bo'lishlarini, bir – birlarini hurmat qilishlarini, ikkalasi bahamjihat yashashlarini nasihat qiladi. Shuningdek, maqolaning davomida yosh o'g'il va qizlarimizga qarata aytadiki, bir oilaning egasi bo'lishni yagona maqsad qilib qo'yishlarini tilab, uni qonuniy jihatlariga amal qilinmasa, albatta jazoga olib kelinishini ta'kidlaydi

Behbudiy millatning urf – odatlari, oila tarbiyasi, oila qurish qoidalari, oilada sihat va salomatlik masalalari borasida ham ko'plab chiqishlar qildi. Shuningdek, uning "Oyina" jurnalida chop qilingan "Qiz bolaning tarbiyasi" maqolasi ham tarbiyaviy ahamiyatli hisoblanadi. Ya'ni, muallif ushbu maqolada qiz va o'g'illarning hayotga tayyor bo'lishining yosh darajalarini ko'rsatib beradi. Shuning bilan bir qatorda ularning biologik o'zgarish qoidalariga e'tibor qaratib, ota va onalarning xushyorli bo'lishini maslahat berdilar. O'g'il va qizlarning xavfsizlik jihatlariga ham to'xtalib, iffat va tarbiya bo'yicha tadbirlar olib borishga chaqirdi.

Behbudiy shariat va zamonaviy qonunlarning bilimdoni sifatida doimiy ravishda matbuot orqali chiqishlar qilib, tushuntirish ishlarini olib bordi. Millatni oilaviy va odat qoidalaridan doimiy ravishda xabordor qilib bordi. Bu boradi turkum maqolalar yozdi. Uning "Oyina" jurnali 1914 yil 27 sentyabr[7:196-197].] sonida chop qilingan "Uylanmaslikni zarari", "Tibban tanosubi zavjayn", "Muomalali zavjiyatg'a e'tidol", "Mujarradlikdagi zararlik odatlar" [8:199-201] kabi maqolalarining har birida

qimmatli nasihatlar, shariy maslahatlar va amaliy qoidalarni tushuntiradi. “Uylanmaslikning zarari”da vaqti yetilganda qiz va er bolalarning turmush qurishlarini aytadi. Aksincha, “jismoniy va botini kasal va yomonliklarni paydo qiladur” deb yozadi. Muallif maqola davomida erlik xotinlar va xotini yo’q erlarning dunyo miqyosida sodir qilayotgan jinoyatlarini solishtiradi. Uning aytishi bo’yicha: “ersiz xotunlardan paydo bo’lgan jinoyatlar, xotunsiz erlardan paydo bo’lgan jinoyatlardan ikki marta ziyodadur”.

Behbudiy ayni paytda ham bugungi kundagiday mavjud bo’lgan nikohsiz og’ir kasalliklarni oldini olishga chaqirdi. Ya’ni: “Nikohsiz ijtimo’dan hadsiz kasallar paydo bo’lub gunohi ortiqchadur” deydi.

Ushbu maqolada Behbudiy uylanishdan oldin er bola qizni ko’rishi kerakmi yoki yo’qmi degan savolga javob berib, “er qizni ko’rmog’i sunnati nabaviyadan bo’lub, aqlan lozimdur”. U bunga to’liq sharh berib: “er va qiz bolani jism va gavdalarini bir – birlarig’a mutanosibligi, bunya va a’zolarini quvvati, hifz us – sihhatcha matlub va mashruti zavjot va taahhuldur” deb qizning faqat chehrasini ko’rib yoqtirmasdan uning o’ziga mos keladigan jihatlariga ham e’tibor qaritilishini nasihat qiladi. Shunigdek, “Muomalai zavjiyag’a e’tidol” [9:201], “Mujarradlikdagi zararlik odatlar” kabi maqolalarida er va xotining oila qurganlaridan keyingi holatlarda bir – birlariga munosabatlari, tushunmaslik oqibatidan kelib chiqadigan muammolarni oldini olish, “muomalai zavjiyadan ko’proq zarar ko’raturganlar yangi uylangan odamlar va xususan, bunyai badan va jismlari zaif...lar”ga maslahatlar berilgan. Shuningdek, uylanish yoshini 30 yoshdan oshmasligi, o’zlarini saqlash masalalariga e’tibor qaratadi. Behbudiy aytadiki: “Maqsadim vatan bolalarini va necha mazlumi shahvatzadalarni sihhat va tariq najoti shar’iy va tibbiyg’a da’vat etmoq va o’z parda va ismatlarini, sihhati badanlarini saxlamoqlarig’a rijo va xizmat qilmoqdan iboratdur. Aning uchun zaruratan xilofi adab yozilgan kalima va so’zlarni husni niyatg’a baxishlanmoqini iltimos qilarman!”.

Qolaversa, Behbudiy maqolada yana bir atama ya’ni ishqibozlik va fahshiyot tushunchasini qo’llaydi.Uning yozishicha: “Ishqibozlik haromkorlikkag’a yurgan

kishini insoniyat va jamiyati bashariya naqadar zarar yetkurganini aytib ado qilib bo'lmas" deb erkaklarga nisbatan qo'llasa, "fahshiyot, nom digar ila ishqibozlik bir baloi mulhikdurki, jamiyati bashariyag'a andan zararlik bir boshqa nimarsa yo'qdur" deb ayollarga nisbatan ham qo'llab, uni nizoga soluvchi va badnom qiluvchi sifatida talqin qiladi. Muallif maqola davomida yoshlarga nisbatan tushuntirishlar olib borib, qattiq tanbehli munosabatlarini bildiradi.

Ayni damda qadim va jadid o'rtasida bahs va munozaralar ketayotgan bir paytda iymon – e'tiqodga doir bahs hamda munozaralar ham ketar edi. Qolaversa, oddiy kiyinish masalasida ham qadimchilar katta muammolarni keltirib chiqarardilar. Behbudiy shunday bir paytda kiyinish, iymon – e'tiqod, shariat bobida ko'plab chiqishlar qilib, millatga to'g'ri tushuntirish ishlarini olib bordi. Jumladan, "Kiyim va tashabbuh masalasi" [10:45-47]shunday maqolalar jumlasidandir. Aytadiki: "Fo'rma kiygan nari tursin, hatto uyining tagini pol va ustini tunka qilganlarni yoki uy ichida ustal, ustol, suvrat kabi narsa qo'yganlarni akfor qilur...Agar bu juz'iy tashabbuhlar ila-da kishi kofir bo'laversa, bas, yur yuzida bir nafar ham musulmon qolmasligi lozim kelurki, bu mumtane'dur".

Shuningdek, muallif aytadiki, hukumdor qaysi hududni va shaharni egallasalar, shu shaharning kiyimlarini kiyganligi, qolaversa, shu shaharning boshqa dinli qizlarini nikohlab olganliklarini ham aytadi. Kiyinish bobida ham yevropacha kiyimlarni kiyish shariati islomga hech qanday zararligi yo'q deb qaraydi, shunday tushuntiradi.

Xulosaki, Mahmudxo'ja Behbudiy ijodida xotin – qizlar masalalariga e'tibor dolzarb mavzu sifatida qaralgan, uning yechimlari ham ko'rsatilgan. Шунингдек, Беҳбудийгача ҳам аёллар образини яратиш, уларнинг илм олишга бўлган эҳтиёлари олдинги манбаларда[11:247-251] ҳам мавжуд бўлганлигини кўриш мумкин.

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ДУДУҚЛАНИШ БИЛАН БИРГА КУЗАТИЛАДИГАН НУТҚ БУЗИЛИШЛАРИГА ЭГА МАКТАБГАЧА ЁШДАГИ БОЛАЛАРДА НУТҚНИНГ ПРОСОДИК ТОМОНЛАРИНИ РИВОЖЛАНТИРИШНИНГ ПЕДАГОГИК АСОСЛАРИ

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Аннотация. *Мазкур мақолада дудуқланиш ҳамда бошқа нутқ бузилишлари кузатиладиган мактабгача ёшдаги болаларда нутқнинг просодик компонентларини ривожлантиришнинг педагогик ва логопедик асослари таҳлил қилинган. Просодиканинг нутқнинг коммуникатив самарадорлиги, эмоционал ифодалилиги ва ижтимоий мослашувдаги аҳамияти илмий манбалар асосида ёритилган. Шунингдек, дизартрия, ринолалия, алалия ва дудуқланиш ҳолатларида просодик компонентларнинг бузилишига таъсир этувчи омиллар таҳлил қилинган. Мақолада мактабгача таълим ташкилотларида просодик кўникмаларни шакллантиришга қаратилган педагогик ёндашувларни қўллаш зарурлиги асосланади. Тадқиқот натижалари болаларнинг нутқий мулоқот қобилиятини, эмоционал ифодалилигини ва ижтимоий фаоллигини оширишда просодик машғулотларнинг муҳим аҳамиятга эга эканлигини кўрсатади.*

Калит сўзлар. *дудуқланиш, просодика, нутқ терапияси, логопедия, мактабгача таълим, нутқ ривожланиши, интонация, ритм, тембр, нутқ суръати, педагогик технологиялар, коммуникатив компетенция.*

Abstract. *This article examines the pedagogical and speech-therapy foundations for developing the prosodic aspects of speech in preschool children with stuttering accompanied by other speech disorders. The study highlights the importance of prosodic components, including intonation, rhythm, tempo, stress, voice timbre, and speech breathing, in ensuring effective communication, emotional expression, and successful social interaction. The characteristics of prosodic impairments in children with stuttering, dysarthria, rhinolalia, and other speech disorders are analyzed on the basis of scientific literature. The article substantiates the necessity of applying modern pedagogical technologies, speech therapy techniques, breathing exercises, logorhythmics, and intonation-based activities in corrective work. The findings indicate that systematic development of prosodic skills contributes to improving speech fluency, communicative competence, emotional expressiveness, and social adaptation of preschool children. The proposed pedagogical recommendations may be effectively implemented in preschool educational institutions and speech therapy practice.*

Keywords. *Stuttering, prosody, speech therapy, preschool education, speech disorders, communication skills, intonation, rhythm, speech breathing, voice timbre, pedagogical technologies, communicative competence.*

Кириш

Ҳозирги кунда инклюзив таълимни ривожлантириш, болаларнинг нутқий ва коммуникатив қобилиятларини эрта аниқлаш ҳамда уларни самарали коррекцион-педагогик қўллаб-қувватлаш дунё педагогикаси ва логопедиясининг устувор йўналишларидан бири ҳисобланади. Мактабгача ёш даври нутқнинг фонетик, лексик, грамматик ва просодик жиҳатлари шаклланадиган энг муҳим босқич бўлиб, айнан шу даврда юзага келган нутқ нуқсонларини бартараф этиш келгусидаги таълим самарадорлигига бевосита таъсир кўрсатади.

Нутқнинг просодик томони овознинг баландлиги, тембри, суръати, ритми, мантиқий урғу, пауза ва интонация каби компонентларни ўз ичига олади. Ушбу компонентлар нафақат нутқнинг тушунарлилигини таъминлайди, балки сўзловчининг ҳиссиёти, муносабати ва коммуникатив мақсадини ҳам ифодалайди. Шу боис просодик кўникмаларнинг етарлича шаклланмаганлиги болаларнинг мулоқот жараёнида қатор қийинчиликларга дуч келишларига сабаб бўлади.

Айниқса, дудуқланиш билан бирга дизартрия, ринолалия ёки нутқнинг умумий ривожланмаганлиги каби ҳолатлар кузатиладиган болаларда просодик бузилишлар янада яққол намоён бўлади. Бундай болаларда овоз тембрининг ўзгариши, нутқ суръатининг беқарорлиги, интонациянинг кам ифодаланиши ҳамда нутқий нафаснинг нотўғри ташкил этилганлиги мулоқот самарадорлигини пасайтиради ва ижтимоий мослашувга салбий таъсир кўрсатади.

Бугунги кунда мактабгача таълим тизимида нутқ нуқсонига эга болалар сонининг ортиб бораётгани просодик компонентларни ривожлантиришга қаратилган замонавий педагогик технологияларни такомиллаштиришни талаб этмоқда. Просодик машқлар, мусиқий-ритмик фаолият, нафас машқлари ва

интонацион ўйинларни логопедик машғулотларга интеграция қилиш болаларнинг нутқий ривожланиши самарадорлигини оширишга хизмат қилади.

Нутқнинг просодик томонининг назарий асослари ва унинг коммуникатив аҳамияти - замонавий логопедияда нутқнинг просодик томони шахснинг тўлиқ нутқий фаолиятини таъминловчи муҳим таркибий қисм сифатида эътироф этилади. Просодика нутқнинг интонацион-ритмик хусусиятларини ўзида мужассам этган бўлиб, овоз баландлиги, тембр, ритм, суръат, мантиқий урғу, пауза, мелодика ҳамда нутқий нафас каби компонентлар йиғиндисидан ташкил топади. Ушбу компонентлар биргаликда нутқнинг тушунарлилиги, эмоционал ифодалилиги ва коммуникатив самарадорлигини таъминлайди.

Е.Ф. Архипова, Л.В. Лопатина, Г.В. Чиркина, Л.Р. Мўминова ва бошқа олимларнинг тадқиқотларида таъкидланишича, просодик воситалар инсоннинг ҳиссий ҳолати, нутқ мақсади ва мулоқотдаги муносабатини тингловчига етказишда муҳим вазифани бажаради. Шунинг учун просодик компонентлардаги ҳар қандай бузилиш нафақат талаффуз сифатига, балки мулоқот самарадорлигига ҳам салбий таъсир кўрсатади.

Мактабгача ёш даврида просодик кўникмалар жадал ривожланади. Бу даврда болалар овоз баландлигини бошқариш, нутқ суръатини мувофиқлаштириш, мантиқий урғуни тўғри қўйиш ва турли интонациялардан фойдаланишни ўрганадилар. Агар айнан шу босқичда нутқий нуқсонлар юзага келса, улар кейинчалик боланинг нутқий ва ижтимоий ривожланишига салбий таъсир кўрсатиши мумкин.

Халқаро тадқиқотларда ҳам просодик қобилиятларнинг ривожланганлиги болаларнинг коммуникатив компетенцияси, эмоционал интеллект ва ижтимоий мослашув даражаси билан узвий боғлиқ эканлиги қайд этилган. Шу боис эрта логопедик аралашувда просодик машқларга алоҳида эътибор қаратиш тавсия этилади.

Дудуқланиш ва бошқа нутқ бузилишларида просодик компонентларнинг ўзига хос хусусиятларини кўриб чиқадиган бўлсак, бунда дудуқланиш билан

бирга кузатиладиган нутқ бузилишларида просодик компонентлар турлича даражада зарарланади. Бу ҳолат овознинг табиий жарангдорлиги пасайиши, нутқ суръатининг беқарорлиги, ортиқча паузалар, мантиқий урғунинг бузилиши ҳамда интонациянинг кам ифодаланиши билан намоён бўлади. Натижада боланинг нутқи монотон, тушуниш қийин ва эмоционал жиҳатдан кам таъсирчан бўлиб қолади.

Дизартрия кузатиладиган болаларда артикуляцион ва нафас мушаклари иннервациясининг бузилиши овоз сифатига салбий таъсир кўрсатади. Бундай болаларда овоз паст, кучсиз, баъзан хириллаган бўлиб эшитилади. Ритм ва интонациядаги ўзгаришлар эса нутқнинг табиийлигини камайтиради. Ринолалияли болаларда эса артикуляцион аппаратнинг анатомик ўзгаришлари сабабли овоз бурун тусида эшитилади, фонацион нафас қисқаради ва нутқнинг мелодик-ритмик жиҳатлари етарлича шаклланмайди. Бу ҳолат боланинг мулоқотга киришишида қатор қийинчиликларни келтириб чиқаради.

Алалия ва нутқнинг умумий ривожланмаганлигида эса интонациянинг камлиги, мантиқий урғуни нотўғри қўйиш, нутқ суръати ва ритмининг бузилиши кузатилади. Бу болаларнинг фикрни ифодалаш ва суҳбатдош билан самарали мулоқот қилиш имкониятларини чеклайди.

Л.Р. Мўминова ва бошқа тадқиқотчиларнинг фикрича, бундай болаларда кузатиладиган психологик ноқулайлик, ўз нуқсонини англаш ва мулоқотдан қочиш ҳолатлари просодик бузилишларни янада кучайтиради. Шунинг учун коррекцион ишлар нафақат нутқ аппаратини, балки боланинг эмоционал ҳолатини ҳам ҳисобга олган ҳолда ташкил қилиниши лозим.

Просодик компонентларни ривожлантириш коррекцион-педагогик ишларнинг муҳим йўналишларидан бири ҳисобланади. Амалиёт шуни кўрсатадики, фақат товуш талаффузини коррекциялаш ёки луғат бойлигини ошириш билан чекланиш кутилган натижани бермайди. Шунинг учун логопедик машғулотларда овоз, нафас, интонация, ритм ва нутқ суръатини комплекс

ривожлантиришга қаратилган технологиялардан фойдаланиш мақсадга мувофиқдир.

Мактабгача ёшдаги болалар билан ишлашда педагогик жараён ўйин технологиялари асосида ташкил этилганда юқори самарадорликка эришилади. Чунки бу ёшда ўйин боланинг етакчи фаолияти ҳисобланади. Интонацияли шеърлар, ролли ўйинлар, мусиқий ҳаракатли машқлар ва эртакларни ифодали ўқиш орқали болаларда овозни бошқариш, мантиқий урғуни тўғри қўллаш ва нутқ суръатини назорат қилиш кўникмалари босқичма-босқич шаклланади.

Просодик кўникмаларни ривожлантиришда нутқий нафасни тўғри шакллантириш алоҳида аҳамиятга эга. Нафас машқлари овознинг барқарорлиги, нутқнинг равонлиги ва физиологик тўғри фонацияни таъминлайди. Айниқса, дудуқланувчи болаларда диафрагмал нафасни ривожлантиришга қаратилган машқлар нутқ силлиқлигини таъминлашда муҳим восита ҳисобланади.

Шунингдек, логоритмика машғулотлари ҳам юқори самара беради. Мусиқа, ҳаракат ва нутқнинг ўзаро уйғунлиги боланинг ритмни ҳис қилиш қобилиятини кучайтиради, ҳаракат координациясини ривожлантиради ҳамда нутқнинг темп-ритмик тузилишини меъёрлаштиради. Илмий кузатишларга кўра, логоритмика элементларини мунтазам қўллаш дудуқланишнинг ташқи белгилари камайишига ва нутқий ишончнинг ортишига хизмат қилади.

Интонацион машқлар ҳам просодик ривожланишнинг муҳим қисми ҳисобланади. Савол, ҳайрат, илтимос, хурсандчилик ва бошқа эмоционал ҳолатларни турли интонациялар ёрдамида ифодалаш болаларнинг коммуникатив компетенциясини ривожлантиради. Бундай машқлар натижасида болалар нафақат тўғри талаффуз қилишни, балки нутқ орқали ўз ҳис-туйғуларини ифодалашни ҳам ўрганадилар.

Тадқиқот натижалари шуни кўрсатадики, дудуқланиш билан бирга кузатиладиган нутқ бузилишларига эга мактабгача ёшдаги болаларда нутқнинг просодик томонлари етарли даражада шаклланмаган бўлиб, бу ҳолат уларнинг коммуникатив фаоллиги, эмоционал ҳолати ва ижтимоий мослашувига салбий

таъсир кўрсатади. Просодик компонентлар (интонация, ритм, темп, овоз тембри, мантиқий урғу ва нутқий нафас) нутқнинг тушунарлилиги ва таъсирчанлигини таъминлайдиган муҳим воситалар ҳисобланади.

Таҳлил қилинган назарий манбалар ҳамда амалий тажрибалар шуни тасдиқлайдики, просодик компонентларни мақсадли ривожлантиришга қаратилган коррекцион-педагогик ишлар болаларнинг нутқий ривожланишига ижобий таъсир кўрсатади. Хусусан, логоритмика, нафас машқлари, мусиқий-ритмик фаолият, интонацион машқлар, ролли ўйинлар ва коммуникатив топшириқлардан тизимли фойдаланиш нутқнинг равонлиги, овоз сифатининг яхшиланиши ҳамда мулоқот маданиятининг шаклланишига хизмат қилади.

Тадқиқот жараёнида просодик томонларни ривожлантиришнинг педагогик асослари аниқланди ҳамда уларни мактабгача таълим ташкилотлари амалиётига жорий этиш бўйича илмий-амалий тавсиялар ишлаб чиқилди.

Тадқиқот натижалари асосида қуйидаги таклифларни бериш мумкин:

- мактабгача таълим ташкилотларида просодик кўникмаларни ривожлантиришга қаратилган махсус дастурларни жорий этиш;
- логопедик машғулотларда инновацион педагогик технологиялар ва логоритмика элементларидан кенг фойдаланиш;
- тарбиячилар ва логопедларнинг просодика бўйича касбий компетенцияларини мунтазам ошириш;
- ота-оналар учун уй шароитида бажариладиган просодик машқлар бўйича методик тавсиялар ишлаб чиқиш;
- мазкур йўналиш бўйича экспериментал тадқиқотларни кенгайтириш ҳамда рақамли логопедик технологияларни амалиётга татбиқ этиш.

Шундай қилиб, дудуқланиш билан бирга кузатиладиган нутқ бузилишларига эга мактабгача ёшдаги болаларда нутқнинг просодик томонларини ривожлантириш уларнинг нутқий, психологик ва ижтимоий ривожланишини таъминловчи муҳим педагогик омиллардан бири ҳисобланади.

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ПРОФИЛАКТИКА РЕЧЕВЫХ НАРУШЕНИЙ У ДЕТЕЙ

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Аннотация: *В статье рассматриваются теоретические и практические аспекты профилактики речевых нарушений у детей дошкольного возраста. Раскрывается значение раннего выявления факторов риска и комплексного подхода к предупреждению отклонений в речевом развитии. Особое внимание уделяется роли семьи, педагогов и логопеда в создании благоприятной речевой среды, а также использованию инновационных технологий и здоровьесберегающих методик. Представлены направления профилактической работы, включающие развитие фонематического восприятия, мелкой моторики, дыхательной и артикуляционной гимнастики. Результаты исследования подтверждают эффективность системного подхода к профилактике речевых нарушений, способствующего гармоничному развитию речи и успешной социализации детей.*

Ключевые слова: *профилактика, речевые нарушения, дети дошкольного возраста, логопедическая работа, ранняя диагностика, развитие речи.*

Annotatsiya: *Mazkur maqolada maktabgacha yoshdagi bolalarda nutq buzilishlarining oldini olishning nazariy va amaliy jihatlari yoritilgan. Nutq rivojlanishidagi xavf omillarini erta aniqlash hamda nutq rivojlanishidagi chetlanishlarning oldini olishda kompleks yondashuvning ahamiyati ochib berilgan. Oila, pedagog va logopedning qulay nutqiy muhitni yaratishdagi o‘rni, shuningdek, innovatsion texnologiyalar hamda sog‘liqni saqlovchi metodikalardan foydalanish masalalariga alohida e’tibor qaratilgan. Profilaktik ishlarning asosiy yo‘nalishlari sifatida fonematik idrokni rivojlantirish, mayda motorikani takomillashtirish, nafas va artikulyatsion gimnastikani qo‘llash ko‘rsatib o‘tilgan. Tadqiqot natijalari nutq buzilishlarining oldini olishda tizimli yondashuvning samaradorligini tasdiqlaydi hamda bolalar nutqining uyg‘un rivojlanishi va ularning muvaffaqiyatli ijtimoiylashuviga xizmat qilishini ko‘rsatadi.*

Kalit so‘zlar: *profilaktika, nutq buzilishlari, maktabgacha yoshdagi bolalar, logopedik ish, erta diagnostika, nutqni rivojlantirish.*

Abstract: *This article examines the theoretical and practical aspects of preventing speech disorders in preschool children. It highlights the importance of early identification of risk factors and a comprehensive approach to preventing deviations in speech development. Particular attention is*

paid to the role of the family, teachers, and speech-language therapists in creating a favorable speech environment, as well as to the use of innovative technologies and health-preserving methods. The main areas of preventive work include the development of phonemic awareness, fine motor skills, breathing exercises, and articulatory gymnastics. The research findings confirm the effectiveness of a systematic approach to the prevention of speech disorders, contributing to the harmonious development of children's speech and their successful socialization.

Keywords: *prevention, speech disorders, preschool children, speech therapy, early diagnosis, speech development.*

Научные публикации последних лет показывают, что исследователи рассматривают коррекцию и профилактику речевых нарушений, в том числе с использованием инновационных педагогических и логопедических технологий. В республике реализуются программы, связанные с диагностикой и реабилитацией детей с нарушениями слуха и речи — что важно для профилактики, поскольку нарушение восприятия речи часто ведёт к речевым трудностям. В Республике делаются операции по кохлеарной имплантации для детей с серьёзными слуховыми нарушениями. В публикациях отмечается, что логопедическая помощь в Узбекистане организуется и через систему образования, и через здравоохранение, и с участием частного сектора. Какие существуют проблемы? Несмотря на тенденции улучшения, систематическая профилактика речевых нарушений (раннее выявление, вовлечение семьи, профилактические программы в детских садах) пока явно недостаточно освещена или стандартизирована на уровне всей страны. В ряде случаев отмечаются нарушенные или недобросовестные методы работы с детьми с речевыми нарушениями. Не всегда публикуются статистические данные (национальные исследования) по фактической распространённости речевых нарушений и эффективности профилактики — что усложняет оценку масштаба. Много внимания уделяется коррекции (работе с уже имеющимися нарушениями), тогда как профилактике (предупреждению) уделяется меньшее системное внимание — особенно на ранних этапах (до- и дошкольный возраст). Усиление раннего выявления факторов риска (например, задержка речи, нарушения слуха,

моторики артикуляционного аппарата) и направление детей на обследование. Развитие комплексных профилактических программ: включение родителей, воспитателей, логопедов, объединённых на ранних этапах (раннее вмешательство). Внедрение и распространение инновационных технологий (игровые, моторные, артикуляционные упражнения, сенсорные комнаты) адаптированных к узбекским реалиям. Усиление квалификации логопедов-дефектологов и стандартизация методов работы. Улучшение мониторинга: сбор и публикация данных об эффективности профилактики и коррекции речевых нарушений. Предупреждение речевых нарушений – это комплексная задача, направленная на создание максимально благоприятных условий для своевременного и полноценного развития речи у детей, а также на минимизацию рисков возникновения и закрепления различных речевых патологий. Для раннего выявления рисков необходимо проводить идентификацию детей, находящихся в группе риска по развитию речевых нарушений (дети с отягощенным анамнезом, перинатальными поражениями ЦНС, неблагоприятными социальными условиями). Необходимо создание стимулирующей речевой среды для формирования условий, способствующих активному речевому общению ребенка с раннего возраста (достаточное количество речевого воздействия, эмоционально-положительное общение). Стимулирование развития крупной и мелкой моторики, артикуляционного аппарата, фонематического слуха и внимания, которые являются основой для формирования правильной речи. Речевые проблемы часто ведут к трудностям в обучении (чтению, письму), а также к задержке общего психического развития. Профилактика направлена на предотвращение этих вторичных осложнений. Дети с речевыми нарушениями часто испытывают фрустрацию, стеснение, неуверенность в себе, что может привести к социальной изоляции или агрессивному поведению. Ранняя профилактика помогает избежать этих эмоциональных проблем. Облегчение социальной адаптации: Четкая и понятная речь – залог успешного общения и адаптации в детском саду, школе, а затем и в

более широком социуме. Когда ребенок может эффективно общаться, улучшается взаимопонимание между ним и родителями, снижается уровень тревожности у взрослых. Успешное речевое развитие способствует формированию здоровой самооценки и уверенности в своих силах. Эффективная профилактика позволяет уменьшить количество детей, нуждающихся в длительной и интенсивной логопедической помощи, что делает систему образования более эффективной и ресурсосберегающей.

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СОВРЕМЕННЫЕ ТЕНДЕНЦИИ РАЗВИТИЯ ДИСТАНЦИОННОГО ОБУЧЕНИЯ В СИСТЕМЕ ВЫСШЕГО ОБРАЗОВАНИЯ В УСЛОВИЯХ ЦИФРОВОЙ ТРАНСФОРМАЦИИ

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Аннотация. *В статье рассматриваются современные тенденции развития дистанционного обучения как одного из стратегических направлений цифровой трансформации высшего образования. Проанализированы современные научные подходы к организации цифровой образовательной среды, раскрыты педагогические и организационные условия эффективной реализации дистанционного обучения. Особое внимание уделено современным международным концепциям цифрового образования, вопросам формирования цифровых компетенций преподавателей и обучающихся, а также перспективам развития дистанционного обучения в системе высшего образования Республики Узбекистан. Обосновано, что эффективность дистанционного обучения определяется не только уровнем технологического обеспечения, но и качеством педагогического проектирования, цифровой компетентностью участников образовательного процесса и организацией интерактивного образовательного взаимодействия.*

Ключевые слова*: дистанционное обучение, цифровая трансформация, цифровая образовательная среда, высшее образование, цифровые компетенции, электронное обучение, педагогическое проектирование.*

Abstract. *The article examines current trends in the development of distance learning as one of the strategic directions of the digital transformation of higher education. It analyzes contemporary scientific approaches to the organization of a digital educational environment and identifies the pedagogical and organizational conditions necessary for the effective implementation of distance learning. Particular attention is paid to contemporary international concepts of digital education, the development of digital competencies among teachers and students, and the prospects for the advancement of distance learning in the higher education system of the Republic of Uzbekistan. The study substantiates that the effectiveness of distance learning is determined not only by the level of technological infrastructure but also by the quality of instructional design, the digital competencies of all participants in the educational process, and the organization of interactive educational engagement.*

Keywords: *distance learning, digital transformation, digital educational environment, higher education, digital competencies, e-learning, instructional design.*

Введение. Цифровая трансформация общества оказывает существенное влияние на развитие системы высшего образования, определяя новые требования к организации образовательного процесса, содержанию подготовки специалистов и профессиональной деятельности преподавателя. Развитие информационно-коммуникационных технологий, облачных сервисов, цифровых

образовательных платформ и систем управления обучением способствует формированию новой модели университетского образования, ориентированной на гибкость, доступность, персонализацию и непрерывность обучения.

За последние годы дистанционное обучение перестало рассматриваться исключительно как альтернативная форма организации образовательного процесса и превратилось в важнейший элемент современной образовательной политики большинства государств. Международные организации UNESCO, OECD и Европейская комиссия рассматривают цифровизацию образования как одно из приоритетных направлений устойчивого развития образовательных систем XXI века [9,10]. В этих условиях особую актуальность приобретают исследования, направленные на повышение качества дистанционного обучения, совершенствование цифровой образовательной среды и развитие цифровых компетенций преподавателей и студентов.

Согласно Концепции развития системы высшего образования Республики Узбекистан до 2030 года, цифровизация образовательного процесса, внедрение дистанционных образовательных технологий и развитие электронной образовательной среды являются важнейшими условиями повышения качества высшего образования [1]

Теоретические основы современного дистанционного обучения представлены в трудах M. G. Moore, разработавшего теорию транзакционной дистанции, R. Garrison и T. Anderson, предложивших модель Community of Inquiry, T. Bates, исследующего стратегические аспекты цифровой трансформации образования, D. Laurillard, обосновавшей принципы педагогического проектирования цифровой образовательной среды, а также G. Siemens и S. Downes, сформулировавших теорию коннективизма как методологическую основу обучения в цифровом обществе. Существенный вклад в развитие отечественной научной школы внесли [1,2,3,4,5,] исследования которых посвящены вопросам информатизации образования, педагогических технологий и организации дистанционного обучения.

Несмотря на значительный объем исследований, сохраняется необходимость комплексного анализа современных тенденций развития дистанционного обучения применительно к условиям цифровой трансформации высшего образования Республики Узбекистан.

Цель исследования – проанализировать современные тенденции развития дистанционного обучения, определить факторы, влияющие на его эффективность, и обосновать направления совершенствования цифровой образовательной среды в системе высшего образования.

Discussion (Обсуждение результатов)

Проведённое исследование подтверждает, что дистанционное обучение в современных условиях представляет собой не самостоятельную форму организации образовательного процесса, а неотъемлемый компонент цифровой образовательной экосистемы высшего образования. Анализ отечественных и зарубежных исследований позволяет утверждать, что эффективность дистанционного обучения определяется не только уровнем развития цифровой инфраструктуры, но и качеством педагогического проектирования, организацией интерактивного взаимодействия между преподавателем и обучающимися, а также уровнем сформированности цифровых компетенций всех участников образовательного процесса.

Полученные результаты согласуются с **теорией транзакционной дистанции** М. Мура (M. G. Moore) [8], согласно которой качество дистанционного обучения зависит не столько от физической удалённости участников образовательного процесса, сколько от уровня педагогического взаимодействия, структуры учебного курса и степени самостоятельности обучающихся. Проведённый анализ показывает, что современные цифровые образовательные платформы позволяют существенно сократить транзакционную дистанцию при условии эффективной организации обратной связи и постоянного педагогического сопровождения студентов.

Существенное значение для интерпретации результатов имеет модель Community of Inquiry, предложенная Р. Гаррисоном, Т. Андерсоном и У. Арчером. Согласно данной концепции, успешность дистанционного обучения определяется единством трёх взаимосвязанных компонентов: педагогического, когнитивного и социального присутствия. Результаты настоящего исследования подтверждают, что именно их интеграция обеспечивает формирование активной образовательной среды, стимулирующей самостоятельную познавательную деятельность студентов и развитие профессиональных компетенций.

Полученные результаты также подтверждают положения Т. Бейтса, рассматривающего цифровую трансформацию образования как комплексный процесс, включающий изменение педагогических технологий, организационной структуры образовательной организации и профессиональной деятельности преподавателя. Исследование показало, что внедрение цифровых технологий само по себе не обеспечивает повышение качества образования. Их эффективность определяется уровнем методического сопровождения, готовностью преподавателей к использованию цифровых инструментов и научно обоснованной организацией образовательного процесса.

Особое значение для понимания современных тенденций развития дистанционного обучения имеет теория коннективизма Дж. Сименса и С. Даунса, согласно которой обучение рассматривается как процесс формирования сети взаимосвязей между информационными ресурсами, цифровыми платформами и участниками образовательного процесса. Проведённый анализ свидетельствует о том, что цифровая образовательная среда способствует развитию сетевого взаимодействия, коллективного решения профессиональных задач и расширению возможностей непрерывного образования.

Сравнение результатов исследования с трудами учёных [1,2,3,4,5,] позволяет сделать вывод о преемственности отечественной и зарубежной научных школ в понимании сущности дистанционного обучения. Вместе с тем

современные условия цифровой трансформации образования требуют переосмысления традиционных педагогических подходов и их интеграции с новыми цифровыми технологиями, средствами искусственного интеллекта, системами управления обучением и аналитикой образовательных данных.

Практическое значение полученных результатов для системы высшего образования Республики Узбекистан определяется тем, что реализуемая государственная политика цифровизации образования требует комплексного совершенствования дистанционного обучения. Приоритетными направлениями являются развитие цифровой образовательной инфраструктуры университетов, разработка современных электронных образовательных ресурсов, повышение цифровой компетентности профессорско-преподавательского состава, внедрение интерактивных методов обучения и совершенствование системы оценки результатов обучения.

Таким образом, результаты исследования позволяют рассматривать дистанционное обучение как стратегический ресурс повышения качества высшего образования, обеспечивающий доступность образовательных услуг, академическую мобильность, непрерывность профессионального образования и интеграцию национальной системы высшего образования в мировое образовательное пространство.

Conclusion (Заключение)

Проведённое исследование позволило сформулировать следующие выводы.

Во-первых, установлено, что современное дистанционное обучение является важнейшим направлением цифровой трансформации высшего образования и представляет собой интегративную образовательную систему, объединяющую цифровые технологии, педагогическое проектирование, организационные механизмы и современные формы академического взаимодействия.

Во-вторых, доказано, что эффективность дистанционного обучения определяется не только уровнем развития цифровой инфраструктуры образовательной организации, но и качеством педагогического сопровождения, профессиональной подготовленностью преподавателей, цифровой компетентностью обучающихся и организацией интерактивной образовательной среды.В-третьих, результаты исследования подтвердили, что успешное внедрение дистанционного обучения требует комплексного применения современных цифровых образовательных платформ, систем управления обучением, электронных образовательных ресурсов и инновационных педагогических технологий.

Сравнительный анализ отечественных и зарубежных научных исследований показал, что перспективы развития дистанционного обучения связаны с дальнейшей интеграцией цифровых технологий, искусственного интеллекта, адаптивных образовательных систем и аналитики образовательных данных в образовательный процесс.

Для повышения качества дистанционного обучения в системе высшего образования Республики Узбекистан целесообразно: совершенствовать цифровую инфраструктуру высших учебных заведений; развивать цифровые компетенции профессорско-преподавательского состава; расширять использование современных систем управления обучением и интерактивных образовательных технологий; создавать качественные электронные образовательные ресурсы, соответствующие международным стандартам; внедрять современные механизмы мониторинга и оценки качества дистанционного обучения.

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СОВРЕМЕННЫЕ НАПРАВЛЕНИЯ ОБУЧЕНИЯ И ВОСПИТАНИЯ ДЕТЕЙ С ТЯЖЕЛЫМИ НАРУШЕНИЯМИ РЕЧИ В УЗБЕКИСТАНЕ

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Аннотация. *В тезисах рассматриваются современные направления обучения и воспитания детей с тяжелыми нарушениями речи в условиях развития системы специального и инклюзивного образования Республики Узбекистан. Особое внимание уделяется комплексному психолого-педагогическому сопровождению детей с тяжелыми нарушениями речи, совершенствованию ранней диагностики, индивидуализации коррекционной помощи, развитию коммуникативной компетентности и использованию современных образовательных и коррекционных технологий. Обосновывается необходимость междисциплинарного взаимодействия логопеда, дефектолога, психолога, педагога и семьи в процессе обучения и воспитания ребенка.*

Ключевые слова: *тяжелые нарушения речи, дети с ТНР, логопедическая помощь, специальное образование, инклюзивное образование, коррекционная педагогика, ранняя помощь, индивидуальный образовательный маршрут, коммуникативное развитие, междисциплинарный подход.*

Annotatsiya. *Maqolada O‘zbekiston Respublikasida og‘ir nutq buzilishlariga ega bo‘lgan bolalarni o‘qitish va tarbiyalashning zamonaviy yo‘nalishlari ko‘rib chiqiladi. Maxsus va inklyuziv ta’lim tizimini takomillashtirish, nutq buzilishlarini erta aniqlash, korreksion-pedagogik yordamni individuallashtirish hamda bolalarning kommunikativ kompetensiyalarini rivojlantirish masalalariga alohida e’tibor qaratiladi. Logoped, defektolog, psixolog, pedagog, tibbiyot mutaxassislari va oila hamkorligiga asoslangan kompleks va fanlararo yondashuvning ahamiyati yoritiladi. Ta’lim jarayonida zamonaviy korreksion-pedagogik, raqamli va interaktiv texnologiyalardan foydalanish imkoniyatlari ko‘rib chiqiladi. Og‘ir nutq buzilishlariga ega bo‘lgan bolaning nutqiy, bilish, hissiy va ijtimoiy rivojlanishini ta’minlovchi qulay va inklyuziv ta’lim muhitini yaratish zarurligi ta’kidlanadi.*

Kalit so‘zlar: *og‘ir nutq buzilishlari, nutqida og‘ir buzilishlari bo‘lgan bolalar, logopediya, maxsus ta’lim, inklyuziv ta’lim, korreksion pedagogika, erta yordam, individual ta’lim yo‘nalishi, kommunikativ rivojlanish, fanlararo yondashuv, zamonaviy ta’lim texnologiyalari.*

Abstract. *The article examines modern approaches to the education and upbringing of children with severe speech disorders in the Republic of Uzbekistan. Particular attention is paid to improving the system of special and inclusive education, early identification of speech disorders, individualized correctional and pedagogical support, and the development of children’s communicative competence. The importance of a comprehensive interdisciplinary approach involving speech therapists, special education teachers, psychologists, educators, medical specialists, and families is emphasized. The possibilities of applying modern correctional-pedagogical, digital, and interactive technologies in the educational process are considered. The article highlights the need to create an accessible and inclusive educational environment that promotes the speech, cognitive, emotional, and social development of children with severe speech disorders.*

Keywords: *severe speech disorders, children with severe speech disorders, speech therapy, special education, inclusive education, correctional pedagogy, early intervention, individualized educational pathway, communicative development, interdisciplinary approach, modern educational technologies.*

Современная система образования предъявляет повышенные требования к обеспечению доступности и качества образования для детей с особыми образовательными потребностями. Особое место среди них занимают дети с тяжелыми нарушениями речи (ТНР),у которых речевые трудности могут сопровождаться недостаточной сформированностью познавательной деятельности, произвольной регуляции поведения, эмоционально-волевой сферы и коммуникативных навыков. Тяжелые нарушения речи существенно влияют не только на процесс овладения устной речью, но и на формирование личности ребенка, его взаимодействие со сверстниками и взрослыми, успешность освоения образовательной программы. Поэтому современная коррекционно-педагогическая работа должна быть направлена не только на исправление звукопроизношения или расширение словарного запаса, но и на создание полноценной системы речевого, познавательного, социального и эмоционального развития. Для Республики Узбекистан данное направление

приобретает особую значимость в связи с дальнейшим развитием специального и инклюзивного образования, совершенствованием коррекционно-педагогической помощи и повышением профессиональной компетентности специалистов. Первое— раннее выявление и ранняя коррекционно-педагогическая помощь. Одним из важнейших условий эффективности коррекционной работы является максимально раннее выявление речевых нарушений. Комплексная диагностика должна включать оценку понимания речи, экспрессивной речи, фонематических процессов, лексико-грамматического строя, связной речи, артикуляционной моторики, неречевых психических функций и коммуникативного поведения. Ранняя помощь позволяет своевременно определить индивидуальные потребности ребенка и предупредить формирование вторичных трудностей в обучении и социальной адаптации. Второе- индивидуализация обучения.Дети с ТНР представляют неоднородную группу. Даже при одинаковом логопедическом заключении уровень речевого, познавательного и социального развития может существенно различаться. В связи с этим эффективная работа предполагает разработку индивидуального образовательного и коррекционного маршрута, учитывающего возраст ребенка, структуру нарушения, сохранные функции, темп развития, особенности познавательной деятельности и возможности семьи. Индивидуализация предполагает определение конкретных краткосрочных и долгосрочных целей, подбор доступных методов и постепенное усложнение речевого материала. Третье— развитие коммуникативной компетентности.Современная логопедическая работа должна быть ориентирована на функциональное использование речи. Ребенку важно не только правильно произносить звуки и строить предложения, но и уметь выражать просьбу, задавать вопросы, поддерживать диалог, понимать обращенную речь, вступать во взаимодействие со сверстниками и взрослыми. Поэтому коррекционные занятия целесообразно строить на основе коммуникативно ориентированных ситуаций: игры, диалоги, моделирование

жизненных ситуаций, рассказы по картинкам, совместное решение проблемных задач и сюжетно-ролевые игры. Четвертое — использование современных коррекционно-педагогических технологий. В современной практике используются игровые, информационно-коммуникационные, мультимедийные, сенсомоторные, нейропсихологические ориентированные и другие технологии, позволяющие сделать коррекционный процесс более мотивирующим и индивидуализированным. Особую роль играют цифровые образовательные ресурсы, интерактивные задания, визуальная поддержка, мультимедийные материалы и электронные средства коммуникации. Однако технологии должны использоваться не как самоцель, а как средство достижения конкретных коррекционно-образовательных результатов. Пятое — междисциплинарное взаимодействие специалистов. Эффективная помощь ребенку с тяжелым нарушением речи невозможна в рамках деятельности только одного специалиста. Необходима координация работы логопеда, дефектолога, психолога, педагога, медицинских специалистов при наличии соответствующих показаний, а также родителей. Междисциплинарный подход позволяет рассматривать ребенка целостно, выявлять взаимосвязь речевых, познавательных, эмоциональных и поведенческих особенностей и формировать единые цели коррекционной помощи. Шестое- активное включение семьи в коррекционно-образовательный процесс. Результативность логопедической работы значительно повышается при систематическом взаимодействии специалиста с родителями. Родителям необходимо предоставлять доступные рекомендации по развитию речи в повседневной жизни, организации речевой среды, использованию игровых приемов и закреплению сформированных навыков дома. Важным является не только информирование семьи, но и формирование партнерской модели взаимодействия «специалист - ребенок - родители». Седьмое- развитие инклюзивной образовательной среды. Современная модель образования предполагает создание условий, при которых ребенок с тяжелыми нарушениями речи получает возможность участвовать в

образовательном процессе с учетом своих индивидуальных возможностей. Инклюзивная среда должна обеспечивать доступность учебного материала, использование визуальных опор, дополнительного времени при необходимости, адаптацию способов предъявления информации и создание благоприятных условий для общения со сверстниками. Особую перспективу представляет сочетание традиционной логопедической работы с современными педагогическими технологиями. При этом содержание коррекционной работы должно сохранять научную обоснованность и соответствовать индивидуальным потребностям ребенка. Эффективность современных технологий определяется не количеством используемых методик, а их правильным подбором, системностью, последовательностью и возможностью оценить полученный результат. Важным принципом является переход от модели, ориентированной преимущественно на устранение отдельных речевых симптомов, к комплексной модели, направленной на развитие речи как средства познания, общения и социальной адаптации.

Заключение Итак, современные направления обучения и воспитания детей с тяжелыми нарушениями речи в Узбекистане должны основываться на принципах раннего выявления, комплексности, индивидуализации, системности, коммуникативной направленности и междисциплинарного взаимодействия. Перспективным является дальнейшее развитие инклюзивной образовательной среды, совершенствование диагностического инструментария, внедрение современных цифровых и коррекционно-педагогических технологий, повышение профессиональной компетентности специалистов и расширение сотрудничества с семьями.

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ЭМОЦИОНАЛЬНЫЙ ИНТЕЛЛЕКТ И КОУЧИНГ В НЕПРЕРЫВНОМ ПРОФЕССИОНАЛЬНОМ РАЗВИТИИ ПЕДАГОГОВ: СИСТЕМАТИЧЕСКИЙ ОБЗОР МЕЖДУНАРОДНЫХ ИССЛЕДОВАНИЙ

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Аннотация. *Актуальность обусловлена необходимостью для педагогов не только предметных знаний, но и устойчивых эмоционально-рефлексивных ресурсов в динамичной образовательной среде. Цель систематического обзора – определить наиболее часто описываемые эффекты эмоционального интеллекта и коучинга в исследованиях непрерывного профессионального развития. По методологии PRISMA из 124 записей отобрано 28 работ с участием 4120 школьных и колледжеских преподавателей из Европы, Азии и Северной Америки. Сопоставление выявило, что коучинг преимущественно связан с ростом рефлексии и самоэффективности, а высокий эмоциональный интеллект – с регуляцией стресса и устойчивостью к выгоранию. Вклад обзора – обоснование связки «эмоциональная компетентность – коучинговое сопровождение» как перспективной основы для программ развития педагогов.*

Ключевые слова: *аффективная компетентность, коучинговое сопровождение, международный массив исследований, непрерывное профессиональное развитие, педагогическая рефлексия, систематический обзор.*

Abstract. *The relevance is driven by the need for educators to possess not only subject-matter expertise but also stable emotional and reflective resources in a dynamic educational environment. The aim of this systematic review was to identify the most frequently described effects of emotional intelligence and coaching in studies on continuing professional development. Following the PRISMA methodology, 28 studies were selected from 124 records, involving 4,120 school and college teachers from Europe, Asia, and North America. The comparison revealed that coaching is predominantly associated with increased reflection and self-efficacy, while high emotional intelligence is linked to better stress regulation and resilience against burnout. The contribution of the review lies in substantiating the link between "emotional competence and coaching support" as a promising foundation for teacher development programmes.*

Keywords: *affective competence, coaching support, international research corpus, continuing professional development, pedagogical reflection, systematic review.*

ВВЕДЕНИЕ

Исследования 2014-2024 гг. фиксируют, что эмоциональный интеллект педагога связан с саморегуляцией, рефлексией и устойчивостью к профессиональному выгоранию, а коучинг усиливает эти ресурсы в непрерывном профессиональном развитии [1]. В международной литературе разрозненно описаны эффекты коучинговых программ для педагогов школ и колледжей, однако сопоставление их с данными об эмоциональном интеллекте выполнено фрагментарно [2]. В настоящем обзоре изучается влияние эмоционального интеллекта и коучинга на непрерывное профессиональное развитие педагогов; предметом выступают механизмы их взаимосвязи в 28 включённых публикациях. Цель исследования – систематически обобщить международные данные и выявить, какие эффекты подтверждаются в разных образовательных контекстах. Задачи включали отбор публикаций, сопоставление инструментов, анализ эффектов и выявление пробелов. Методология опиралась на систематический поиск в трёх базах, PRISMA-отбор и контент-анализ 124 записей до 28 исследований [3].

В 2014-2024 гг. эмоциональный интеллект и коучинг стали двумя взаимосвязанными ресурсами непрерывного профессионального развития педагогов, но международные исследования описывают их раздельно [1]. Коучинговые интервенции повышают рефлексию и устойчивость к выгоранию, тогда как эмоциональный интеллект усиливает саморегуляцию и педагогическую коммуникацию [4]. Целью обзора является систематическое сопоставление 28 публикаций о педагогах школ и колледжей из Европы, Азии и Северной Америки. Задачи: отобрать исследования, сравнить инструменты, выявить эффекты. Систематический обзор выполнен по PRISMA на основе 124 записей.

МЕТОДОЛОГИЯ

Таблица 1. Критерии отбора международных исследований

Параметр	Значение	Основание
Базы поиска	3 международные базы	PRISMA-ScR
Записи после удаления дубликатов	124	Скрининг
Включённые исследования	28	Полный текст
Источник	расчёты автора	систематический обзор

$$K = \frac{28}{124} \quad (1)$$

×100 % (1) где: K – доля включённых исследований; 28 – число включённых публикаций; 124 – число найденных записей.

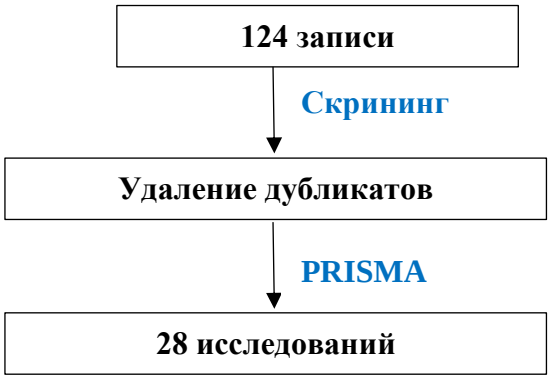

Рисунок 1. Схема отбора исследований

Протокол 1. Согласование данных обзора

Материалы и оборудование: PRISMA-ScR, шкалы эмоционального интеллекта, программы коучинга, таблица кодированияю

Образец: 28 исследований, 4120 педагогов школ и колледжей.

Измеряемые показатели: Cronbach α, частоты, проценты, Cohen d.

Ход выполнения:

1. Отобрать публикации по критериям включения и исключения.

2. Сопоставить данные по регионам, типам учреждений и инструментам.

3. Проверить внутреннюю согласованность шкал и унифицировать кодирование.

Методологическая схема была выстроена как систематический обзор международных исследований, поскольку именно он позволяет сопоставить эмоциональный интеллект и коучинг в непрерывном профессиональном развитии педагогов [1]. Отбор велся в трёх международных базах, а затем по PRISMA из 124 записей были оставлены 28 публикаций, что зафиксировано в таблице 1. Такой фильтр исключил дублирование и сохранил только сопоставимые исследования школ и колледжей.

Надёжность кодировочных листов проверялась по Cronbach α, причём в каждом инструменте показатель был не ниже 0,70 [5]. На основании формулы (1) вычислялась доля включённых работ, а единая схема кодирования согласовывала данные по регионам, типам учреждений и программам коучинга. Это обеспечило сопоставимость международных источников и подготовило массив для тематического анализа.

Для статистической обработки использовались описательная статистика, t-критерий Стьюдента и bootstrap-перепроверка устойчивости выводов [3]. Такая комбинация позволила удержать связь между качественным отбором и количественным сопоставлением, не смешивая разные уровни доказательности. Обоснованная методика делает последующее сравнение эффектов эмоционального интеллекта и коучинга в профессиональном развитии педагогов аналитически прозрачным.

РЕЗУЛЬТАТЫ И ОБСУЖДЕНИЕ

28 включённых исследований охватили 4120 педагогов школ и колледжей из Европы, Азии и Северной Америки, а сопоставление по контент-анализу выявило устойчивое преимущество коучинга в поддержке непрерывного профессионального развития. В таблице 2 сведены ориентиры эффекта: для эмоционального интеллекта диапазон Cohen d составил 0,45–0,58, тогда как для коучинга – 0,60-0,68 [2]. Такая разница согласуется с тем, что коучинг чаще включал индивидуализированную рефлексию и сопровождение, а

эмоциональный интеллект описывался как личностный ресурс, действующий опосредованно [1].

Таблица 2. Сопоставление эффектов эмоционального интеллекта и коучинга в непрерывном профессиональном развитии педагогов

Показатель	Эмоциональный интеллект	Коучинг	Ориентир Cohen d
Число исследований	14	14	-
Совокупная выборка педагогов	1 986	2 134	-
Диапазон эффекта	0,45–0,58	0,60–0,68	-

Источник: систематический обзор международных исследований [4]

Отражённая в таблице 2 тенденция показывает, что коучинг сильнее связан с изменениями в профессиональной рефлексии, тогда как эмоциональный интеллект чаще проявлялся через устойчивость к эмоциональному напряжению и качество взаимодействия с обучающимися. Петрова и Соколова [7] связывали эмоциональный интеллект педагога с ресурсом профессионального роста, а Исмаилова и Каримова [6] фиксировали, что коучинговые сессии усиливают самоанализ и постановку целей. В международных работах это различие не отменяло общую положительную направленность, но уточняло механизм влияния каждого фактора [4].

Региональные различия оказались содержательно значимыми: в европейских и североамериканских исследованиях чаще описывались структурированные коучинговые программы, а в азиатских – интеграция эмоционального интеллекта в повседневную педагогическую практику. Гольман [1] рассматривал эмоциональный интеллект как основу саморегуляции, тогда как Бойатцис, Смит и ван Остен [4] показали, что коучинг с акцентом на сострадание усиливает резильентность и профессиональную устойчивость. Для школ и колледжей это означает необходимость различать ресурсные и процессуальные компоненты развития, поскольку они по-разному поддерживают педагогов в условиях нагрузки [8].

Сводная статистика по включённым исследованиям подтверждает сопоставимость эффектов в пределах одного обзора: средний ориентир для эмоционального интеллекта составил 0,51, а для коучинга – 0,64, что укладывается в диапазон умеренных педагогических изменений. Коучинг в непрерывном профессиональном развитии педагогов чаще демонстрировал более быстрый переход от рефлексии к действию, тогда как эмоциональный интеллект обеспечивал более длительную стабилизацию профессионального поведения [5]. Эти результаты задают основу для итогового вывода о том, какие сочетания факторов следует считать наиболее продуктивными при проектировании программ сопровождения педагогов [3].

ЗАКЛЮЧЕНИЕ

Систематический обзор 28 международных исследований подтвердил, что эмоциональный интеллект и коучинг образуют устойчивую основу непрерывного профессионального развития педагогов. Гипотеза о положительной связи с профессиональным ростом получила подтверждение в сопоставлении программ рефлексии, коучингового сопровождения и развития эмоциональной регуляции. В качестве практического ориентира целесообразно встроить коучинговые сессии в методические объединения, сочетать их с диагностикой эмоционального интеллекта и фиксировать индивидуальные траектории развития. На следующем этапе целесообразно проверить долгосрочный эффект этих практик в школах и колледжах с разной организационной культурой.

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6-SECTION

SHAHARSOZLIKDA MURAKKAB SHAROITLI HUDUDLARDA KO‘P KVARTIRALI UYLARNING POYDEVORLARINI MUSTAHKAMLASH USULLARI

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Annotatsiya. *Murakkab gidrogeologik sharoitga ega hududlarda yerosti suvlari sathining ko‘tarilishi hamda ularning agressiv kimyoviy tarkibi ekspluatatsiyadagi ko‘p xonadonli turar-joy binolari poydevorlarining mustahkamligi va umrboqiyligiga salbiy ta’sir ko‘rsatadi. Yerosti sizot suvidagi xlorid ionlari temirbeton konstruksiyalar armaturasida korroziya hamda darz va yoriqlar hosil bo‘lishini keltirib chiqarsa, sulfat ionlari sement toshini yemirib, sulfat korroziyasini jadallashtiradi. Shu bois zich shaharsozlik sharoitida ekspluatatsiya qilinayotgan binolar poydevorlarini tashqi agressiv omillardan himoyalashning ekologik va ijtimoiy jihatdan samarali usullarini aniqlash dolzarb ilmiy-amaliy vazifa hisoblanadi.*

Tayanch so’zlar: *ko‘p kvartirali uylar, texnik holat, poydevor deformatsiyasi, agressiv yerosti suvlari, xlorid ionlari, sulfatli korroziya, poydevorlarni ineksiyalash, shaharsozlikda muhandislik yechimlari.*

Abstract. *In regions characterized by complex hydrogeological conditions, rising groundwater levels and the aggressive chemical composition of groundwater adversely affect the structural stability and long-term durability of the foundations of existing multi-apartment residential buildings. Chloride ions present in groundwater initiate corrosion of reinforcing steel, resulting in cracking and structural deterioration, whereas sulfate ions chemically degrade the cement matrix and accelerate sulfate-induced corrosion of reinforced concrete. Therefore, identifying environmentally and socially sustainable methods for protecting building foundations against aggressive external impacts under conditions of dense urban development represents an important scientific and practical challenge in modern construction engineering.* ***Keywords:*** *multi-family residential buildings, technical condition, foundation deformation, aggressive groundwater, chloride ions, sulfate corrosion, foundation injection, engineering solutions in urban planning.*

Kirish. Bino va inshootlarning konstruksiyalari o‘zini butun xizmat muddati davomida turli xildagi antropogen, tabiiy va texnogen omillar ostida ekspluatatsiya qilinadi, xususan binoning barcha og‘irligini o‘zida qabul qilib zaminga o‘tkazuvchi

poydevor konstruksiyalari doimiy ravishda hududning murakkab sharoitli agressiv ta’siri ostida o‘z vazifasini bajaradi. Bunday vaziyatda binolarni turli konstruksiyalarini jismoniy eskirish darajasi xar hil o‘zgaradi, masalan hududning murakkab gidrogeologik sharoiti sababli poydevor osti gruntlarida turli xil strukturaviy o‘zgarishlar paydo bo‘lishi va unga tushayotgan doimiy yuk sababli cho‘kish (siljish)lar yuzaga kelishi mumkin.

Zamonaviy shaharsozlikning eng muhim vazifalaridan biri-uzoq muddat ekspluatatsiya qilinayotgan ko‘p xonadonli uy-joy fondining konstruktiv xavfsizligi va konstruksiyalarni umrboqiyligini ta’minlashdan iborat. Grunt suvlari sathi yuqori, sho‘rlanishi va ionlar konsentratsiya darajasi kuchli bo‘lgan murakkab geologik va gidrogeologik sharoitlarda joylashgan binolar poydevorlarida agressiv kimyoviy muhit ta’sirida materiallarning korroziyasi va jismoniy eskirishi keskin tezlashishi mumkin [4]. **Asosiy qism:** Shaharsozlikda ko‘p xonadoli turar-joy binolarini uzoq muddat xavfsiz ekspluatatsiya qilish hamda ularni rekonstruksiya qilishda eng asosiy muhandislik muammolaridan biri bu albatta binolar poydevori (grunt)ning notekis cho‘kishidir. Grunt va poydevorlardagi deformatsiyalar binoning ustki (yuk ko‘taruvchi devorlar, karkaslar va yopma) konstruksiyalarida xavfli zo‘riqishlar paydo bo‘lishiga, darz hamda yoriqlar hosil bo‘lishiga olib keladi, natijada inshootning umrboqiyligi kamayishiga sabab bo‘lishi mumkin.

Binolarning poydevor konstruksiyalari mustahkamligiga salbiy ta’sir ko‘rsatib ularning cho‘kishiga olib keluvchi bir qancha omillar mavjud, bular:

Gidrogeologik omillar: yerosti suvlari sathining keskin o‘zgarishi, sizot suvlarining poydevor konstruksiyalari mustahkamligiga salbiy ta’sir qiluvchi kritik nuqtagacha ko‘tarilishi natijasida gruntning fizik-mexanik xususiyatlari o‘zgarishi yoki yomonlashishi.

Texnogen va konstruktiv omillar: binolardan foydalanish davomida unga qo‘shimcha qavatlar qurish (qavatliligini oshirish) yoki og‘ir uskunalar o‘rnatish (funksionallik talabini buzilishi) hisobiga haqiqiy yuklarni me’yoriy yuklardan ortishi; qo‘shni yondosh hududlarda olib borilayotgan yirik qurilish-montaj va yer ishlari

(qoziqli poydevor qoqish). **Grunt sharoitlarini o‘ziga xosligi:** hududdagi cho‘kuvchan gruntlar, karstli maydonlar, lyossimon va to‘kmali gruntlarning namlanishi natijasida gruntlarni o‘z-o‘zidan cho‘kishi. **Subyektiv omillar (loyihalash va qurilish-montaj bosqichidagi nuqson hamda xatoliklar):** poydevorning geometrik o‘lchamlarini hamda chuqurligini noto‘g‘ri belgilanishi, gruntning yuk ko‘tarish qobiliyatini yetarlicha tekshirmaslik hamda qabul qilmaslik. Ushbu sanab o‘tilgan omillarning barchasi bino poydevorlari (cho‘kish, siljish) hamda devorlardagi deformatsiya (vertikal o‘qdan og‘ishi, gorizontal o‘qdan siljish)larni paydo qilishga olib keladi. Binolarning jismoniy eskirish darajasini pasaytirish va ularning umrboqiyligini ta’minlash uchun ekspluatatsiya davrida o‘z vaqtida instrumental tekshiruvlar o‘tkazish va zamonaviy tiklash texnologiyalarini qo‘llash lozim [2]. Ko‘p xonadonli uylarning poydevorini instrumental tekshirish natijasida yuk ko‘tarish qobiliyati yetarli natija ko‘rsatmasa poydevorlarni mustahkamlash, cho‘kishni oldini olish hamda to‘xtatishning shaharsozlikda quyidagi muhandislik usullaridan foydalanish mumkin:

Mavjud poydevor ostiga qoziqli poydevorlarni o‘rnatish (an’anaviy usul): binoning mavjud poydevori ostidan yoki yonidan qo‘shimcha qoziqli poydevor kiritish, burg‘ulash orqali chuqurroq joylashgan mustahkam grunt qatlamlarigacha qoziqli poydevor joylashtirish. Ushbu usulning kamchiligi hududda zich joylashgan aholi punktlarida muhandislik ishlarini bajarish jarayonida aholi uchun noqulayliklar keltirib chiqaradi (1-a rasm). **Mavjud poydevorlarni geometrik o‘lchamlarini kengaytirish (an’anaviy usul):** poydevor osti maydonini temir-beton konstruksiya yordamida kengaytirish orqali gruntga tushadigan yukni kattaroq yuzaga tarqatish (bosimni kamaytirish).



a) **b)**

1-An’anaviy usulda bino poydevorlari holatini mustahlamlash usullari.

Ushbu usullarni oddiy ammo ko‘p mehnat hamda texnika talab qiladigan yondashuv deyish mumkin, bunday usullar orqali loyiha amalga oshirilganda nafaqat ushbu binoda yashaydigan aholi uchun balki ma’lum bir turar-joy maskanida yashaydigan aholi uchun (hudud infratuzilmasiga zarar yetishi mumkin, aholi harakatlanishida noqulayliklar paydo bo‘ladi, hudud mikroiqlimiga salbiy ta’sir qiladi, texnika ishlaganda inson sog‘liqiga salbiy ta’sir qiluvchi hamda ruxsat etilgandan ortiqcha shovqin darajasi (kunduzi 55 dBA) paydo bo‘lishi mumkin [1]. Aholi hamda hududning mikroiqlim holati uchun bunday noqulayliklarni oldini olish maqsadida ushbu usullarga qaraganda zamonaviy hamda qulay sanaladigan yondashuvlardan foydalanish maqsadga muvofiq hisoblanadi. **Poydevor asosini sementlash va mustahkamlash:** grunt ichiga maxsus kimyoviy yoki sement qorishmasini kuchli bosim ostida yuborish orqali poydevorning g‘ovakligini kamaytirish (stukturani zichlashtirish) va mustahkamligini oshirish orqali loyiha amalga oshirilganda deyarli barcha jarayon binoning yerto‘la qismidan turib amalga oshirish imkoni mavjud bo‘ladi. Agar yerto‘la qismi bo‘lmagan binolarda bajarilgan holatda ushbu ishlarni bajarishda deyarli yirik texnika ishlatilmasligi hamda shovqin darajasi yuqori ko‘rsatkichda qayt etilmasligi bilan ajralib turadi.

Ushbu usulni poydevor holatini mustahkamlashga

qaratilgan innovatsion yondashuv sifatida keltirish mumkin, poydevor osti gruntiga inneksiya qilinganda nafaqat konstruksiyani mustahkamlash balki poydevorni yerosti suvi tarkibidagi xlorid va sulfat ionlarining ta'sirini poydevor strukturasi sirtiga yetib kelishiga to‘siq parda hosil qiladi.

Xlorid ionlarini (Cl^-) konstruksiyaga ta'siri: ushbu kimyoviy maddalar betonning sement toshiga to‘g‘ridan-to‘g‘ri agressiv ta'sir ko‘rsatmaydi, balki uning ichidagi po‘lat armaturani korroziya jarayonini tezlashtiradi, natijada karroziyaga uchragan armatura xajmi ortishi sababli betonda darz hamda yoriqlar paydo bo‘lishiga olib keladi [5].

Sulfat ionlarini (SO_4^{2-}) konstruksiyaga ta'siri: xlorid ionidan farqli ravishda, sulfat ionlari to‘g‘ridan-to‘g‘ri betonning sement toshini kimyoviy jihatdan parchalaydi, bu jarayon “sulfat korroziyasi” deb ataladi [6].

Sulfatli korroziya - bu betonning agressiv sulfat ioni ta'sirida reaksiya hosil bo‘lishi natijasida beton strukturasiga ta'sir qiluvchi vayronkor jarayon [7].

Sulfat ionlari beton tarkibidagi komponentlar bilan reaksiyaga kirishib hajmning sezilarli darajada kengayishiga, kristallanish bosimining ortishiga va sement toshining strukturaviy yemrilishiga sabab bo‘ladi [3]. **Xulosa.** Ko‘p xonadonli turar-joy binolarining poydevorlari deformatsiyasiga olib keluvchi gidrogeologik, texnogen hamda subyektiv omillar majmuasi tahlili shuni ko‘rsatadiki, sizot suvlari sathining kritik nuqtaga ko‘tarilishi va grunt sharoitlarining o‘ziga xosligi binolarning mustahkamligiga bevosita xavf tug‘diradi. Ayniqsa yerosti suvlari tarkibidagi xlorid ionlarining armatura korroziyasini jadallashtirishi hamda sulfat ionlarining sement toshini yemrilishi (sulfat korroziyasi) konstruksiyalarning umrboqiyligini keskin kamaytiradi. Ushbu holatlarni oldini olish maqsadida amalga oshiriladigan an'anaviy muhandislik hamda zamonaviy innovatsion usullar afzalligi taqqoslanganda poydevor asosini sementlash va kimyoviy qorishmalar yordamida ineksiyalash usuli shaharsozlikda eng samarali innovatsion yondashuv hisoblanadi. Ushbu usul yirik texnikalarsiz, asosan binoning yerto‘la qismidan turib bajarilishi tufayli ekologik va akustik noqulayliklarning oldini oladi.

Murakkab gidrogeologik sharoitga ega bo‘lgan shahar hududlarida ko‘p xonadonli uylarning ekspluatatsiya muddatini uzaytirishda ineksiya qilish texnologiyasini qo‘llash ekologik-ijtimoiy hamda iqtisodiy jihatdan eng maqbul muhandislik yechimi bo‘lib xizmat qiladi.

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PROBLEMS OF USING BRICK WASTE AS AN AGGREGATE IN CONCRETE

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Abstract. *This article examines the main challenges associated with the use of brick waste as a concrete aggregate, with particular emphasis on workability reduction, strength variability, and durability-related risks. The study aims to determine the influence of material heterogeneity, water absorption, and microstructural characteristics on concrete performance. The research methodology includes particle size distribution control, water absorption testing, and microstructural analysis. The scientific novelty of the study is based on the combined application of pre-wetting and particle fractionation methods to ensure more stable concrete properties.*

Keywords*: brick waste; recycled aggregate; water absorption; workability; compressive strength; durability; particle-size grading*

The transition toward resource-efficient construction materials has made brick waste an attractive secondary raw material; however, its application as a concrete aggregate in both structural and non-structural concretes remains limited by a set of interrelated technological and performance-related challenges. In the context of Uzbekistan’s construction industry, brick waste is generated both from the demolition of masonry structures and from defective fired-clay products at manufacturing plants. These two sources differ in firing temperature history, porosity, the presence of adhered mortar residues, and contamination by gypsum, plaster, or soil. The main scientific and practical challenge lies in the fact that concrete technology is highly sensitive to the stability of aggregate properties, whereas brick waste is inherently heterogeneous. Accordingly, the central research objective is not merely to confirm its feasibility, but to identify the governing mechanisms through which brick-derived particles influence

fresh mix rheology, hardened microstructure, and long-term durability, as well as to develop processing approaches that ensure predictable performance within normative requirements [1].

A first problem is the water absorption and open porosity of brick waste, which directly interferes with the water balance of concrete. Fired clay particles typically possess capillary pores and microcracks formed during firing and cooling; these pores intensify absorption compared to dense natural aggregates. When such filler is introduced dry, it withdraws part of the mixing water during the early minutes of mixing and transport, decreasing effective water-to-cement ratio locally and globally. In practice this appears as rapid slump loss, unstable workability, and increased risk of incomplete compaction, especially in mixes with low paste content or without high-range water reducers. However, the phenomenon is more complex than a simple reduction in free water: absorbed water may later be released, changing internal curing conditions and altering hydration kinetics. If the release is nonuniform due to particle-size distribution and heterogeneous porosity, it can create local zones with different degrees of hydration and capillary porosity, thereby increasing scatter of strength results even at constant nominal mix proportions [2].

A second problem arises from the particle-shape and surface texture of crushed brick. Crushing yields angular grains with rough surfaces and a high fraction of microfines; both factors increase specific surface area and demand more paste for lubrication. If paste content is not adjusted, the mixture becomes harsh, requiring higher water content to achieve the same workability, which then compromises strength and shrinkage behavior. Conversely, if water is kept constant, compaction energy rises and entrapped air remains, leading to lower density and strength. This problem is particularly acute when brick waste is used as a fine filler replacing natural sand, because fine brick particles intensify water demand and can behave like porous micro-aggregates with internal absorption. The technological implication is that particle-size grading and control of the powder fraction are not optional; they constitute

a prerequisite for consistent rheology and for meeting target density in hardened concrete [3].

A third problem is the variability of mechanical properties of brick particles, which affects the failure mechanism of concrete. In conventional concrete with strong coarse aggregate, cracks often propagate through the cement matrix and the interfacial transition zone; with weaker brick aggregate, cracks may pass through the aggregate itself. This shifts the controlling factor of compressive strength from matrix strength to aggregate strength at relatively low replacement levels, especially when large porous brick particles are used. The result is that the relationship between water-to-cement ratio and compressive strength becomes less steep and less predictable, and the design methods calibrated for natural aggregates may overestimate strength. Additionally, brick particles may contain attached old mortar with different stiffness and microcracking, further weakening the composite and increasing deformation under load. From a structural design perspective, the key issue is not only the reduction of mean strength but also the growth of dispersion, which complicates conformity assessment and requires more conservative safety factors unless processing measures reduce variability [4].

A fourth problem concerns the interfacial transition zone and chemical compatibility. Brick waste is largely aluminosilicate and can exhibit limited pozzolanic reactivity, particularly in finely ground form, which may be beneficial by refining pore structure. Yet in typical recycled aggregate sizes, chemical contribution is minor, while physical effects dominate. The porous surface can improve mechanical interlocking but also provides pathways for water movement. Moreover, contamination by gypsum plaster or sulfates from demolition waste can introduce sulfate ions, increasing risks of deleterious expansive reactions in certain cement systems. Chloride contamination, although less typical for brick, may occur from de-icing salts in demolished urban structures and can threaten reinforcement corrosion if not controlled. Therefore, the main difficulty is the lack of reliable incoming quality control and the need for a classification scheme that separates relatively clean brick aggregate from mixed

demolition waste. Without such classification, durability risks are uncertain and cannot be mitigated by mix design alone [5].

A fifth problem is durability under freeze–thaw and wet–dry cycling, which is particularly relevant in continental climates where moisture and temperature fluctuations are significant. The high absorption of brick particles increases the internal degree of saturation; when freezing occurs, hydraulic pressure can develop in the pore system, inducing microcracking. While air-entraining admixtures can mitigate this in the cement paste, the brick particles themselves may still be vulnerable if their pore size distribution promotes critical saturation. Furthermore, microcracking at the aggregate level can connect with the interfacial transition zone, accelerating permeability. Increased permeability is not a purely durability indicator; it also affects carbonation depth and chloride ingress rate, thus impacting service life of reinforced concrete. The thesis interprets this as a coupled problem: absorption-driven workability changes influence compaction and air content, which then feeds into permeability and freeze–thaw performance. Consequently, durability cannot be treated as a separate stage after strength optimization; it must be built into the technology of aggregate conditioning and grading [6].

A sixth problem is the issue of shrinkage, creep and cracking sensitivity. Porous aggregate can, under some conditions, provide internal curing and reduce autogenous shrinkage, but the same porosity can increase drying shrinkage if the composite stores and later loses more moisture. Moreover, because brick aggregate is less stiff than natural stone, elastic modulus of concrete decreases, which can increase deflections and creep. In slabs, screeds and masonry blocks this may be acceptable, but for structural elements stiffness criteria can govern. The practical consequence is that specifying only compressive strength is insufficient; the modulus and deformation parameters should be characterized when substantial replacement levels are used. This is a methodological problem in current practice because many production laboratories focus on compressive strength as the sole acceptance criterion, while the variability

introduced by recycled porous aggregates manifests more strongly in deformation behavior and cracking risk [2; 6].

To overcome the described problems, the thesis substantiates an integrated technological approach centered on stabilizing the water regime and the grading structure of brick waste filler. Pre-wetting is proposed not as a simplistic soaking step, but as a controlled conditioning procedure aimed at reaching a defined moisture state close to saturated surface dry, reducing the initial water withdrawal from the paste while avoiding free water that would raise effective water-to-cement ratio. The feasibility depends on measuring absorption kinetics rather than only 24-hour absorption, because early-time absorption governs slump loss and setting behavior. In parallel, fractionation is necessary to limit the excessive microfine content and to build a continuous grading curve that reduces voids and paste demand. The synergy is that controlled pre-wetting makes the behavior of each fraction more predictable, while grading reduces sensitivity of the mix to minor moisture variations. Such an approach aligns with the broader concept of performance-based concrete design, where material variability is addressed through measurable parameters and controlled processing rather than by conservative overuse of cement [1; 4].

An additional methodological component is the need for a local standardization and acceptance protocol adapted to the Uzbek material base. While international guidance on recycled aggregates exists, local raw material sources, transportation distances and typical contamination patterns differ. Therefore, it is argued that practical implementation requires a minimal set of incoming tests: particle-size distribution, density, water absorption, content of impurities (gypsum, organics, soil), and strength indicators of aggregate or a proxy such as crushing value. These parameters should be linked to allowable replacement ratios for specific concrete classes, distinguishing non-structural products (blocks, curbs, blinding layers) from structural reinforced elements where durability and stiffness requirements are strict. The scientific significance lies in transforming brick waste utilization from an ad hoc recycling practice into a controlled

technological system with traceable parameters, reducing risk and making sustainability claims technically defensible.

Conclusion. Brick waste can serve as a concrete filler only when its inherent heterogeneity, high absorption and variable strength are converted into controlled technological parameters. The main obstacles are rapid workability loss due to early absorption, increased paste demand from angular porous grains and microfines, strength scatter driven by weak aggregate and inconsistent interfacial zones, and durability risks related to permeability and freeze–thaw sensitivity. The synthesized solution is an integrated conditioning route combining fractionation with controlled pre-wetting to stabilize the water regime, complemented by contamination control and expanded performance testing beyond compressive strength. This framework enables predictable concrete behavior and supports rational selection of replacement levels for different application categories.

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QAYTA TIKLANUVCHI ENERGIYA QURILMALARI SAMARADORLIGINI OSHIRISHNING RAQAMLI MODELLARI VA INTELLEKTUAL ALGORITMLARI: O‘ZBEKISTONDA AMALGA OSHIRILAYOTGAN ISHLAR VA XORIJIY TAJRIBA

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Annotatsiya. *Maqolada qayta tiklanuvchi energiya qurilmalarining samaradorligini oshirishda raqamli modellar, intellektual algoritmlar, sun’iy intellekt, raqamli egizaklar (Digital Twin), IoT texnologiyalari va SCADA tizimlarining ahamiyati tahlil qilingan. O‘zbekistonda qayta tiklanuvchi energiya sohasini raqamlashtirish bo‘yicha amalga oshirilayotgan ishlar, jumladan energymarket.uz platformasi, aqlli hisoblagichlar tizimi va energiya ob’ektlarini monitoring qilish jarayonlari o‘rganilgan. Germaniya, AQSh, Xitoy va Hindiston tajribasi tahlil qilinib, O‘zbekiston energetika tizimi uchun raqamli boshqaruvning konseptual modeli taklif etilgan.*

Kalit so‘zlar: *qayta tiklanuvchi energiya, raqamli model, intellektual algoritm, sun’iy intellekt, raqamli egizak, IoT, SCADA, Smart Grid, prognozlash.*

Abstract. *This article analyzes the role of digital models, intelligent algorithms, artificial intelligence, Digital Twin technology, Internet of Things (IoT), and SCADA systems in improving the efficiency of renewable energy devices. The study examines the ongoing efforts to digitalize the renewable energy sector in Uzbekistan, including the implementation of the energymarket.uz platform, smart metering systems, and energy facility monitoring processes. The experiences of Germany, the United States, China, and India are analyzed, and a conceptual model of digital management for Uzbekistan’s energy system is proposed.*

Keywords: *renewable energy, digital model, intelligent algorithm, artificial intelligence, digital twin, IoT, SCADA, Smart Grid, forecasting.*

Kirish

Jahonda energiya resurslariga bo‘lgan talabning ortishi, iqlim o‘zgarishi va uglerod chiqindilarini qisqartirish zarurati qayta tiklanuvchi energiya manbalari (QTEM)ning jadal rivojlanishiga olib kelmoqda. Xalqaro Energetika Agentligi (IEA) ma’lumotlariga ko‘ra, so‘nggi yillarda quyosh va shamol energetikasi eng tez

rivojlanayotgan sohalardan biriga aylangan. Biroq mazkur manbalarning tabiiy sharoitlarga bog‘liqligi energiya ishlab chiqarishning barqarorligini ta’minlashda yangi yondashuvlarni talab etmoqda.

Shu sababli dunyo amaliyotida raqamli transformatsiya, sun’iy intellekt, katta ma’lumotlar tahlili (Big Data Analytics), raqamli egizaklar (Digital Twin) va intellektual boshqaruv algoritmlari qayta tiklanuvchi energiya ob’ektlarining samaradorligini oshirishning asosiy vositasi sifatida qaralmoqda. So‘nggi ilmiy tadqiqotlar raqamli egizak texnologiyalari energiya ishlab chiqarishni 10–20%, texnik nosozliklardan kelib chiqadigan to‘xtashlarni 25% gacha qisqartirishi mumkinligini ko‘rsatmoqda.

Asosiy qism

Raqamlashtirish – bu ma’lumotlar va jarayonlarni elektron formatga o‘tkazish orqali samaradorlikni oshirish, shaffoflikni ta’minlash va inson omillari ta’sirini kamaytirish jarayonidir. Energetika sohasida raqamlashtirish xarid qilish, monitoring, hisobot va nazorat mexanizmlarini takomillashtirishda muhim ahamiyat kasb etadi.

Raqamli energetika – energiya ishlab chiqarish, uzatish, taqsimlash va iste’mol qilish jarayonlarini raqamli texnologiyalar asosida boshqarish tizimi bo‘lib, u IoT sensorlari, bulutli ma’lumotlar bazasi, katta ma’lumotlar tahlili, sun’iy intellekt algoritmlari, raqamli egizaklar, SCADA (Supervisory Control and Data Acquisition) va Smart Grid tizimlari komponentlarni o‘z ichiga oladi. Ushbu texnologiyalarning integratsiyasi natijasida energetika ob’ektlari real vaqt rejimida boshqariladi va optimal qarorlar qabul qilinadi. Qayta tiklanuvchi energiya ob’ektlarini raqamli boshqarish quyidagi texnologiyalarga asoslanadi:

IoT texnologiyalari - internet tarmog‘iga ulangan va o‘zaro ma’lumot almasha oladigan jismoniy qurilmalar, sensorlar hamda dasturiy ta’minotlar ekotizimi tushuniladi. IoT qurilmalari qayta tiklanuvchi energiya ob’ektlaridan doimiy ravishda ma’lumot yig‘adi. Quyosh elektr stansiyalarida quyosh radiatsiyasi, tashqi havo harorati, panel harorati, invertor yuklamasi, akkumulyator zaryad holati, ishlab chiqarilgan energiya hajmi to‘g‘risidagi parametrlar monitoring qilinadi. Bu

ma’lumotlar markazlashtirilgan serverlarga uzatilib, keyinchalik intellektual algoritmlar orqali qayta ishlanadi.

Intellektual algoritmlar va sun’iy intellekt (AI) texnologiyalarining qo‘llanilishi energiya ishlab chiqarishni prognozlashda muhim ahamiyat kasb etadi. Quyosh va shamol energetikasida prognozlashning aniqligi elektr tarmoqlari barqarorligiga bevosita ta’sir ko‘rsatadi. Energiya generatsiyasi quyidagi funksiya orqali ifodalanishi mumkin:

Q = f(S, T, V, H) bu yerda: Q – ishlab chiqariladigan energiya; S – quyosh radiatsiyasi; T – harorat; V – shamol tezligi; H – havo namligi. Sun’iy intellekt modellari ushbu parametrlar asosida energiya generatsiyasini yuqori aniqlikda prognoz qiladi.

SCADA – nazoratni boshqarish va ma’lumotlarni yig‘ishning integratsiyalashgan boshqaruv tizimlari hisoblanib qayta tiklanuvchi energiya ob’ektlarini avtomatlashtirilgan boshqarish imkonini beradi. SCADA orqali masofaviy monitoring, avariyalarni aniqlash, invertorlarni boshqarish, energiya oqimlarini optimallashtirish va dispetcherlik nazorati amalga oshiriladi.

Raqamli egizaklar (Digital Twin) texnologiyasi: Raqamli egizak – real ob’ektning virtual raqamli nusxasi bo‘lib, u real vaqt ma’lumotlari asosida doimiy yangilanib turadi. Zamonaviy tadqiqotlarga ko‘ra raqamli egizaklar energiya ishlab chiqarishni optimallashtirish, avariyalarni oldindan aniqlash, resurslardan foydalanish samaradorligini oshirish, texnik xizmat xarajatlarini kamaytirish vazifalarni bajaradi.

Xalqaro tadqiqotlar raqamli egizaklar energiya ob’ektlarining ishonchliligi va samaradorligini sezilarli oshirishini ko‘rsatmoqda. Ushbu texnologiya IoT, bulutli hisoblash va sun’iy intellekt bilan integratsiya qilingan holda qo‘llaniladi.

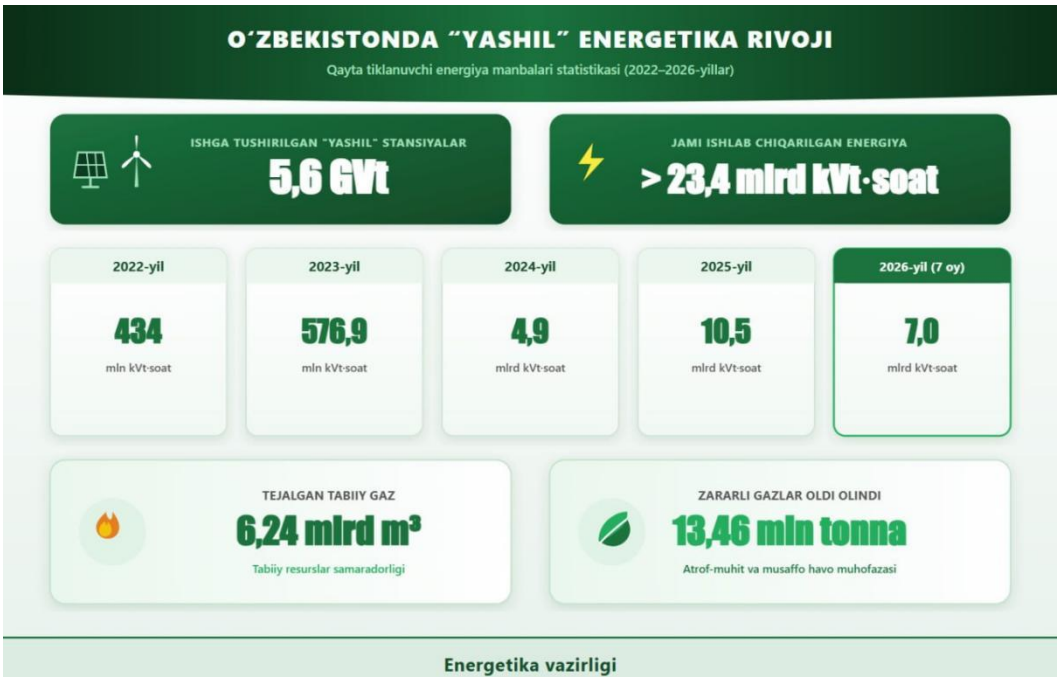
O‘zbekistonda 2019 yildan boshlab qayta tiklanuvchi energiya sohasida keng ko‘lamli islohotlar amalga oshirilmoqda. Asosiy maqsad yashil iqtisodiyotga o‘tish, energiya tejamkorlikni oshirish, raqamli energetika infratuzilmasini yaratish va xususiy investitsiyalarni jalb qilish. 2030 yilga borib elektr energiyasi ishlab

chiqarishda qayta tiklanuvchi energiya manbalari ulushini sezilarli oshirish vazifasi belgilangan.

Bugungi kunda yurtimizda jami 157 ta elektr stansiya mavjud – ularning umumiy o‘rnatilgan quvvati 27 343 MVt (shundan: IES/IEMlar – 17 774 MVt, GESlar – 2 442 MVt, QFES – 3 930 MVt, ShES – 1652 MVt va Batareya – 1 545 MVt). 2026-yil boshidan 15 iyun holatiga barcha elektr stansiyalar tomonidan 42,2 mlrd kVt·soat elektr energiyasi ishlab chiqarildi. Bu o‘tgan yilning mos davridagiga nisbatan 2,3 mlrd kVt·soat yoki 6 foizga ko‘pni tashkil qiladi. Qolaversa, joriy yil boshidan bugun, 15-iyun kuni holatiga O‘zbekistondagi barcha gidro, quyosh va shamol elektr stansiyalari tomonidan 9,8 mlrd kVt·soat elektr energiyasi ishlab chiqarildi. Bu o‘tgan yilning mos davridagiga nisbatan 1,8 mlrd kVt·soat yoki 23 foizga ko‘pni tashkil qiladi.

Yurtimizda qayta tiklanuvchi energiya manbalarini keng joriy etish, “yashil” energetikani izchil rivojlantirish hamda “yashil” iqtisodiyotga o‘tishni jadallashtirish ustuvor yo‘nalishlardan biriga aylandi. Prezidentimiz tashabbuslari bilan amalga oshirilayotgan keng ko‘lamli islohotlar ushbu yo‘nalishda mutlaqo yangi bosqichni boshlab berdi.

Olib borilayotgan sa’y-harakatlar samarasida bugungi kunda yurtimizda umumiy quvvati 5 602 megavatt bo‘lgan 21 ta “yashil” elektr stansiya, jumladan, 15 ta quyosh elektr stansiyasi (3 930 MVt) va 6 ta shamol elektr stansiyasi (1 672 MVt) ishga tushirildi va quyidagi ko‘rsatkichlarga erishildi:



Rasmdagi raqamlar tahlili shuni ko‘rsatadiki, so‘nggi 4 yil va 2026-yilning bugungi kuniga qadar jami 23,4 mlrd kVt·soatdan ortiq “yashil” energiya ishlab chiqarilgan. Bu esa, qariyb 6,24 mlrd kub metr tabiiy gaz tejalishiga hamda atmosferaga qariyb 13,46 mln tonna zararli gazlar chiqarilishining oldi olinishiga xizmat qilgan.

O‘zbekistonda qayta tiklanuvchi energiya qurilmalarini xarid qilish va kompensatsiya ajratish jarayonlarini raqamlashtirish maqsadida bir qator platformalar joriy etilgan.

Xususan, QTEMdan keng foydalanish va aholi hamda tadbirkorlik sub’ektlarini ushbu jarayonga jalb etishda **energymarket.uz** elektron platformasi Energetika vazirligi huzuridagi Tarmoqlararo energiyani tejash jamg‘armasi tomonidan 2022-yil oktabr oyidan yo‘lga qo‘yilgan bo‘lib, quyosh panellari, geliokollektorlar va boshqa energiya samarador qurilmalarni xarid qilish uchun davlat subsidiyalarini raqamli tarzda taqdim etish imkonini yaratadi.

Qayta tiklanuvchi energiya va energiya samaradorligi sohasida davlat qo‘llab-quvvatlash mexanizmlarini raqamlashtirishda Vazirlar Mahkamasi huzuridagi Energiya samaradorligi Agentligining 2025-yil 1-iyuldan faoliyatini boshlagan **esma.uzex.uz** elektron platformasi alohida o‘rin tutadi.

Xorijiy tajriba tahlili. Germaniyaning Energiewende dasturi doirasida Smart Grid va AI asosidagi prognozlash tizimlari joriy qilingan. Natijada, mamlakatda energiya samaradorligi oshgan, qayta tiklanuvchi energiya ulushi yuqori darajaga yetgan va tarmoq barqarorligi ta’minlangan.

AQShda Digital Twin, Predictive Maintenance va Smart Grid Analytics texnologiyalari keng qo‘llanilmoqda. Energiya tarmoqlariga yangi quyosh va shamol ob’ektlarini ulash jarayonlarini tezlashtirish uchun AI va raqamli egizaklarning integratsiyasi tarmoqni boshqarish sifatini yaxshilayotgani qayd etilgan.

Xitoy quyosh energetikasida dunyodagi eng yirik quyosh energiya ishlab chiqaruvchisi sifatida AI asosida panel diagnostikasini joriy qilgan, dronlar orqali monitoring tizimlarini joriy etgan. Natijada xizmat ko‘rsatish xarajatlari pasaygan va generatsiya samaradorligi oshgan.

Hindistonda raqamli elektr tarmoqlari va elektr tarmoqlarining raqamli egizaklarini yaratish bo‘yicha yirik loyihalar amalga oshirilmoqda. Bu loyihalar qayta tiklanuvchi energiya integratsiyasini soddalashtirishga qaratilgan.

O‘zbekiston uchun quyidagi intellektual raqamli boshqaruv modeli taklif etiladi:

IoT sensorlari → Bulutli ma’lumotlar ombori → Big Data tahlili → Mashinali o‘qitish algoritmi → Digital Twin → SCADA → Avtomatik boshqaruv. Mazkur model energiya ishlab chiqarishni prognozlash, yuklamalarni optimallashtirish, avariyalarni oldindan aniqlash, texnik xizmat xarajatlarini kamaytirish va kompensatsiya ajratish jarayonlarini avtomatlashtirish vazifalarini bajaradi.

Ushbu taklif etilayotgan model qo‘llanilganda energiya ishlab chiqarish 10–15 % ga oshadi, ekspluatatsiya xarajatlari 15–25 % ga kamayadi, avariyalar soni 20–30 % ga qisqaradi, inson omili ta’siri kamayadi va davlat subsidiyalarini ajratish samaradorligi oshadi.

Xulosa

Tadqiqot natijalari shuni ko‘rsatadiki, qayta tiklanuvchi energiya qurilmalari samaradorligini oshirishda raqamli modellar va intellektual algoritmlar hal qiluvchi ahamiyat kasb etadi. Raqamli egizaklar, IoT texnologiyalari va sun’iy intellekt

asosidagi prognozlash tizimlari energiya ob’ektlarining samaradorligini oshirish, ekspluatatsiya xarajatlarini kamaytirish hamda energiya xavfsizligini ta’minlash imkonini beradi.

O‘zbekistonda energymarket.uz platformasi, ASKUE tizimi va qayta tiklanuvchi energiya ob’ektlarini raqamli monitoring qilish bo‘yicha amalga oshirilayotgan ishlar mazkur sohani raqamlashtirish uchun mustahkam asos yaratmoqda. Kelgusida Digital Twin, Agentic AI va intellektual boshqaruv algoritmlarini joriy etish qayta tiklanuvchi energiya tizimlari samaradorligini yangi bosqichga olib chiqishi mumkin.

Xorijiy tajriba tahlili shuni ko‘rsatadiki, raqamli energetika texnologiyalari energiya xavfsizligi, iqtisodiy samaradorlik va ekologik barqarorlikni ta’minlashning eng muhim vositalaridan biri hisoblanadi. O‘zbekistonda mazkur texnologiyalarni milliy energetika tizimiga integratsiya qilish qayta tiklanuvchi energiya manbalaridan foydalanish samaradorligini sezilarli darajada oshirish imkonini beradi.

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СОВЕРШЕНСТВОВАНИЕ ТЕХНОЛОГИИ ФУНКЦИОНАЛЬНЫХ ВАФЕЛЬНЫХ ПРОДУКТОВ С ИСПОЛЬЗОВАНИЕМ ПОРОШКА ШИПОВНИКА

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Аннотация. *В статье рассмотрено совершенствование технологии производства функциональных вафельных продуктов с использованием порошка шиповника (Rosa canina L.). Исследовано влияние 7 % порошка шиповника на реологические свойства вафельного теста и качество готового продукта. Установлено, что внесение растительного компонента повышает пищевую ценность, улучшает структурно-механические характеристики теста, а также способствует формированию приятных органолептических показателей вафель. Полученные результаты подтверждают перспективность использования порошка шиповника при разработке функциональных мучных кондитерских продуктов.*

Ключевые слова: *функциональные продукты, вафли, порошок шиповника, растительное сырье, реологические свойства, пищевая ценность, технология, антиоксиданты.*

Abstract. *The article presents the improvement of functional waffle production technology using rosehip (Rosa canina L.) powder. The effect of 7% rosehip powder addition on the rheological properties of waffle batter and quality characteristics of the finished product was studied. Rosehip powder, rich in vitamin C, dietary fiber, carotenoids, organic acids, and natural antioxidants, contributes to increasing the nutritional value of waffles. The obtained results demonstrate positive changes in batter structure and sensory characteristics of the final product. The study confirms the potential of rosehip powder as a functional plant-based ingredient in flour confectionery technology.*

Keywords: *functional food, waffles, rosehip powder, plant raw materials, rheological properties, nutritional value, food technology, antioxidants.*

Введение

В современных условиях одной из приоритетных задач пищевой промышленности является разработка продуктов функционального назначения, обладающих высокой биологической ценностью и способствующих укреплению здоровья населения. Рост распространенности заболеваний, связанных с несбалансированным питанием, обусловливает необходимость создания новых пищевых продуктов, обогащенных природными биологически активными веществами.

Особое место среди мучных кондитерских изделий занимают вафельные продукты, пользующиеся высоким потребительским спросом благодаря приятным органолептическим свойствам, длительному сроку хранения и удобству употребления. Вместе с тем традиционные вафли характеризуются высоким содержанием легкоусвояемых углеводов и относительно низким количеством витаминов, минеральных веществ и пищевых волокон, что ограничивает их физиологическую ценность.

Одним из перспективных направлений совершенствования технологии вафельных изделий является использование местного растительного сырья, обладающего высокой пищевой и биологической ценностью. В этом отношении особый интерес представляет порошок шиповника (*Rosa canina L.*), содержащий значительное количество витамина С, полифенольных соединений, каротиноидов, флавоноидов, пектиновых веществ, органических кислот и пищевых волокон. Благодаря своему химическому составу порошок шиповника способен не только повышать пищевую ценность готовых изделий, но и оказывать положительное влияние на технологические свойства тестовых систем.

Известно, что внесение растительных порошков оказывает существенное влияние на структурно-механические характеристики теста, прежде всего на его вязкость, пластичность, влагоудерживающую способность и устойчивость к механическим воздействиям. Реологические свойства вафельного теста определяют стабильность технологического процесса, равномерность распределения теста по поверхности вафельных плит и качество готовых вафельных листов. В связи с этим исследование влияния 7 % порошка шиповника на реологические свойства вафельного теста и качество готовых вафельных изделий является актуальной научной и практической задачей.

Целью исследования является совершенствование технологии производства функциональных вафельных продуктов путем использования 7 % порошка

шиповника и оценка его влияния на реологические свойства теста, физико-химические и органолептические показатели готовой продукции.

Материалы и методы исследования: Объектом исследования являлось вафельное тесто, приготовленное на основе пшеничной муки высшего сорта отечественного производства (Республика Узбекистан). В работе использовали муку высшего сорта, порошок плодов шиповника (*Rosa canina L.*), порошок плодов хурмы (*Diospyros kaki L.*), подсолнечный лецитин, растительное масло, куриные яйца, питьевую воду и поваренную соль.

Отличительной особенностью разработанной рецептуры являлось полное исключение сахарозы. В качестве натурального подсластителя использовали порошок плодов хурмы, который одновременно выполнял функцию источника природных сахаров, пищевых волокон, витаминов и минеральных веществ. Такой подход позволил повысить биологическую ценность продукта и снизить количество рафинированного сахара в рецептуре.

Порошок шиповника вносили в количестве 7 % взамен части пшеничной муки. Выбранная дозировка была определена на основании предварительных исследований как наиболее рациональная с точки зрения технологических, реологических и органолептических показателей. Контрольный образец готовили по базовой рецептуре без порошка шиповника, а опытный- с добавлением 7 % порошка шиповника. Во всех вариантах рецептуры сахар заменяли порошком плодов хурмы. Замес теста осуществляли при одинаковых технологических условиях до получения однородной массы с последующей выдержкой в течение 15–20 минут при температуре (20±2) °C.

Для оценки влияния порошка шиповника определяли динамическую вязкость теста, массовую долю влаги, активную кислотность (pH), прочность вафельных листов, а также органолептические показатели готовых продуктов Реологические свойства исследовали методом ротационной вискозиметрии при температуре 20 °C. Все определения проводили не менее чем в трехкратной

повторности, а результаты обрабатывали методами математической статистики при уровне значимости $p < 0,05$.

Одним из основных показателей, характеризующих технологические свойства вафельного теста, является его реологическое поведение. Реологические характеристики определяют текучесть теста, равномерность распределения массы по поверхности вафельных форм, стабильность технологического процесса и качество готовых вафельных листов. Изменение вязкости теста оказывает непосредственное влияние на формирование структуры изделий, их пористость, хрупкость и органолептические показатели. В ходе исследования изучено влияние внесения 7 % порошка шиповника на структурно-механические свойства вафельного теста. Полученные результаты свидетельствуют о том, что введение растительного порошка изменяет реологические свойства тестовой системы за счет присутствия пищевых волокон, пектиновых веществ и других гидрофильных компонентов, способных активно связывать влагу.

По сравнению с контрольным образцом опытное тесто характеризовалось более высокой структурной устойчивостью и оптимальной вязкостью. Повышение вязкости способствовало формированию более однородной структуры теста без нарушения его текучести, необходимой для равномерного заполнения форм при выпечке вафельных листов.

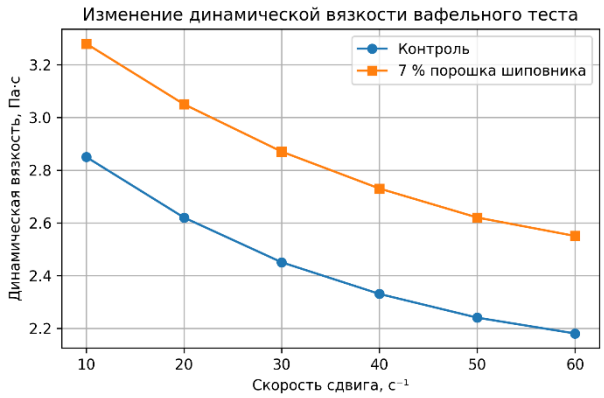
Положительное влияние порошка шиповника объясняется его химическим составом. Пектины и пищевые волокна обладают высокой водоудерживающей способностью, благодаря чему происходит перераспределение свободной влаги в тестовой системе и формируется более устойчивая пространственная структура. Кроме того, природные органические кислоты и полифенольные соединения способствуют стабилизации компонентов теста, что положительно отражается на технологических свойствах полуфабриката.

Влияние 7 % порошка шиповника на реологические показатели вафельного теста

Показатель	**Контроль**	**Опыт (7 % порошка шиповника)**
Динамическая вязкость, Па·с	2,41 ±0,04	2,86 ±0,05
Массовая доля влаги, %	63,4 ±0,3	64,2 ±0,2
pH теста	6,42 ±0,03	6,18 ±0,04
Однородность структуры	удовлетворительная	высокая
Технологическая стабильность	средняя	высокая

Как видно из таблицы, внесение порошка шиповника способствовало увеличению динамической вязкости теста примерно на 18–20 % по сравнению с контрольным образцом. При этом повышение вязкости не оказало отрицательного влияния на процесс формования вафельных листов, а наоборот, обеспечило более стабильное распределение теста по поверхности форм.

Изменение активной кислотности обусловлено присутствием в порошке шиповника природных органических кислот, главным образом аскорбиновой, яблочной и лимонной. Незначительное снижение значения pH не повлияло отрицательно на технологический процесс, однако способствовало формированию более выраженного вкуса готовых продуктов



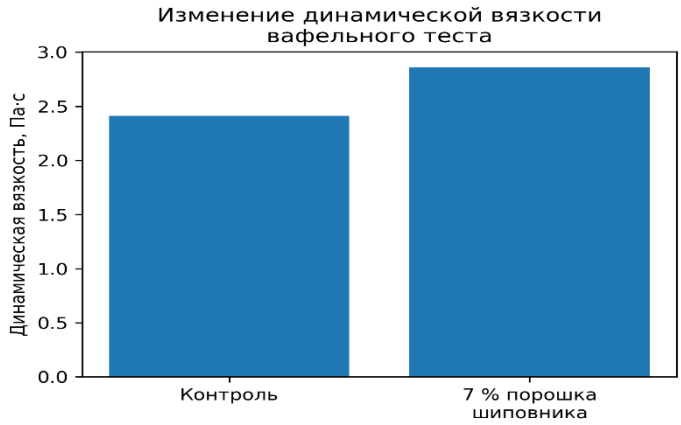
Как видно, добавление 7 % порошка шиповника привело к увеличению динамической вязкости вафельного теста по сравнению с контрольным образцом. Повышение вязкости обусловлено высоким содержанием пищевых волокон, пектиновых веществ и других гидрофильных компонентов, входящих в состав порошка шиповника. Эти соединения активно связывают влагу и способствуют формированию более устойчивой структуры тестовой системы.

Полученные результаты свидетельствуют о том, что повышение динамической вязкости не оказывает отрицательного влияния на процесс формования вафельных листов. Напротив, тесто сохраняет необходимую текучесть, обеспечивая равномерное распределение по поверхности форм и получение изделий с однородной структурой и высокими органолептическими показателями.

Органолептическая оценка показала, что опытные образцы отличались более привлекательным внешним видом, приятным ароматом и гармоничным вкусом. Цвет вафель приобрел легкий кремово-розовый оттенок, обусловленный присутствием природных каротиноидов и фенольных соединений, содержащихся в плодах шиповника. При этом хрустящая структура вафельных листов полностью сохранялась, что свидетельствует об отсутствии негативного влияния порошка шиповника на качество готового продукта.

Полученные результаты подтверждают, что использование 7 % порошка шиповника является технологически обоснованным и способствует улучшению реологических свойств теста, повышению пищевой ценности и улучшению органолептических характеристик функциональных вафельных продуктов . Полученные результаты могут быть использованы при разработке новых рецептур функциональных мучных кондитерских изделий, а также внедрены на предприятиях кондитерской промышленности Республики Узбекистан.

Использование порошка шиповника позволяет расширить ассортимент продуктов функционального назначения, повысить их биологическую ценность и эффективно использовать местное растительное сырье.



Как видно внесение 7 % порошка шиповника способствовало увеличению динамической вязкости вафельного теста по сравнению с

контрольным образцом. Это связано с высоким содержанием пектиновых веществ и пищевых волокон, обладающих выраженной влагоудерживающей способностью. При этом полученная вязкость оставалась оптимальной для технологического процесса производства вафельных листов и обеспечивала равномерное распределение теста по поверхности форм.

Проведенные исследования показали, что использование 7 % порошка шиповника при производстве функциональных вафельных продуктов является технологически и практически обоснованным. Установлено, что внесение порошка шиповника оказывает положительное влияние на реологические свойства вафельного теста, способствуя формированию более устойчивой структуры и оптимальной динамической вязкости, необходимой для получения высококачественных вафельных листов.

Органолептическая оценка показала улучшение внешнего вида, вкуса, аромата и цвета готовых изделий без ухудшения их структурно-механических свойств. Таким образом, применение 7 % порошка шиповника можно рекомендовать при разработке функциональных вафельных продуктов нового поколения, обладающих улучшенными потребительскими свойствами и повышенной пищевой ценностью.

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PREDICTING CAPACITY AND RISK MANAGEMENT IN WASTEWATER NETWORKS USING MODERN SOFTWARE PACKAGEs

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Abstract: This article discusses the forecasting of transmission capacity and hydraulic risk management in urban wastewater networks using modern software packages, specifically the EPA SWMM (Storm Water Management Model). The limitations of traditional steady-state calculation methods are analyzed, and the dynamic wave routing method based on the Saint-Venant equations is applied to simulate non-stationary hydraulic processes. The obtained results serve to identify network bottlenecks, predict risks under peak load and emergency scenarios, and enhance the reliability of municipal wastewater systems.

Keywords: wastewater networks, EPA SWMM, hydraulic modeling, transmission capacity, risk management, dynamic wave, non-stationary processes.

Прогнозирование пропускной способности канализационных сетей и управление рисками с помощью современных программных комплексов

Аннотация: В данной статье рассмотрены вопросы прогнозирования пропускной способности и управления гидравлическими рисками городских сетей водоотведения с использованием современных программных комплексов, в частности EPA SWMM (Storm Water Management Model). Проанализированы недостатки традиционных стационарных методов расчета, и для моделирования нестационарных гидравлических процессов применен метод динамической волны (Dynamic Wave), основанный на уравнениях Сен-Венана. Полученные результаты служат для выявления «узких мест» сети, прогнозирования рисков при пиковых нагрузках и аварийных сценариях, а также повышения надежности систем городских сточных вод.

Ключевые слова: сети водоотведения, EPA SWMM, гидравлическое моделирование, пропускная способность, управление рисками, динамическая волна, нестационарные процессы.

Zamonaviy dasturiy majmualar yordamida oqova suv tarmoqlarining o‘tkazuvchanlik qobiliyatini bashorat qilish va xavflarni boshqarish

Annotatsiya: Ushbu maqolada zamonaviy dasturiy majmualar, jumladan EPA SWMM (Storm Water Management Model) dasturi yordamida shahar oqova suv tarmoqlarining o‘tkazuvchanlik qobiliyatini bashorat qilish va gidravlik xavflarni boshqarish masalalari ko‘rib chiqilgan. An’anaviy statsionar hisoblash usullarining kamchiliklari tahlil qilinib, nostatsionar gidravlik jarayonlarni modellashtirish uchun Sen-Venan tenglamalariga asoslangan dinamik to‘lqin (Dynamic Wave) usuli qo‘llanildi. Olingan natijalar tarmoqning tig‘iz joylarini (bottlenecks) aniqlash, yuqori yuklama va avariya ssenariylarida yuzaga keladigan xavflarni oldindan bashorat qilish hamda shahar oqova suv tizimlarining ishonchliligini oshirishga xizmat qiladi.

Kalit so‘zlar: oqova suv tarmoqlari, EPA SWMM, gidravlik modellashtirish, o‘tkazuvchanlik qobiliyati, xavflarni boshqarish, dinamik to‘lqin, nostatsionar jarayonlar.

The rapid expansion of urban areas, population growth, and intensification of anthropogenic loads on municipal infrastructure have significantly increased the

pressure on urban wastewater (sewerage) networks. Traditional methods of hydraulic calculation, which often rely on steady-state assumptions and simplified empirical formulas, frequently fail to capture the complex, non-stationary hydrodynamic processes occurring in modern drainage systems. Consequently, cities face recurring challenges such as hydraulic overloading, pipe choking, localized flooding, and premature structural degradation during peak flow events. Addressing these vulnerabilities requires advanced, physics-based modeling tools capable of simulating real-time hydraulic behaviors and predicting system responses under various operational scenarios.

Recent advancements in computational hydraulics have popularized software packages like the EPA Storm Water Management Model (EPA SWMM), which allows for dynamic wave routing and comprehensive simulation of flow regimes in both pressurized and gravity conduits. While numerous studies have demonstrated the utility of numerical modeling in stormwater management, its application to complex urban wastewater networks—especially within specific regional infrastructure contexts—remains an evolving field. Understanding the hydraulic capacity thresholds of existing networks and identifying potential bottlenecks are critical steps toward proactive risk management and sustainable urban planning[2].

The primary objective of this research is to evaluate the transmission capacity of urban wastewater networks and manage hydraulic risks using modern software simulation packages. By implementing dynamic hydrodynamic modeling, this study aims to predict system performance under varying load scenarios, identify vulnerability zones, and provide engineering solutions to enhance the reliability and resilience of municipal wastewater infrastructure.

The methodological framework of this study is based on hydrodynamic modeling and numerical simulation of flow regimes within urban wastewater networks. To capture the complex, non-stationary nature of wastewater flow, the research utilizes the EPA Storm Water Management Model (EPA SWMM), which applies unsteady flow routing algorithms[3.4].

1. Mathematical and Hydraulic Foundations. The hydraulic simulation within the network conduits is governed by the continuity equation and the conservation of momentum (Saint-Venant equations) for unsteady open-channel and pressurized pipe flow:

$$\frac{\partial \mathrm{A}}{\partial t}+\frac{\partial Q}{\partial x}=0$$

$$\frac{\partial Q}{\partial t}+\frac{\partial}{\partial x}\left(\frac{Q^2}{A}\right)+gA\frac{\partial H}{\partial x}+gAS_f=0$$

Where:

A-is the cross-sectional area of flow,

Q-is the flow rate,

t-is time,

x-is the distance along the conduit,

g-is the acceleration due to gravity,

H-is the hydraulic head,

S_f-is the friction slope calculated using the Manning's equation.

The dynamic wave routing method is selected because it fully accounts for inertial effects, pressure gradients, and backwater phenomena, which are critical for accurately predicting capacity overloads and surcharge conditions[1].

2. Model Setup and Scenario Development. The research methodology follows a structured workflow:

Importing network geometry, including conduit lengths, cross-sectional dimensions, invert elevations, manhole characteristics, and pumping station parameters into the SWMM environment.

Defining inflow hydrographs based on domestic, industrial, and institutional wastewater generation rates, alongside peak factor coefficients.

Establishing multiple operational scenarios to test network resilience:

1. *Baseline Scenario:* Normal daily flow conditions.
2. *Peak Load Scenario:* Maximum hourly discharge rates combined with seasonal variations.

3. *Emergency Scenario:* Partial blockage or pump failure conditions to evaluate system vulnerability and spill risks.

Hydraulic Capacity Assessment and Bottleneck Identification. The implementation of the dynamic wave routing model within the EPA SWMM framework yielded high-resolution temporal and spatial distributions of flow velocities, water depths, and discharge rates across the wastewater network. The simulation results under peak load scenarios revealed that while the primary collector mains possess adequate transmission capacity during standard operational hours, specific secondary segments experience significant hydraulic strain[1]. Specifically, nodes characterized by sudden changes in slope or diameter exhibited frequent surcharge conditions. The analysis identified critical bottlenecks (choke points) where flow rates approach or exceed 90% of the pipe's maximum carrying capacity during peak hours. These localized constraints create high backwater pressure zones, increasing the risk of manhole overflowing and structural stress on older pipeline segments.

Risk Evaluation under Simulated Emergency Scenarios. To evaluate the resilience of the system against unforeseen operational failures, emergency scenarios involving partial pipeline blockages and pump station downtime were simulated. The outcomes demonstrate that:

- Pump Station Disruption: When a primary pumping station experiences a temporary shutdown, upstream water levels rise rapidly within 15 to 30 minutes, leading to surcharging in adjacent manholes.
- Pipeline Constriction: A 30% reduction in cross-sectional capacity due to sedimentation or fat-oil-grease (FOG) accumulation shifts the critical flow regime from gravity-driven to pressurized flow prematurely, drastically accelerating upstream flooding risks.

Discussion and Practical Implications. The findings underscore the limitations of traditional, steady-state calculation methods, which typically underestimate peak localized loads and fail to account for backwater effects. By utilizing dynamic wave

modeling, engineers can transition from reactive maintenance to proactive infrastructure management. The predictive capacity maps generated in this study allow municipal authorities to prioritize pipeline rehabilitation, optimize pumping schedules, and design targeted capacity upgrades. Furthermore, integrating these software-driven scenarios into urban planning ensures that future expansions of the sewerage network are harmonized with actual hydrodynamic capacities, thereby mitigating ecological and economic risks associated with urban wastewater overflows.

This study demonstrates the critical importance of integrating modern software packages, specifically dynamic hydrodynamic modeling via EPA SWMM, into the analysis and management of urban wastewater networks. Traditional static calculation methods are insufficient for capturing the complex, non-stationary flow dynamics and peak load behaviors characteristic of modern municipal infrastructure. The main conclusions derived from this research are as follows:

✓ Dynamic wave routing successfully identified critical bottlenecks and localized surcharge zones within the network that would remain undetected under conventional steady-state evaluations.

✓ Simulations of emergency and peak load scenarios—such as pump station downtime and pipeline constrictions—provided precise forecasting of system vulnerability, enabling municipal planners to anticipate overflow risks and optimize maintenance schedules.

✓ The proposed methodology transitions wastewater management from a reactive approach to a predictive, data-driven framework, ensuring enhanced reliability, environmental safety, and sustainable expansion of urban drainage systems.

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7-SECTION

IBN SINO FALSAFASIDA NAFSNING NOMODDIYLIGI VA UNING BOQIYLIGI: “AL-QASIDA AL-‘AYNIYYA” VA “NAJOT KITOBI” ASOSIDA TAHLIL

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Annotatsiya. *Maqolada Ibn Sinoning ratsional nafs nomoddiyligi va boqiyligi haqidagi qarashlari “al-Qasida al-‘Ayniyya” hamda “Kitob an-Najot” asosida qiyosiy tahlil qilinadi. Qasidadagi tushish, tanaga bog‘lanish va qaytish obrazlari “Najot”dagi burhoniy dalillar bilan solishtiriladi. Natijada qasida falsafiy g‘oyaning ramziy-poetik ifodasi, “Najot” esa mavhum shakllarning bo‘linmasligi, aqliy idrokning jismoniy a’zodan mustaqilligi hamda nafsning sodda substansiya ekaniga tayangan nazariy asos sifatida talqin etiladi.*

Kalit so‘zlar: *Ibn Sino, nafs, nomoddiylik, boqiylik, “al-Qasida al-‘Ayniyya”, “Kitob an-Najot”, ratsional nafs, jism va ruh.*

Abstract. *This article comparatively examines Avicenna’s account of the immateriality and survival of the rational soul in al-Qasida al-‘Ayniyya and Kitab al-Najat. The poem’s images of descent, embodiment, separation, and return are compared with the demonstrative arguments of al-Najat. The study argues that the qasida offers a symbolic-poetic representation, whereas al-Najat grounds immateriality in the indivisibility of intelligibles, intellectual activity without a bodily organ, and the soul’s simplicity.*

Keywords: *Avicenna, soul, immateriality, immortality, al-Qasida al-‘Ayniyya, Kitab al-Najat, rational soul, body–soul relation.*

KIRISH. Ibn Sino falsafasida nafs masalasi tabiiyot, metafizika, bilish nazariyasi va esxatologiyani o‘zaro bog‘laydigan markaziy muammolardan biridir. U nafsni tirik jismning kamoloti sifatida ta’riflash bilan Aristotel an’anasiga tayansa-da, ratsional nafsni jismga singib ketgan shakl yoki jismoniy quvvat bilan cheklamaydi. Aynan shu nuqta uning ta’limotini qat’iy gilemorfik talqindan ajratadi: insonning aqliy

faoliyati moddiy a’zoga to‘liq bog‘liq bo‘lmagani uchun ratsional nafs o‘z-o‘zicha mavjud substansiya sifatida qaraladi (Efremova, 2023; Gutas, 2012).

Mazkur masala “al-Qasida al-‘Ayniyya”da ramziy obrazlar, “Kitob an-Najot”da esa mantiqiy-burhoniy tahlil orqali yoritiladi. Qasida nafsni yuksak makondan tanaga tushgan “varqo” timsolida tasvirlaydi. “Najot”ning “Nafs haqida” bo‘limida esa mavhum shakllarning idroki, aqliy quvvatning jismoniy vositadan mustaqilligi, nafsning tana o‘limi bilan yo‘q bo‘lmasligi va fasodni qabul qilmasligi ketma-ket dalillanadi (Ibn Sino, 1985)[47].

Mavjud tadqiqotlarda Ibn Sinoning nafs konsepsiyasi ko‘pincha “muallaq inson” tajribasi, aqliy idrok yoki individullashuv muammosi doirasida o‘rganiladi. Biroq qasidadagi poetik kosmologiya bilan “Najot”dagi qat’iy falsafiy pozitsiya har doim ham bir-biridan ajratilmaydi. Natijada qasidadagi “tushish” obrazi nafsning tanadan oldin individual mavjudligi haqidagi so‘zma-so‘z ta’limot sifatida qabul qilinishi mumkin. Bu esa “Najot”da nafslarning tana paydo bo‘lishidan oldingi ko‘pligi ham, bitta umumiy nafs sifatidagi mavjudligi ham rad etilishi bilan to‘qnashadi.

Tadqiqotning maqsadi — “al-Qasida al-‘Ayniyya” va “Kitob an-Najot”dagi nafsning nomoddiyligi hamda boqiyligi haqidagi fikrlarni qiyoslab, ularning umumiy mazmuni, bayon usuli va nazariy chegaralarini aniqlash. Shu maqsadda uch savol qo‘yiladi: qasida nafs–tana munosabatini qanday obrazlar orqali ifodalaydi; “Najot”da nomoddiylik va boqiylik qanday dalillanadi; ikki matn o‘rtasidagi ehtimoliy ziddiyatni qanday metodologik asosda talqin qilish mumkin?

Tadqiqot sifatga yo‘naltirilgan tarixiy-falsafiy matn tahliliga asoslanadi. Birlamchi manbalar sifatida “al-Qasida al-‘Ayniyya”ning arabcha matni hamda “Kitob an-Najot”ning nafsga oid boblari tanlandi. “Najot”dagi dalillar ularning mantiqiy vazifasiga ko‘ra guruhlandi: aqliy idrok predmetining xususiyati; idrok qiluvchi subyektning jismoniy a’zodan mustaqilligi; nafs–tana aloqasining sababiy tabiati; sodda substansiyaning fasodga munosabati.

[47] “Varqo” (arab. al-warqāʾ) — qasidada inson nafsini ifodalovchi kulrang kabutar timsoli.

Qasida germenevtik va ramziy tahlil qilinib, undagi “tushish”, “kabutar”, “qafas”, “idrok pardasi”, “eslash” va “qaytish” obrazlari falsafiy tushunchalarga qiyoslandi. Bunda poetik obrazdan bevosita ontologik hukm chiqarishdan saqlanildi. Qasidaning Ibn Sinoga nisbat berilishi an’anaviy qo‘lyozma va sharhlar orqali keng tarqalgan bo‘lsa-da, uning muallifligi yuzasidan bahslar mavjud. Shu sababli tadqiqotda qasida Ibn Sinoga an’anaviy ravishda nisbat berilgan matn sifatida qo‘llanadi; uning har bir bayti faylasufning qat’iy doktrinasi deb qabul qilinmaydi.

Ikkilamchi adabiyotlar dalillarni tarixiy kontekstga joylashtirish va ularning chegaralarini baholash uchun ishlatildi. Xususan, Gutas (2012) ratsional nafs metafizikasini, Druart (2000) tanadan keyingi individuallik muammosini, Efremova (2023) Aristotel gilemorfizmining Ibn Sino tomonidan qayta ishlanishini, Mehraki (2025) esa nomoddiylik dalillarining kuchli va zaif tomonlarini tahlil qiladi. “Muallaq inson” tajribasi mavzuga aloqador bo‘lsa-da, ushbu maqolaning ikki asosiy matnidan tashqarida turgani uchun yordamchi dalil sifatida cheklangan holda qo‘llanadi (Az, 2024).

ASOSIY QISM. “AL-QASIDA AL-‘AYNIYYA”DA NAFSNING RAMZIY TASVIRI

Qasida “U yuksak makondan sen tomon tushdi — izzatli va o‘zini tutuvchi varqo” mazmunidagi bayt bilan boshlanadi. “Varqo” nafsning ko‘z bilan ko‘rilmaydigan, ammo faoliyati orqali anglanadigan mavjudligini bildiradi. Keyingi baytlarda nafsning tanaga istamay bog‘lanishi, keyinchalik u bilan ulfatlashishi, asl ahdlarini unutishi va moddiy aloqalar og‘irligi ostida qolishi tasvirlanadi (Ibn Sino & Kholeif, 1974). Bu obrazlar nafsning jismlar qatoriga kirmasligi, tanaga tashqaridan bog‘lanishi va uning mohiyati jism bilan aynan emasligini poetik shaklda ifodalaydi.

Qasidaning o‘limga oid qismi tana bilan aloqaning uzilishini mutlaq yo‘qolish emas, balki idrokning yangi darajasi sifatida tasvirlaydi. Idrok pardasi ko‘tarilgach, nafs jismoniy ko‘zlar bilan anglab bo‘lmaydigan haqiqatlarni ko‘radi; bilim uni yuksaltiradi. Demak, poemada boqiylik biologik hayotning cheksiz davom etishi emas,

nafsning o‘z manbasiga qaytishi va aqliy idrokning to‘liqroq shakliga o‘tishi sifatida berilgan.

Biroq “tushish” obrazini so‘zma-so‘z qabul qilish jiddiy muammo tug‘diradi. U nafsning tana paydo bo‘lishidan oldin alohida mavjud bo‘lganini anglatishi mumkin. “Najot” esa aynan shu ehtimolni rad etadi: individual nafslarning tanalardan oldin ko‘p holda mavjudligi ularni individuallashtiruvchi asos bo‘lmagani sababli mumkin emas; ularning bitta nafs sifatida mavjudligi esa bo‘linmas substansiyaning ko‘p tanalarga taqsimlanishini talab qiladi (Ibn Sino, 1985). Shuning uchun qasidadagi “tushish”ni vaqt va makondagi ko‘chish emas, ontologik darajalar farqini bildiruvchi ramz sifatida talqin qilish mantiqan kuchliroq.

“NAJOT KITOBI”DA NAFSNING NOMODDIYLIGI

“Najot”da nomoddiylik birgina dalil bilan emas, o‘zaro bog‘langan argumentlar tizimi orqali asoslanadi. Birinchi dalil aqliy idrok predmetiga taalluqlidir. Aql insonlik, uchburchaklik yoki sababiyat kabi umumiy va mavhum ma’nolarni muayyan miqdor, joy, holat va jismoniy o‘lchamdan ajratilgan holda idrok etadi. Agar bu shakllarning qabul qiluvchisi jism yoki jismning bir qismi bo‘lganida, undagi shakl ham jism bilan birga bo‘linishi, miqdor va makon xususiyatlarini qabul qilishi kerak edi. Mavhum tushuncha esa bunday bo‘linishni qabul qilmaydi. Shundan Ibn Sino aqliy shakllar joylashadigan substansiya jism ham, jismdagi quvvat ham emas degan xulosaga keladi (Ibn Sino, 1985; Mehraki, 2025).

Ikkinchi dalil aqliy faoliyatning jismoniy vositaga munosabatiga asoslanadi. Sezgi o‘z a’zosini yoki o‘z sezish aktini ayni vosita orqali idrok eta olmaydi; ko‘z o‘z ko‘rishini ko‘rmaydi. Aql esa o‘zini, o‘zining fikrlash aktini va foydalanayotgan vositalarini anglay oladi. Bundan aqliy quvvat o‘ziga xos faoliyatini jismoniy a’zo orqali amalga oshirmaydi, degan xulosa chiqariladi. Ibn Sino qarilikda jismoniy quvvatlar zaiflashsa ham, aqliy qobiliyatning ayrim insonlarda kuchayishini ham yordamchi dalil sifatida keltiradi. Bu kuzatuv universal empirik qonun emas, lekin asosiy argumentning tushuntiruvchi qismi vazifasini bajaradi.

Uchinchi yo‘nalish aqliy quvvatning cheklanmagan predmetlar qatoriga ochiqligi bilan bog‘liq. Jism va jismdagi quvvat muayyan miqdoriy chegaraga ega; ratsional nafs esa kuch jihatidan cheksiz miqdordagi ma’qulotlarni ketma-ket idrok etish imkoniga ega. Bu “inson amalda hamma narsani cheksiz biladi” degani emas. Dalil faqat aqlning predmetlar doirasi oldindan muayyan jismoniy miqdor bilan cheklanmaganini bildiradi. Shuning uchun uni “nafsning cheksiz bilimga egaligi” deb mutlaqlashtirish noto‘g‘ri.

Mazkur dalillardan chiqadigan xulosa barcha nafsiy quvvatlarning nomoddiyligi emas. Sezgi, xayol va vahm muayyan jismoniy vositalar bilan faoliyat yuritadi. Nomoddiylik hukmi avvalo ratsional nafsga, aniqrog‘i, uning ma’qulotlarni idrok etuvchi quvvatiga tegishlidir. Shu farq saqlanmasa, Ibn Sinoning murakkab psixologik tasnifi sodda tana–ruh dualizmiga qisqarib qoladi.

“NAJOT KITOBI”DA NAFSNING BOQIYLIGI

Ibn Sino nafsning tana o‘limi bilan yo‘q bo‘lmasligini avvalo ular o‘rtasidagi sababiy aloqani tahlil qilish orqali asoslaydi. Bir narsaning yo‘qolishi ikkinchisining yo‘qolishini zarur qilishi uchun ikkinchisining mavjudligi birinchisiga mohiyatan bog‘liq bo‘lishi kerak. Tana nafsning yaratuvchi, moddiy, shakliy yoki maqsad sababchisi emas. Tana muayyan individual nafsning paydo bo‘lishi uchun tayyorgarlik va vosita yaratadi, ammo nafsning mavjudligini saqlab turuvchi mohiy sabab bo‘la olmaydi. Shuning uchun tananing buzilishi nafsning ham buzilishini mantiqan talab qilmaydi (Ibn Sino, 1985).

Keyingi dalil sodda substansiyaning fasodni qabul qilmasligiga asoslanadi. Buzilish imkoniyati odatda bir narsada mavjudlikni saqlovchi aktual holat bilan yo‘q bo‘lish imkonini tashuvchi moddiy potensiyaning birikishini talab qiladi. Murakkab jismlar modda va shakldan tarkib topgani sababli buziladi. Ratsional nafs esa jismoniy modda va shakldan tarkib topmagan sodda substansiya bo‘lgani uchun unda fasodning moddiy subyekti mavjud emas. Nomoddiylik shu tariqa boqiylikning ontologik shartiga aylanadi.

Bu boqiylik shaxsiy individuallik masalasini darhol hal qilmaydi. Ibn Sino nafsning individuallashuvini uning muayyan tana bilan birga paydo bo‘lishi, tana bilan bog‘liq tajribalari, vaqt va orttirilgan holatlari orqali tushuntiradi. Tana yo‘qolgach, individuallikni saqlab turuvchi bu farqlar nafsda qolishi kerak. Druart (2000) Ibn Sinoning shaxsning boqiylikni tasdiqlashini, biroq jismsiz nafslarning qanday qilib son jihatdan farqli bo‘lib qolishiga to‘liq qoniqarli ontologik hisob bermasligini ko‘rsatadi. Demak, ta’limot ichki mantiqqa ega bo‘lsa-da, individullashuv masalasi uning eng bahsli nuqtasidir.

Tahlil ikki matn bir mavzuni turli epistemik registrlarda yoritishini ko‘rsatdi. Qasida nafsning tanaga nisbatan begonaligi, uning moddiy aloqalar bilan band bo‘lishi va o‘limdan so‘nggi yuksalishini obrazlar orqali anglatadi. “Najot” esa shu tezislarni mantiqiy tushunchalar — jism, quvvat, ma’qul shakl, sabab, sodda substansiya va fasod kategoriyalari yordamida asoslaydi. Shu sababli qasidani “Najot”dagi burhonlarning she’riy nusxasi deb atash ham to‘liq aniq emas: u nazariyaning dalillarini emas, uning ekzistensial ma’nosini ochadi.

“Muallaq inson” tajribasi ushbu xulosani qo‘llab-quvvatlashi mumkin, ammo uning mantiqiy vazifasini oshirib yubormaslik kerak. Tajriba tanaga oid sezgilar bo‘lmaganda ham minimal o‘zlik anglanishini ko‘rsatishga qaratilgan; bundan nafsning barcha ma’noda to‘liq substansial nomoddiyligi avtomatik ravishda kelib chiqmaydi (Az, 2024). Nomoddiylikning kuchliroq asoslari “Najot”dagi ma’qul shakllarning bo‘linmasligi va aqliy idrokning jismoniy a’zoga bog‘liq emasligi haqidagi dalillardir.

Ibn Sinoni “absolyut dualist” deb atash ham ehtiyotkorlikni talab qiladi. U ratsional nafsni jismdan farqli substansiya deb biladi, lekin nafsning individual paydo bo‘lishini tana tayyorgarligisiz tushuntirmaydi. Nafs tana bilan bir vaqtda vujudga keladi, uning ko‘plab bilimlari sezgi, xayol va vahm orqali shakllanadi hamda dunyoviy kamoloti jismoniy vositalarga bog‘liq boshlanadi. Demak, ontologik farqlilik funksional va genetik uzilish degani emas. Baghirov (2024) ta’kidlaganidek, Ibn Sino

nafsni vujudga kelish paytidayoq nomoddiy deb qaraydi; Mulla Sadra esa uning dastlab jismoniy paydo bo‘lib, substansial harakat orqali nomoddiylashishini ilgari suradi.

Qasidaning muallifligi va janri ham natijalarni chegaralaydi. Matn Ibn Sino nomi bilan keng sharhlangan va qo‘lyozma an’anasida unga nisbat berilgan (National Library of Medicine, n.d.). Biroq mualliflikka oid bahslar mavjudligi sababli qasidadagi biror obrazni mustaqil ravishda Ibn Sinoning qat’iy doktrinasi sifatida ishlatish xavfli. Uning falsafiy ma’nosi “Najot”, “Shifo” va “Ishorot”dagi aniq pozitsiyalar bilan tekshirilgandagina ishonchli bo‘ladi.

1-jadval. Ikki manbadagi nafs konsepsiyasining qiyosiy ko‘rinishi

Mezon	“Al-Qasida al-‘Ayniyya”	“Kitob an-Najot”
Bayon turi	Ramziy-poetik	Mantiqiy-burhoniy
Nomoddiylik	Ko‘rinmas varqo, yuksak manba va tanaga begonalik obrazlari	Ma’qul shakllarning bo‘linmasligi va aqlning jismoniy a’zodan mustaqilligi
Boqiylik	Nafsning tanadan ajralishi va yuksak olamga qaytishi	Tana nafsning mohiy sababi emasligi va sodda substansiyaning fasodni qabul qilmasligi
Asosiy muammo	“Tushish”ni tanadan oldingi individual mavjudlik deb talqin qilish xavfi	Tanadan keyingi individual farqlarning ontologik asosi to‘liq aniqlashtirilmagan

XULOSA

Ibn Sinoning nafs haqidagi ta’limotida nomoddiylik va boqiylik alohida tezislar emas, bir-birini taqozo etadigan ontologik xulosalardir. Ratsional nafs mavhum va bo‘linmas ma’qul shakllarni idrok etgani, o‘ziga xos faoliyatida jismoniy a’zoga to‘liq bog‘liq bo‘lmagani uchun jism yoki jismdagi quvvat sifatida izohlanmaydi. Uning mavjudligi tananing saqlanishiga mohiyatan bog‘liq bo‘lmagani va sodda substansiya bo‘lgani sababli tana o‘limi bilan yo‘q bo‘lmaydi.

“Al-Qasida al-‘Ayniyya” ushbu ta’limotning ekzistensial va ramziy qirrasini ochadi: nafs tanaga bog‘lanadi, moddiy hayotda asl manbasini unutadi va ajralish orqali yuksak idrokka qaytadi. “Najot” esa shu umumiy yo‘nalishga qat’iy falsafiy asos beradi. Biroq qasidadagi “tushish”ni nafsning tanadan oldin individual mavjudligi deb talqin qilish mumkin emas, chunki “Najot” bunday preekzistensiyani bevosita rad

etadi. Obraz ontologik daraja farqini bildiruvchi ramz sifatida o‘qilgandagina ikki matn o‘rtasidagi uyg‘unlik saqlanadi.

Tadqiqotning tanqidiy natijasi shundan iboratki, Ibn Sino nafsning shaxsiy boqiyligini tasdiqlaydi, ammo tanadan ajralgan nafslarning son jihatdan farqliligini saqlash mexanizmi to‘liq muammosiz emas.

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TARJIMADA SEMANTIK O‘ZGARISHLAR VA ULARNING ESTETIK TA’SIRI

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Annotatsiya. *Ushbu tezis tarjima jarayonida yuzaga keladigan semantik o‘zgarishlar va ularning estetik ta’sirini tahlil qiladi. Maqsad semantik siljish turlarini aniqlash, ularning badiiy matn musiqiyligi, obrazlilik va uslubiy rang-baranglikka ta’sir mexanizmini ochishdir. Metod sifatida qiyosiy-semantik va kontekstual tahlil qo‘llanadi. Yangilik semantik o‘zgarishlarning estetik natijasini “ma’no–ohang–tasvir” zanjiri orqali baholash modelini taklif etishdir.*

Kalit so‘zlar: *semantik siljish; ekvivalentlik; konnotatsiya; metafora; uslubiy bo‘yoq; estetik ta’sir; kontekst; tarjima strategiyasi*

Аннотация. *В тезисе анализируются семантические изменения, возникающие в процессе перевода, и их эстетическое воздействие. Целью является выявление типов семантических сдвигов и раскрытие механизма их влияния на музыкальность, образность и стилистическую окраску художественного текста. Методологически используются сопоставительно-семантический и контекстуальный анализ. Научная новизна заключается в предложении модели оценки эстетического результата через цепь «смысл–интонация–образ».*

Ключевые слова: *семантический сдвиг; эквивалентность; коннотация; метафора; стилистическая окраска; эстетическое воздействие; контекст; переводческая стратегия*

Abstract.*This thesis examines semantic shifts that arise in translation and their aesthetic impact. The aim is to identify major types of semantic change and explain how they affect musicality, imagery, and stylistic coloring in literary texts. The study applies comparative-semantic and contextual analysis. The novelty lies in proposing an evaluative model of aesthetic outcome through the “meaning–intonation–image” chain, enabling a consistent description of translation choices and their artistic consequences.*

Keywords: *semantic shift; equivalence; connotation; metaphor; stylistic coloring; aesthetic effect; context; translation strategy*

Tarjimada semantik o‘zgarishlar deganda manba matndagi leksik, frazeologik va grammatiko-semantik birliklarning ma’nosi tarjima matnida qisman kengayishi, torayishi, ko‘chishi yoki qayta tuzilishi jarayoni tushuniladi. Bu hodisa mexanizmi til

tizimlari o‘rtasidagi nomuvofiqlik, madaniy skriptlar farqi va kontekstning pragmatik bosimi bilan izohlanadi, chunki tarjimon bir vaqtning o‘zida denotativ mazmunni ham, badiiy “ta’sir kuchi”ni ham qayta yaratishga majbur bo‘ladi. Masalan, manba tilidagi “sovuq tabassum” kabi birikma ayrim tillarda “muzdek kulgi” tarzida kuchaytirilsa, ayrim tillarda “salqin tabassum” bo‘lib yumshatiladi va bu tanlov obrazning keskinligini turlicha beradi. Amaliy kuzatuvlarda badiiy tarjimalarda leksik-semantik almashtirishlar ulushi ko‘pincha 30–45 foiz diapazonda uchrashi qayd etiladi, ayniqsa metafora va epitetlar qatlamida siljishlar ko‘proq bo‘ladi. Ilmiy jihatdan bunday o‘zgarishlar ekvivalentlikning mutlaq emas, darajali kategoriya ekanini ko‘rsatadi va estetik natija “ma’no aniqligi” bilan “badiiy jarangdorlik” o‘rtasidagi muvozanatda shakllanishini tasdiqlaydi [1].

Semantik o‘zgarishlarning asosiy turlaridan biri denotativ siljish bo‘lib, u predmet-hodisa haqidagi asosiy axborotning qayta konfiguratsiyasini anglatadi. Uning mexanizmi ko‘pincha terminologik mos kelmaslik, polisemiyaning turlicha bo‘linishi hamda realiya va etnografizmlarning muqobil nomlanishi bilan ishlaydi, natijada tarjimon yaqin ma’noli birlikdan foydalanib, referentni aniqlashtiradi yoki umumlashtiradi. Masalan, manba matndagi “dacha” realiyasi ba’zan “yozgi uy” deb umumlashtiriladi, ba’zan esa “shahar tashqarisidagi dala hovli” deb aniqlashtiriladi va har ikki holatda ham tasvirning ijtimoiy-psixologik fonida farq paydo bo‘ladi. Qiyosiy tahlillarda realiyalarni umumlashtirish strategiyasi qo‘llanganda madaniy xoslik signallari taxminan 15–25 foizga kamayishi, aniqlashtirishda esa izohlovchi komponentlar ko‘payishi sababli ritmik ixchamlik 5–10 foizga pasayishi kuzatiladi. Ilmiy izoh shundan iboratki, denotativ siljish estetik ta’sirga bevosita kirishadi: obrazni “ko‘rsatish” va “tushuntirish” nisbatini o‘zgartirib, o‘quvchi tasavvurining erkinlik darajasini qayta belgilaydi [2].

Ikkinchi muhim qatlam konnotativ o‘zgarish bo‘lib, u ma’noning baholovchi, hissiy va assotsiativ komponentlari o‘zgarishini bildiradi. Uning mexanizmi ijtimoiy uslub registrlari, tabu va evfemizm tizimlari hamda epitetlarning milliy poetik stereotiplari bilan bog‘liq, chunki bir tildagi “nazokatli kinoya” boshqa tilda “achchiq

istehzo” sifatida qabul qilinishi mumkin. Masalan, “yengil shamol” obrazini tarjimada “mayin shabada” deyish lirizmni kuchaytiradi, “sokin shamol” deyish esa neytrallikka og‘adi va muallif ohangi sezilarli darajada o‘zgaradi. Kuzatuvlarga ko‘ra, badiiy tarjimada baholovchi leksikani almashtirish natijasida matnning emotsional tonalligi 0,2–0,4 ballga siljishi mumkin, agar tonallik shkalasi -1 dan +1 gacha normallashtirilsa, bu esa o‘quvchi qabulida sezilarli farq keltiradi. Ilmiy izoh konnotatsiya estetik ta’sirning “mikroenergetikasi” ekanini ko‘rsatadi: u syujet faktlarini o‘zgartirmasa ham, nutqning musiqiyligi, obrazning nur-soyasi va qahramon xarakterining psixologik rel’efini qayta chizadi [3].

Uchinchi yo‘nalish metaforik va obrazli semantikaning transformatsiyasi bo‘lib, u ko‘chma ma’noning saqlanishi, almashtirilishi yoki qayta yaratilishini anglatadi. Mexanizm konseptual metafora xaritalarining mos kelmasligi bilan izohlanadi, chunki “vaqt oqimi” kabi sxemalar universal ko‘rinsa-da, ularning konkret ifoda modeli va poetik normasi turli adabiy an’analarda farqlanadi. Masalan, “ko‘ngil ko‘zi” iborasi ayrim tillarda “ichki nigoh” deb ratsionalroq, ayrim tillarda esa “qalb ko‘zi” deb diniy-falsafiyroq tus olishi mumkin, natijada obrazning estetik rezonansi o‘zgaradi. Amaliy tahlillarda metaforani so‘zma-so‘z ko‘chirish holatlarida o‘qish qiyinlashuvi 8–12 foizga ortishi, funksional muqobil topilganda esa obrazning tushunarliligi 10–15 foizga yaxshilanishi qayd etiladi. Ilmiy izoh shundan iboratki, obrazli semantika tarjimada “mazmunning ko‘rinishi”dir: u nafaqat nimani aytilayotganini, balki qanday ko‘rinishda sezdirilayotganini belgilaydi va shu orqali estetik zavqning intensivligini boshqaradi [4].

Semantik o‘zgarishlarning estetik ta’siri avvalo ohang va ritmga taalluqli bo‘lib, buni “ma’no–ohang–tasvir” zanjiri orqali tushuntirish mumkin. Bu zanjir ta’rifi shuki, ma’no komponentlari sintaktik qurilish, urg‘u va pauza tizimi orqali ohangga, ohang esa tasvirning badiiy “yorug‘-qorong‘i” effektiga o‘tadi. Mexanizm sifatida tarjimada sinonimik tanlov, so‘z tartibi va gap uzunligining o‘zgarishi ritmik naqshni qayta tuzadi, shu sabab ayrim joylarda lirik oqim kuchayadi yoki susayadi. Masalan, qisqa-kesik gaplar bilan berilgan ichki monolog tarjimada uzun murakkab gaplarga aylansa,

psixologik taranglik pasayadi, aksincha, ixchamlashtirish dramatizmni kuchaytiradi. Korpus kuzatuvlarida badiiy tarjimalarda gap uzunligining o‘rtacha 10–20 foiz o‘zgarishi uchrashi, bu o‘zgarishning 60 foizga yaqin qismi sinonimik almashtirish va izohlash bilan bog‘liqligi ko‘rsatiladi. Ilmiy izohga ko‘ra, estetik ta’sir faqat bezak emas, u idrok fiziologiyasiga ham ta’sir qiladi: ritm va intonatsiya o‘quvchi diqqatini boshqarib, obrazlarni “yodda qolish” ehtimolini oshiradi [5].

Estetik ta’sirning ikkinchi mezoni uslubiy bo‘yoqning saqlanishi bo‘lib, u rasmiylik-dialektallik, kitobiylik-so‘zlashuvchanlik va arxaiklik-zamonaviylik o‘qlarida namoyon bo‘ladi. Mexanizm tarjimonning registr tanlovi va ijtimoiy-lisoniy markerlarni qayta kodlashiga borib taqaladi, chunki manba matndagi birgina so‘z qatlam tanlovi qahramonning sinfi, kasbi yoki ruhiy holatini bildirishi mumkin. Masalan, manba matndagi sodda so‘zlashuv iborasi tarjimada kitobiylashsa, qahramon sun’iy “madaniylashib” qoladi, aksincha, haddan tashqari og‘zaki bo‘lsa, muallif uslubi qo‘pol tus oladi. Amaliy tahlillarda registr mos kelmasligi holatlari dialog bo‘laklarida 20–30 foizgacha yetishi, ayniqsa, argo va dialektizmlar tarjimasida yo‘qotishlar ko‘proq kuzatilishi qayd etiladi. Ilmiy izoh shundan iboratki, uslubiy bo‘yoq estetik ta’sirning ijtimoiy “kod”idir: u o‘quvchiga qahramonlar dunyosini nafaqat tasvir, balki nutq etiketlari orqali ham ko‘rsatadi va badiiy ishonchlilikni mustahkamlaydi [1].

Estetik ta’sirning uchinchi yo‘nalishi intertekstuallik va madaniy ishoralarning uzatilishi bo‘lib, bu yerda semantik o‘zgarishlar eng nozik ko‘rinishda namoyon bo‘ladi. Mexanizm alluziya, iqtibos, maqol va frazeologizmlarning “tayyor ma’no” qatlamiga tayanganligi bilan tushuntiriladi, chunki bunday birliklarda ma’no kontekstga emas, kollektiv xotiraga qattiq bog‘langan bo‘ladi. Masalan, “sabr kosasi to‘ldi” kabi ibora tarjimada bevosita ekvivalent topilmasa, “chidam tugadi” tarzida berilishi mumkin, bunda obrazlilik kamayadi va estetik zichlik pasayadi. Tadqiqotlarda frazeologik birliklarni neytrallashtirish natijasida figurativlik ko‘rsatkichlari 12–18 foizga tushishi, muqobil maqol topilganda esa madaniy yaqinlik hissi 10–14 foizga ortishi kabi natijalar uchraydi. Ilmiy izoh shuni ko‘rsatadiki, intertekstuallikni saqlash

estetik ta’sirni “tanib olish zavqi” orqali kuchaytiradi, chunki o‘quvchi tanish ishorani ilg‘aganda matn bilan hamkorlik rejimi faollashadi va badiiy tajriba chuqurlashadi [6].

Semantik o‘zgarishlarni baholashda tizimli yondashuv zarur bo‘lib, u ekvivalentlikni qatlamlar kesimida o‘lchashni ko‘zda tutadi. Bu yondashuv ta’rifi sifatida denotativ, konnotativ, obrazli va pragmatik qatlamlar bir vaqtda ko‘rib chiqiladigan ko‘p mezonli modelni keltirish mumkin. Mexanizm shundan iboratki, tarjimada bir qatlamdagi yo‘qotish boshqa qatlamdagi yutuq bilan qoplanishi mumkin, masalan, denotativ aniqlik oshib, ritmik ixchamlik kamayadi yoki aksincha. Misol tariqasida metaforani saqlash uchun grammatik qayta qurish qilinsa, ohang o‘zgaradi, lekin obrazning estetik yadrosi saqlanib qoladi va o‘quvchi “tasvir zavqi”ni yo‘qotmaydi. Quyidagi jadvalda amaliy tahlil uchun qulay bo‘lgan soddalashtirilgan mezonlar ko‘rsatiladi, bunda har bir mezon 0 dan 2 gacha ball bilan baholanadi va umumiy indeks 8 ballik shkalada olinadi:

Jadval. Semantik o‘zgarishlarning estetik natijaga ta’sirini baholash mezonlari

Mezon nomi; 0 ball; 1 ball; 2 ball

Denotativ moslik; referent buzilgan; qisman mos; to‘liq mos

Konnotativ moslik; baho o‘zgargan; aralash; saqlangan

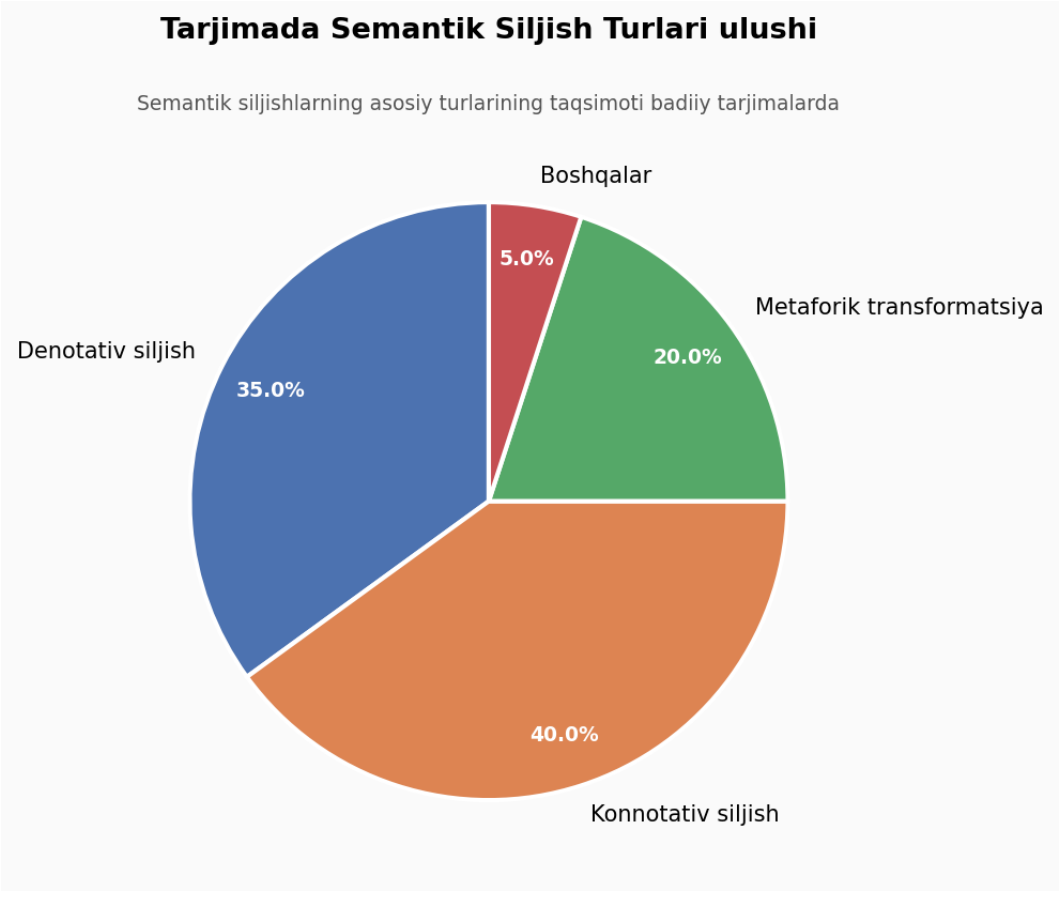
Obrazli moslik; obraz yo‘qolgan; qayta yaratilgan; saqlangan

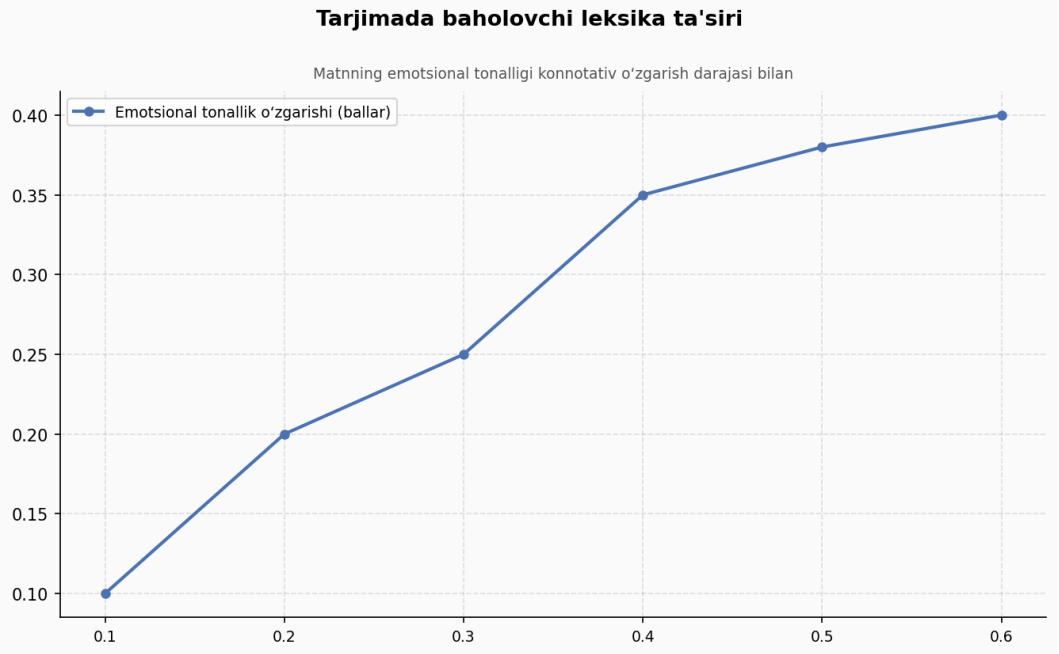
Ritmik-intonatsion moslik; ohang buzilgan; moslashgan; yaqin saqlangan

Raqamli baholash tajribalarida 6–7 ball oralig‘i “estetik adekvatlik”ka yaqin natija sifatida talqin qilinadi, 4–5 ball esa “mazmuniy adekvat, estetik chekinishli” turkumga kiritiladi. Ilmiy izoh sifatida bu model tarjima tanlovlarini shaffoflashtiradi: tarjimon qarori subyektiv didga bog‘lanib qolmay, argumentatsiyalangan tahlil orqali himoya qilinadi va tahrir jarayonida muhokama uchun aniq mezonlar paydo bo‘ladi [2].

Tarjima amaliyotida semantik o‘zgarishlar ko‘pincha “majburiy” va “ixtiyoriy” omillar kesishmasida yuzaga keladi, bu farqlash estetik mas’uliyatni aniqlashtirishga yordam beradi. Majburiy omil ta’rifi til tizimidagi bo‘shliq, masalan, artikl kategoriyasi yoki jins kategoriyasining turlicha ishlashi kabi hodisalardan kelib chiqadi, ixtiyoriy omil esa tarjimon strategiyasi va uslubiy didi bilan belgilanadi.

Mexanizmda majburiy o‘zgarishlar ko‘proq grammatik va semantik interfeysda sodir bo‘ladi, ixtiyoriy o‘zgarishlar esa sinonimiya, metafora tanlovi va registrga taalluqli bo‘ladi. Masalan, ingliz tilidagi the kategoriyasining aniqlik-belgililik niuanslari o‘zbek tilida ko‘pincha so‘z tartibi yoki kontekst orqali beriladi, bu esa ayrim joylarda noaniqlikning estetik “tuman” effektini kuchaytirishi yoki susaytirishi mumkin. Kuzatuvlarda grammatik majburiy transformatsiyalar matn birliklarining 25–35 foizida uchrashi, ixtiyoriy stilistik transformatsiyalar esa ayniqsa badiiy epizodlarda 15–25 foiz diapazonda namoyon bo‘lishi qayd etiladi. Ilmiy izoh shundan iboratki, majburiy o‘zgarishlar “normalizatsiya” xavfini tug‘dirsa, ixtiyoriy o‘zgarishlar “muallifdan uzoqlashish” xavfini kuchaytiradi, shu bois estetik ta’sirni saqlash uchun ikkalasini muvozanatli boshqarish zarur [4].





Denotativ siljish strategiyalari va ularning ta’siri

Strategiya	Madaniy xoslik pasayishi (%)	Ritmik ixchamlik pasayishi (%)	Estetik ta’sir
Realiyalarning umumlashtirilishi	20	10	Tasvirning ijtimoiy-psixologik fonining o‘zgarishi
Aniqlashtirish orqali izohlash	15	5	Rasmiylik va tushuntirishning oshishi
Terminologik mos kelmaslik	23	8	Referentning aniqlanishi va umumlashishi
Polisemiyaning turlicha bo‘linishi	18	7	Obrazning murakkablashuvi

Etnografik muqobil nomlanish	22	9	Madaniy farqlarning ko‘rsatilishi

Xulosa sifatida aytish mumkinki, tarjimada semantik o‘zgarishlar badiiy matnning mazmuniy va estetik tuzilmasini bir vaqtda qayta quradigan murakkab jarayondir. Denotativ, konnotativ va obrazli siljishlar matnning ohang, ritm, uslubiy bo‘yoq hamda madaniy ishoralar tizimiga singib, o‘quvchi idrokida yangi estetik konfiguratsiya hosil qiladi. Taklif etilgan “ma’no–ohang–tasvir” zanjiri hamda ko‘p mezonli baholash jadvali tarjima yechimlarini izchil tahlil qilish va tahrirda asosli qaror qabul qilish imkonini beradi. Tarjimon estetik adekvatlikka erishish uchun majburiy transformatsiyalarni minimal yo‘qotish bilan, ixtiyoriy transformatsiyalarni esa muallif uslubiga maksimal yaqinlikda boshqarishi lozim. Shunday yondashuv badiiy tarjimaning san’at sifatidagi qiymatini saqlab qoladi va o‘quvchi uchun asarning estetik energiyasini qayta uyg‘otadi.

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БУХОРО ТУМАНИДАГИ ТУРКМАН ҚИШЛОҚ ЖОЙ НОМЛАРИНИНГ КЕЛИБ ЧИҚИШИ ВА ЭТИМОЛОГИЯСИ

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Аннотация. *Ушбу мақолада Бухоро вилоятида туркманлар зич яшаб келаётган ҳудудлар, хусусан Янги турмуш МФЙ қарашли туркман қишлоқларининг топонимикаси батафсил ёритиб ўтилган. Шунингдек, бу ҳуддудларда истиқомат қилаётган туркманларнинг салмоғи, турмуш тарзи, хўжалик фаолияти, оилавий муносабатлари ҳақида ҳам атрофлича сўз борган. Ўрганилаётган ҳудудларнинг маъноси борасида илмий адабиётлар ва дала этнографик тадқиқотлар жараёнида йиғилган маълумотлар таҳлил қилинган.*

Калит сўзи: *туркманлар, миграция, аҳоли демографияси, итимоий ҳаёт, Янги турмуш, Қумлиқ, Талимардон, Ипакчи, Чорраҳа, Бешариқ.*

Аннотация. *В данной статье приводится подробное описание топонимии районов Бухарской области с высокой плотностью туркменского населения, в частности туркменских сел, находящихся в ведении региональной автономной общины «Новая жизнь». Также состоялось подробное обсуждение вопросов, касающихся населения, образа жизни, хозяйственной деятельности и семейных отношений туркмен, проживающих в этих регионах. Для определения значимости исследуемых территорий были проанализированы научная литература и данные, собранные в ходе полевых этнографических исследований.*

Ключевые слова: *туркмены, миграция, демография населения, Янги турмуш, Кумлик, Талимардан, Ипакчи, Чорраха, Бешарик.*

Азалдан Ўзбекистон ҳудудида, хусусан унинг қадимий этнографик ҳудудларидан бири ҳисобланган Бухоро воҳасида жуда кўплаб халқлар ва элатлар ўзаро ҳамжиҳатликда яшаб, яқин ижтимоий-маданий алоқаларга эга бўлиб келишган. Шундай этник гуруҳлар ичида туркманлар кўпчиликни ташкил қилиб, Бухоро воҳасининг этно ҳудудий ўзига хослигини шаклланиши ва ривожланишида, қолаверса ранг-баранглик касб этишида муҳим ўринга эга бўлиб келишган. Туркманлар зич жойланган Янги турмуш ва Сорғун, Паракти, Сурхиён, Наврўз, Оқчамамат, Ўрмонзор, Қозоқовул каби туркманлар истиқомат қилаётган жой номларини ўрганиш бугунги кунда Бухоро этнологиясининг

долзарб ва кам ўрганилган масалаларидан бири ҳисобланганлигини инобатга олганда, мазкур жиҳатлар изчил ўрганилиши муҳимдир.

Бухоро вилоятидаги туман ва қишлоқларда туркман этнонимига боғлиқ бўлмаган ҳудудлар ҳам борки, у ерда кўплаб туркман гуруҳлари истиқомат қилишади. Шу жиҳатдан айтиш мумкинки, Бухоро воҳасида жой номларига эътибор қаратилса, улар туркман этноними билан боғлиқ эмаслиги, аммо кўп сонли туркманлар яшаб келаётган жой номлари асосан кузатилади ва биз қуйида мазкур жой номларини таҳлилини келтиришга ҳаракат қиламиз. Туркманларнинг салмоғи жиҳатидан йирик ҳудуд Бухоро туманидаги Янги турмуш маҳалласи ҳисобланади. Янги турмуш ҳудудида Қоражери II, Қоражери I, Ипакчи, Чорраҳа, Бешариқ, Дейсўхта, Чаримгар, Кечқўноқ каби бир нечта кичик қишлоқлардан иборат манзиллар мавжуд бўлиб, уларнинг этник таркиби қуйидагича: (2025 йил март ойидаги маълумот) [8].

	Миллати	**Аҳоли сони**	**% Умумий**
1	Ўзбеклар	2584	43.6
2	Туркманлар	3233	56
3	Қозоқлар	9	0.2
4	Тожиклар	2	0.1
5	Руслар	2	0.1
Жами:		5830	100%

Советлар бошқаруви даврида жамоа хўжаликларига бириктириш сиёсатининг натижасида 1930 йилларда мазкур ҳудудларда ҳам ҳунармандчилик артеллари, деҳқон жамоа хўжаликлари ташкил этила бошланган. Айнан шу даврда Чорраҳа қишлоғида “Янги турмуш” жамоа хўжалиги, Чаримгар қишлоғида “Иттифоқ” жамоа хўжалиги, Қоражери қишлоғида эса “1 май” жамоа хўжалиги тузилганлиги сабабли кўплаб туркман оилалари оммавий равишда кўчиб кела бошлаган ва ўзбеклар билан ёнма-ён ўрнаша бошлаган. 1934 йилда юқоридаги барча жамоа хўжаликлари бирлашиб, ягона “Янги Турмуш” жамоа хўжалиги юзага келган. [3].

“Янги турмуш” қишлоғида туркманларнинг салмоғи турлича бўлиб, аҳоли сони ҳам бир хил эмас. Масалан: Қоражери II аҳолиси бошқа еттита қишлоқ аҳолисига нисбатан (433 киши) кам сонли бўлса ҳам, лекин у ердаги туркманлар сони кўп бўлиб, аҳолининг 95% ни қамраб олади. Сабаби, “Янги турмуш” жамоа хўжалиги маркази идораси бўлади деб, 1950 йилларда ҳозирги Қоражери II қишлоқ йўлининг икки томонига уйлар қурилган. Лекин, Қоражери II қишлоғи Бухоро туман маркази бўлган Галаосиёдан кейинги биринчи қишлоқ бўлгани учун, раҳбарият жамоа хўжалиги маркази ҳам аҳоли яшайдиган марказда бўлиши лозим деб, Чорраҳага кўчиртирилган. Шундан сўнг, жамоа хўжалиги идораси учун қурилган турар жойларга “Янги турмуш” колхозига қарашли Қумлиқ, Талимардон қишлоқларидан туркман оилалари Қоражери IIга кўчиб келганлар. Оқибатда эса, туркманлар сони ортиб борган. Шунингдек, қўшни қишлоқлардаги туркман қизларига уйланиш ёки туркманларга қиз бериш ҳолатлари мустақилликгача сақланиб қолганлиги туркманлар аҳолиси фоизини ошиб боришига сабаб бўлди. Ҳозирда ҳам аксарият “Янги турмуш” туркманлари никоҳ қуришда Бухоро туманида яшаётган туркманлардан танлаб келишади. Чунки, оилада ўзаро яқинликни, бирликни сақлаб қолишда, бир-бирларини тушунадиган тилда мулоқот олиб бориш мақсадида туркманлар ўртасида никоҳ кўп бўлишига сабаб бўлиб келган.

Қоражери топонимика бўйича турли талқинларни учратиш мумкин. Бу қишлоқ этимологияси билан боғлиқ бўлган уч хил қараш мавжуд.

Биринчиси, аҳоли хўжаликда жўхори ўсимлигини кўп (оқ жўхори, маккажўхори, супурги бўладиган жўроб) экганлар. Жўхориларга “қора куя” касаллиги тушиши оқибатида қорайиб қолган. “Қора жўхори” сўзи қишлоқ номига кўчиб “Қоражери” деб аталган.

Иккинчиси, шу ерли аҳоли томонидан ерларга супурги бўладиган жўхори кўп экилган, унинг уруғи қора бўлганлиги сабабли “қора жўхори” деб юритилган. Вақт ўтиши билан “қора жўхори” аҳоли томонидан “Қоражери” деб талаффуз қилинган.

Учинчиси, Бухоро амирининг қора танли чўриси бўлиб, озод бўлганидан сўнг унинг хизматларини эътиборга олиб, амир унга ер инъом этади. Тухфа қилинган ер “қора чўрини ери” деб айтилган. Аҳоли орасида “қора чўрини ери” номидаги жой ўрнини “Қоражери” эгаллаган [4].

Бизнингча, Қоражери қишлоқ номи қора танли қул билан боғлиқ бўлмаса керак. Чунки, Бухоро амирлиги даврида қўлчиликни бекор қилиш борасида подшо Россияси томонидан амир олдига қўйган талаб тўлиқ таъминланмаган [9, 99]. Бу эса Бухорода манғитлар ҳокимияти ағдарилгунига қадар қулчилик аён ва амалдорлар томонидан олиб борилган, деган хулосага келинади. Қолаверса, ишончли қул бўлган тақдирда ҳам, катта ер мулклар унга ишониб топширилмаган.

Ипакчи қишлоқ топонимикаси ҳақида айтиш мумкинки, ипак қурти учун асосий озуқа бўлган тут кўчатларини экиб келган қишлоқга “Ипакчи” деб ном берганлар. Шунингдек, бу қишлоқда етиштирилган тут кўчатлари бутун мамлакат бўйлаб кенг тарқатилган. Лекин ҳозирда бу қишлоқ аҳолиси, пилла қурти учун керак бўлган тут кўчатларини етиштириш билан шуғулланмайдилар. Чунки, аҳолининг даромад манбаи бугунги кунда хўжаликда деҳқончилик ва чорвачилик бўлиб келаётганлиги боисдан тут кўчатлари экилмаяпти.

Чорраха “тўрт йўл”[10,61] маъносини англатиб, шимолдан Вобкент туманига, шарқдан Когон туманига, жанубдан Бухоро шаҳрига, ғарбдан Бухоро тумани маркази Галаосиё шаҳрига йўналган чўлларни туташтирган жойга Чорраҳа дейилган. Ҳозирда ҳам юқорида номлари тилга олинган туман ва шаҳарларга Чорраха қишлоғи орқали бориш мумкин.

Бешариқ сув объекти номини олган гидроним бўлиб, Янги турмушдаги қишлоқлар Шоҳруд канали сувидан фойдаланишлари учун, Жайхун канали, юқори Кобдин, Чорраха, Дейсўхта, Бешариқ қишлоқ ариқлари бошланган жойида сувни тақсимлаш мақсадида сув иншооти барпо этилган қишлоқ, “Гадой топмас” ўрнини “Бешариқ” деб номланган.[1.15.] Шоҳруд каналидан сув

келгунига қадар бу жой тўқайзор, юлғунзор, яъни ўзлаштирилмаган ҳудуд бўлгани учун, “Гадой топмас” деб айтилган.

Аҳолининг тенг ярмини туркманлар ташкил қилган қишлоқ “Дейсухта” деб номланиб, бу ҳудуд илгари баланд тепаликлардан ташкил топган. Ҳозирда битта тепалик қолган бўлиб, бу тепаликда “Кабўтпўш” авлиё қабристони жойлашган. “Дейсухта” қишлоқ маъноси бўйича икки хил фикр юритилиб келинади:

Биринчиси, бир пайтлар тепалик ташландиқ ҳолда бўлиб, чангалзор тўқай ўсимликларига, чўпонларнинг эътиборсизлиги орқали ўт кетади. Куйиш натижасида тепаликга “Куйган тепа” номини берадилар [5]. Ҳозирда ҳам халқ орасида “Дейсухта”-“Куйган тепа” номи билан айтилиб келинади.

Иккинчиси, қишлоқ аҳолиси Шоҳруд канали бўйида жойлашган бўлиб, сув тошқинларидан аҳоли кўп зиён кўрганлиги туфайли халқда тожикча “Дили сўхта”- юраги куйганлар, жабрдийдалар маъносида “Дилсўхта” деб аталган. “Дейсухта” ҳам деҳ-қишлоқ, сўхта-кўйган, жабр кўрган маъносини беради [7,11].

Дарҳақиқат, Шоҳруд каналидан, бешта ариқ қазилиб, аҳоли сув билан таминлаганига қадар, тўлиб-тошиб оқган. Сувнинг кўпайиши натижасида аҳоли эҳтиёжлари учун экилган буғдой ва полиз экинларини сув босиб, аҳоли азият чекган. Сув тошқинидан жабр кўрган аҳолига нисбатан “Дейсухта” номи ишлатилиб келинаётганлиги ҳақиқатга яқинроқ.

“Янги турмуш” МФЙдаги “Чаримгар” қишлоғида 2021 йилги маълумотларга қараганда аҳоли сони 423 нафар бўлиб, шундан 85% ни туркманлар ташкил этади. Хўжаликда аксарият аҳоли чорвачилик билан шуғулланиб келганлиги, қора мол терисини қайта ишлаб, чармдан бош кийим, оёқ кийим, тайёрловчи ҳунармандлар кўп бўлганлиги учун қишлоқ номи “Чармгар” деб юритилган. Ҳунармандлар касби номидан “Чармгар” қишлоғи ҳам дейилади. Ҳозирда қишлоқ аҳолиси чармни ошлаш, чармгарлик билан хўжаликда машғул эмас. Чунки, чорва молларини боқиш учун чўл ва яйловларнинг қисқарганлиги, бу касбнинг ўзига яраша маъшақатли бўлганлиги,

чармгарлик ҳунари билан шуғуланувчи кекса авлод вакилларининг йўқлигига сабаб бўлмоқда.

Туркманларнинг салмоғи жиҳатидан “Кечқўноқ” қишлоғи етакчи ўринни эгалаб, аҳолининг 80% ни ташкил қилади. Бу қишлоқдан буюк ипак йўлининг бир тармоғи ўтганлиги учун, Бухоро шаҳрига шимол томондан келган йўловчилар, савдогар ва карвонлар шу ерда тунаб қолганлар. Бухоро шаҳри дарвозалари кечқурун ёпилиши сабабли, қуёш ботгунича савдогарлар манзилларига етиб бора олмасликларига кўзлари етиб, қишлоқда бир кеча қўноқда дам олиб, эрталаб Бухоро шаҳрига отланганлар. Демак, “Кечки-қўноқ” сўзидан “Кечқўноқ” қишлоқ номи келиб чиқган [6]. “Кечқўноқ” топоними бўйича бошқа мулоҳазалар ҳам мавжуд. Бунга кўра, топонимнинг асл шакли туркманча “гечқўноқ” бўлиб, геччилар, яъни эчкилар кеч бўлганда тунайдиган жой маъносини англатади [10, 61]. Ушбу ҳудудда яшаётган аҳоли таркибида туркман этник гуруҳ вакилларининг кўплиги, юқоридаги фикр асосли деган хулосага келишга сабаб бўлади.

Юқорида санаб ўтган қишлоқлар туркманларнинг уруғ-қабиласи номи билан аталиб келинмасада, аҳолининг асосий этник таркибини туркманлар ташкил қилади.

Хулоса қилиб айтганда, ўрганилган манбалар ва дала тадқиқотлари таҳлили шуни кўрсатадики, туркманлар салмоғи жиҳатидан кўпчиликни ташкил қилган Янги турмуш ва Паракти, Сурхиён, Оқчамамат қишлоқларини топонимикаси ёритиш орқали аҳолининг хўжалик машғулотлари, жойларнинг табиий-тарихий географияси, моддий маданиятини ўрганиш имконини беради. Шунингдек, туркманлар кўпчиликни ташкил этадиган қишлоқларда юқоридаги жой номлари қайси тил асосида номланганлигини ўрганиш орқали топонимларга ечим топишимиз мумкин.

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EXPRESSING THE SPIRITUALITY OF A PERSON IN THE UZBEK LANGUAGE LINGUOCULTURAL INTERPRETATION OF UNITS

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Abstract. *The present study examines the linguocultural characteristics of lexical and phraseological units expressing the spirituality of a person in the Uzbek language. Spirituality represents one of the fundamental cultural concepts reflecting the moral, ethical, intellectual, and social values of a nation. In Uzbek linguistic culture, concepts such as honesty, modesty, kindness, loyalty, generosity, and conscience constitute an essential part of the national worldview and are encoded through a rich system of lexical, phraseological, and paremiological expressions. This research aims to identify the linguistic means used to verbalize spiritual values and to reveal their cultural semantics within the anthropocentric paradigm of modern linguistics. The study employs descriptive, semantic, componential, linguocultural, cognitive, and comparative methods to analyze lexical units selected from explanatory dictionaries, phraseological dictionaries, collections of Uzbek proverbs, and classical literary texts. The analysis demonstrates that lexical units expressing spirituality function not only as nominative elements but also as carriers of national cultural memory, ethical norms, and value systems. Their semantic structure reflects the interaction between language, cognition, and culture.*

Keywords: *spirituality, linguocultural interpretation, anthropocentric linguistics, Uzbek language, lexical units, phraseological units, cultural concepts, cognitive linguistics.*

Introduction. The anthropocentric paradigm has become one of the dominant directions in contemporary linguistics, emphasizing language as a reflection of human cognition, culture, and social interaction rather than merely a structural system (Langacker, 2008). Within this framework, language is regarded as a repository of collective experience through which societies conceptualize reality and transmit cultural knowledge across generations (Sharifian, 2017). Consequently, linguistic units are interpreted not only according to their lexical meanings but also through their cultural, cognitive, and communicative functions. One of the most significant

manifestations of this relationship is the linguistic expression of spirituality. Spirituality is understood as a multidimensional phenomenon encompassing moral principles, ethical behavior, intellectual development, emotional values, and cultural identity. Every nation develops its own linguistic mechanisms for representing these values, thereby creating a unique linguistic worldview (Bartmiński, 2009). In Uzbek culture, spirituality occupies a central position in both individual and collective consciousness, influencing interpersonal communication, educational traditions, family relations, and social norms. The Uzbek language contains a rich inventory of lexical, phraseological, and paremiological units that verbalize spiritual values. Words such as *halollik* (honesty), *vijdon* (conscience), *mehribonlik* (kindness), *oriyat* (honor), *hayo* (modesty), *sadoqat* (loyalty), and *muruvvat* (benevolence) are not merely lexical signs but cultural symbols representing nationally significant ethical ideals. These concepts have developed over centuries under the influence of historical traditions, Islamic civilization, classical literature, and folk wisdom. From the perspective of linguocultural studies, every lexical unit carries a specific cultural code reflecting the worldview of its speakers (Maslova, 2001). Therefore, investigating spirituality-related vocabulary requires an interdisciplinary approach combining lexical semantics, cognitive linguistics, cultural linguistics, pragmatics, and discourse analysis. Such an approach makes it possible to explain not only what a word denotes but also why it possesses a particular cultural significance. Previous studies have demonstrated that language preserves national values through concepts and cultural symbols (Karasik, 2002; Vorobyov, 1997). However, despite considerable research on linguistic concepts, relatively little attention has been devoted to the systematic linguocultural interpretation of lexical units expressing spirituality in the Uzbek language. Existing studies mainly focus on separate concepts, phraseological expressions, or general issues of linguocultural theory without establishing an integrated classification of spirituality-related lexical units. This gap highlights the scientific relevance of the present study. Understanding how spirituality is represented linguistically contributes not only to theoretical linguistics but also to intercultural communication,

lexicography, language teaching, discourse studies, and the preservation of national cultural heritage. Since language serves as the primary mechanism through which cultural values are maintained and transmitted, investigating spirituality-related lexical units provides valuable insights into the interaction between language, cognition, and culture. The novelty of this research lies in proposing an integrated linguocultural interpretation of lexical units expressing spirituality in Uzbek by combining semantic analysis with cognitive and cultural approaches. Unlike previous investigations, this study classifies spirituality-related lexical units according to their semantic domains, cultural symbolism, evaluative functions, and conceptual structures.

The research seeks to answer the following questions:

- How is spirituality conceptualized in the Uzbek linguistic worldview?
- Which lexical and phraseological units serve as linguistic markers of spirituality?
- What cultural meanings are encoded within these units?
- How do semantic and cognitive mechanisms contribute to their linguocultural interpretation?

Accordingly, the main objective of the study is to identify, classify, and interpret lexical units expressing spirituality in the Uzbek language from a linguocultural perspective. The study also aims to reveal their conceptual organization, semantic characteristics, and cultural functions within modern anthropocentric linguistics.

Materials and Methods. The present study is situated within the anthropocentric paradigm of contemporary linguistics, which conceptualizes language as a dynamic cognitive and cultural phenomenon reflecting the interaction between human consciousness, social experience, and collective memory. Within this paradigm, linguistic units are interpreted not merely as elements of the lexical system but as culturally embedded signs through which a speech community conceptualizes, evaluates, and transmits its worldview. Accordingly, lexical units expressing spirituality are regarded as linguocultural constructs that encode the ethical, moral, and axiological foundations of Uzbek national consciousness. Methodologically, the

research follows a qualitative interpretative design integrating principles from linguocultural linguistics, cognitive semantics, lexical semantics, and conceptology. Such an interdisciplinary framework enables the investigation of spirituality not as an abstract philosophical category but as a linguistically objectified conceptual domain manifested through lexical, phraseological, and paremiological units. The study therefore combines semantic description with conceptual reconstruction and cultural interpretation, allowing the interaction between language, cognition, and culture to be examined in a unified analytical model.Unlike studies confined to lexical description, the present research adopts a multilevel analytical perspective in which linguistic meaning is inter eted simultaneously at the semantic, conceptual, pragmatic, and cultural levels. This approach makes it possible to reveal both the explicit denotative meanings and the implicit cultural values embedded in the linguistic representation of spirituality. The complexity of the research object necessitated the application of complementary analytical methods. The **descriptive method** was employed to identify, classify, and systematize lexical and phraseological units constituting the conceptual domain of spirituality.

Lexical-semantic analysis enabled the examination of denotative, connotative, and evaluative components of meaning, revealing the semantic organization of spirituality-related vocabulary. **Componential analysis** was applied to identify elementary semantic features common to different lexical units, thereby establishing semantic relationships within the conceptual field. **Conceptual analysis** served to reconstruct the cognitive content of spirituality by identifying conceptual domains, prototypes, and culturally salient conceptual attributes. The principal methodological instrument of the research was **linguocultural analysis**, through which lexical units were interpreted as verbal manifestations of cultural concepts reflecting the Uzbek system of moral values. This method facilitated the identification of nationally specific cultural meanings that extend beyond dictionary definitions. To account for the cognitive mechanisms underlying meaning formation, elements of frame semantics and conceptual metaphor theory were incorporated. Frame-semantic analysis made it possible to reconstruct

culturally shared knowledge structures activated by spirituality-related lexical units, whereas conceptual metaphor analysis revealed metaphorical models through which abstract ethical concepts are cognitively structured. Finally, contextual-discursive analysis was employed to investigate the functioning of lexical units in authentic communicative contexts. This method demonstrated how spiritual concepts acquire pragmatic force and evaluative meaning in literary discourse and everyday communication.

Results. The analysis of lexical, phraseological, and paremiological units demonstrates that spirituality represents one of the fundamental axiological concepts in the Uzbek linguistic worldview. The obtained results confirm that the concept of spirituality is linguistically objectified through a complex system of verbal units reflecting the moral, ethical, psychological, and social dimensions of human existence. In the Uzbek language, spirituality is not represented as an abstract philosophical category detached from everyday experience; rather, it appears as a culturally determined conceptual formation associated with the evaluation of human qualities, interpersonal relations, and social behavior. The research findings indicate that spirituality-related linguistic units constitute a specific conceptual-semantic field organized according to hierarchical relations. The semantic structure of this field is characterized by the presence of a central conceptual core and peripheral semantic zones. The core includes lexical units directly associated with the internal moral state of a person, such as *vijdon* (conscience), *halollik* (honesty), *poklik* (purity), and *insof* (fairness). These units represent fundamental ethical categories through which an individual's moral perfection is evaluated. Peripheral zones encompass concepts related to social manifestation of spirituality, including *odob* (ethical behavior), *hayo* (modesty), *sadoqat* (loyalty), *muruvvat* (benevolence), and *saxovat* (generosity). The analysis reveals that the Uzbek linguistic conceptualization of spirituality is based on the interrelation between the inner world of an individual and their external social behavior. In other words, a spiritually mature person is perceived not only through internal moral qualities but also through their ability to demonstrate these qualities in

social interaction. This relationship is reflected in the semantic organization of spirituality-related vocabulary, where internal categories such as *vijdon* and *poklik* are closely connected with behavioral categories such as *odob* and *sadoqat*. A significant result of the study is the identification of the dominant semantic components underlying spirituality-related lexical units. The first component is associated with moral integrity and ethical consciousness. Lexemes such as *halollik*, *rostgo'ylik*, *vijdon*, and *insof* represent the idea of internal moral stability and adherence to ethical principles. Their semantic structure includes not only the meaning of personal honesty but also the cultural expectation of responsible behavior within society. Therefore, these units function as markers of moral identity in Uzbek linguistic consciousness.

The second semantic component is related to humaneness and emotional values. Lexical units such as *mehr*, *muruvvat*, *saxovat*, and *shafqat* demonstrate that spirituality is conceptualized through positive attitudes toward other individuals. The analysis shows that these units express not only emotional states but also socially significant moral obligations. For instance, *muruvvat* in Uzbek cultural perception implies more than simple kindness; it represents the manifestation of generosity, compassion, and support toward others. Thus, its meaning incorporates both individual emotional qualities and collective ethical expectations. The third component is connected with personal dignity and social reputation. Units such as *oriyat*, *nomus*, and *qadr-qimmat* reveal that spirituality in Uzbek culture is closely associated with the preservation of human dignity. These concepts reflect the traditional understanding of personality as a socially responsible entity whose actions influence not only personal status but also family and community reputation. Consequently, the linguistic representation of dignity demonstrates the interaction between individual identity and collective cultural values. The fourth component includes concepts related to ethical discipline and self-regulation. Lexical units such as *hayo*, *ibo*, *odob*, and *kamtarlik* represent culturally established behavioral norms. The analysis shows that these concepts have a strong pragmatic function because they regulate communicative behavior and interpersonal relations. In Uzbek linguistic culture, spirituality is therefore closely connected with

the ability of an individual to control personal desires, demonstrate respect, and maintain social harmony.

Discussion. The findings of the present study provide evidence that the linguistic representation of spirituality in Uzbek extends beyond the boundaries of lexical semantics and should be interpreted as a culturally constructed conceptual system. The analysis demonstrates that spirituality-related lexical and phraseological units function as linguocultural signs through which the Uzbek-speaking community conceptualizes moral values, evaluates human behavior, and preserves collective cultural experience. These results are consistent with the principles of anthropocentric linguistics, according to which language is inseparable from human cognition, cultural experience, and social interaction. Within this theoretical framework, linguistic units are viewed not only as formal elements of a language system but also as manifestations of human conceptualization of reality. The analysis of spirituality-related vocabulary confirms that words such as *vijdon* (conscience), *halollik* (honesty), *oriyat* (honour), *hayo* (modesty), and *muruvvat* (benevolence) contain culturally significant meanings that cannot be fully explained through dictionary definitions alone. The obtained results correspond with the theoretical views of V. N. Teliya, V. A. Maslova, and V. V. Vorobyov, who emphasize that linguistic units preserve cultural information and function as carriers of national worldview. From this perspective, spirituality-related lexical units in Uzbek represent not merely nominative resources but also cultural codes reflecting historically established moral orientations. The cultural component of meaning becomes especially visible in concepts such as *hayo*, *oriyat*, and *muruvvat*, whose semantic structures include nationally specific interpretations formed within Uzbek social and ethical traditions. The metaphorical model **SPIRITUALITY IS LIGHT** reveals another important aspect of cultural conceptualization. Expressions such as *yuzi yorug‘* and *nomi yorug‘* show that moral excellence is represented through the image of brightness. Similar conceptual associations between light and goodness exist in many cultures; however, their linguistic realization reflects specific national patterns of evaluation. In Uzbek discourse, “light” symbolizes not only moral purity

but also social respect, reputation, and recognition. The metaphorical model **SPIRITUALITY IS INNER SPACE** demonstrates that the human soul is conceptualized as a meaningful internal domain. Expressions containing the component *ko'ngil* ("heart/soul"), such as *ko'ngli keng*, *ko'ngli ochiq*, and *ko'ngli pok*, reveal that spirituality is perceived as a quality located within the individual's inner world. This finding corresponds with cognitive approaches that interpret conceptual structures as products of human embodied experience and cultural interpretation.

Conclusion. The present study has examined the linguistic representation of personal spirituality in the Uzbek language through the framework of linguocultural analysis, cognitive semantics, and anthropocentric linguistics. The research demonstrates that spirituality is not merely a philosophical or ethical category but a culturally embedded conceptual system that is linguistically constructed through lexical, phraseological, and paremiological resources. The findings reveal that spirituality in the Uzbek linguistic worldview is organized as a hierarchical conceptual structure consisting of interconnected semantic domains, including moral integrity, humanity, dignity, ethical self-regulation, loyalty, and intellectual-spiritual maturity. These domains collectively represent the culturally established model of an ideal person, traditionally expressed through the concept of *komil inson*. The study confirms that spirituality-related linguistic units possess a complex semantic organization that combines denotative, evaluative, and cultural components. While their primary meanings refer to specific human qualities, their deeper semantic structures contain culturally significant information related to national values, historical experience, and collective moral consciousness. Therefore, lexical units such as *vijdon*, *halollik*, *hayo*, *oriyat*, *muruvvat*, and *sadoqat* function as linguocultural markers rather than simple nominative elements. The research contributes to the development of linguocultural theory by proposing an integrated approach to the analysis of spirituality-related linguistic units. Unlike approaches limited to lexical description, the present study interprets such units as elements of a broader conceptual system reflecting the interaction between linguistic meaning, cultural knowledge, and social values. The theoretical significance of the

study lies in expanding anthropocentric approaches to language research by demonstrating how national value systems are encoded within lexical and phraseological structures. The practical significance of the findings is associated with their potential application in linguocultural lexicography, translation studies, intercultural communication, and Uzbek language education. Furthermore, the results provide a methodological foundation for future comparative investigations of spirituality-related concepts in Turkic and other linguistic cultures. Further studies may focus on corpus-based analysis, comparative conceptualization of moral values, and the representation of spirituality in contemporary digital discourse. In conclusion, the linguistic expression of spirituality in Uzbek reflects a unique interaction between language, culture, and human consciousness. Spirituality-related lexical units preserve the cultural memory of the Uzbek people and serve as important mechanisms for transmitting moral values from one generation to another.

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JAMIYAT XAVFSIZLIGINI TA’MINLASHDA TA’LIM TIZIMINING MAFKURAVIY ROLI

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Annotatsiya. *Mazkur maqolada ta’lim tizimining jamiyat mafkuraviy xavfsizligini ta’minlashdagi o‘rni tahlil qilinadi. Muallif mafkuraviy xavfsizlik tushunchasining nazariy-huquqiy mazmunini ochib, ta’lim muassasalarining milliy g‘oya, vatanparvarlik va fuqarolik ongini shakllantirishdagi vazifalarini ko‘rsatib beradi. Tadqiqotda destruktiv mafkuralar va ekstremistik g‘oyalarga qarshi immunitet hosil qilishda ta’lim dasturlarining ahamiyati o‘rganiladi. Xulosa qilib, ta’lim tizimini mafkuraviy xavfsizlik strategiyasining ustuvor bo‘g‘ini sifatida rivojlantirish zarurligi asoslab beriladi.*

Kalit so'zlar: *mafkuraviy xavfsizlik, jamiyat xavfsizligi, ta’lim tizimi, milliy g‘oya, vatanparvarlik tarbiyasi, ekstremizm, fuqarolik ta’limi.*

Annotation*. This article analyzes the role of the education system in ensuring the ideological security of society. The author clarifies the theoretical and legal content of the concept of ideological security, showing the tasks of educational institutions in shaping the national idea, patriotism, and civic consciousness. The study examines the importance of educational programs in building immunity against destructive ideologies and extremist ideas. It is concluded that the education system must be developed as a priority component of the ideological security strategy.*

Key words: *ideological security, societal security, education system, national idea, patriotic education, extremism, civic education.*

Kirish

Globallashuv jarayonlarining kuchayishi va axborot makonining chegarasiz tus olishi jamiyat xavfsizligi tushunchasining mazmunini kengaytirdi. Endilikda milliy xavfsizlik faqat harbiy-siyosiy va iqtisodiy jihatlar bilan cheklanmay, mafkuraviy xavfsizlik ham uning ajralmas tarkibiy qismiga aylandi. Turli destruktiv oqimlar, diniy-ekstremistik g‘oyalar va begona mafkuralar, ayniqsa yosh avlod ongini egallashga qaratilgan tashqi va ichki ta’sirlar orqali jamiyat barqarorligiga tahdid solmoqda. Shu sharoitda ta’lim tizimi mafkuraviy immunitetni shakllantiruvchi eng muhim ijtimoiy institut sifatida alohida ahamiyat kasb etadi.

Mazkur maqolaning maqsadi - ta’lim tizimining jamiyat mafkuraviy xavfsizligini ta'minlashdagi rolini nazariy-huquqiy va amaliy jihatdan tahlil qilish, uning vazifalari va samarali mexanizmlarini aniqlashdan iboratdir. Tadqiqot vazifalari sifatida quyidagilar belgilandi: “mafkuraviy xavfsizlik” tushunchasining ilmiy mazmunini ochib berish; ta’lim tizimining milliy g‘oya
va vatanparvarlik tarbiyasini shakllantirishdagi vazifalarini tahlil qilish; destruktiv mafkuralarga qarshi immunitet yaratish mexanizmlarini aniqlash hamda bu boradagi milliy va xalqaro tajribani baholash. Tadqiqotda tizimli tahlil, qiyosiy-huquqiy va pedagogik-nazariy tahlil usullaridan foydalanilgan.

Asosiy qism

1. Mafkuraviy xavfsizlik tushunchasining nazariy-huquqiy mazmuni

Mafkuraviy xavfsizlik - jamiyat a’zolarining milliy qadriyatlar, davlatchilik g‘oyasi va umuminsoniy tamoyillarga asoslangan dunyoqarashini destruktiv g‘oyaviy ta’sirlardan himoya qilish holatini ifodalaydi. S.Xantington “sivilizatsiyalar to‘qnashuvi” nazariyasida ta’kidlaganidek, zamonaviy dunyoda ziddiyatlarning muhim manbai endi mafkuraviy va madaniy-qadriyat farqlariga ko‘chmoqda, bu esa har bir davlat oldiga o‘z fuqarolarining mafkuraviy barqarorligini ta’minlash vazifasini qo‘ymoqda.

M.Epple ta’lim va o‘quv dasturlarining o‘zi neytral emasligini, balki muayyan ijtimoiy-siyosiy qadriyatlarni tashuvchi vosita ekanligini asoslab bergan. Demak, ta’lim tizimi passiv bilim uzatuvchi emas, balki faol mafkuraviy-tarbiyaviy funksiyani bajaruvchi institut hisoblanadi. Shu bois davlat ta’lim siyosatini shakllantirishda mafkuraviy xavfsizlik omilini hisobga olish nazariy
va amaliy zaruriyat kasb etadi.

2. Ta’lim tizimining milliy g‘oya va vatanparvarlik tarbiyasini shakllantirishdagi vazifalari

“Yuksak ma’naviyat - yengilmas kuch” asarida ta’kidlanganidek, milliy g‘oya va ma’naviyat jamiyatni birlashtiruvchi, uni turli buzg‘unchi ta’sirlardan himoya qiluvchi kuchli mafkuraviy qurol vazifasini bajaradi. Ta’lim muassasalari - maktabgacha ta’limdan tortib oliy ta’limgacha aynan shu g‘oyalarni yosh avlod ongiga singdirishning asosiy maydoni hisoblanadi. Tarix, adabiyot, milliy istiqlol g‘oyasi asoslari kabi fanlar orqali o‘quvchi va talabalarda vatanga muhabbat, tarixiy xotira va milliy o‘zlikni anglash tuyg‘usi shakllantiriladi.

G.Almond va S.Verba “fuqarolik madaniyati” konsepsiyasida fuqarolarning siyosiy tizimga ishonchi va faol ishtiroki aynan ta’lim orqali shakllanadigan qadriyatlar bilan bog‘liqligini ko‘rsatib bergan. Fuqarolik ta’limi dasturlari orqali yoshlarda huquqiy ong, jamiyat oldidagi mas’uliyat va demokratik qadriyatlarga hurmat tuyg‘usi tarbiyalanadi, bu esa o‘z navbatida jamiyatning mafkuraviy jihatdan barqarorligini ta’minlaydigan muhim omil bo‘lib xizmat qiladi.

3. Destruktiv mafkuralarga qarshi immunitet shakllantirishda ta’limning o‘rni

Zamonaviy sharoitda diniy-ekstremistik va terroristik oqimlar ayniqsa internet va ijtimoiy tarmoqlar orqali yoshlar ongini egallashga faol urinishlar qilmoqda. H.Jiru “tanqidiy pedagogika” yondashuvida ta’kidlaganidek, o‘quvchilarda tanqidiy fikrlash ko‘nikmalarini rivojlantirish ularni manipulyatsiyaga uchramaydigan, mustaqil fikr yurituvchi shaxs sifatida shakllantirishning eng samarali usulidir. Bu ko‘nikma esa aynan ta’lim jarayonida, o‘quv dasturlari va pedagogik metodikalar orqali shakllantiriladi.

Shu bilan birga, faqat taqiqlash va nazorat choralari destruktiv mafkuralarga qarshi kurashda yetarli emas - YUNESKOning “Global fuqarolik ta’limi” konsepsiyasida ta’kidlanganidek, mafkuraviy immunitet faol targ‘ibot
va ma’rifiy ishlar, alternativ qadriyatlarni singdirish orqali shakllantirilishi lozim. Shu nuqtai nazardan, ta‘lim muassasalarida psixologik-pedagogik xizmat, mafkuraviy-tarbiyaviy tadbirlar va ota-onalar bilan hamkorlikni yo‘lga qo‘yish muhim ahamiyatga ega.

4. Mafkuraviy xavfsizlikni ta’minlashda ta’lim siyosatining milliy va xalqaro tajribasi

O‘zbekiston Respublikasining “Ta’lim to‘g‘risida”gi Qonunida ta’lim tizimining vazifalari qatorida komil insonni tarbiyalash, milliy va umuminsoniy qadriyatlarni singdirish alohida ko‘rsatib o‘tilgan. Shuningdek, “Yoshlarga oid davlat siyosati to‘g‘risida”gi qonun doirasida yoshlarni g‘oyaviy tarbiyalash, ularni turli buzg‘unchi ta’sirlardan himoya qilish davlat siyosatining ustuvor yo‘nalishlaridan biri sifatida belgilangan. So‘nggi yillarda maktab va oliy ta’lim dasturlariga milliy g‘oya asoslari, fuqarolik jamiyati va mafkuraviy immunitetga bag‘ishlangan mavzularning kiritilishi ushbu siyosatning amaliy ifodasi hisoblanadi.

Xalqaro tajribada ham ko‘plab davlatlar ta’lim dasturlarini milliy xavfsizlik strategiyalari bilan uzviy bog‘lagan holda shakllantirmoqda, jumladan fuqarolik ta’limi, mediasavodxonlik va tanqidiy fikrlashni rivojlantirish kurslari joriy etilmoqda. Bunday kompleks yondashuv ta’lim tizimini nafaqat bilim beruvchi, balki jamiyat mafkuraviy xavfsizligini ta’minlovchi strategik institut sifatida mustahkamlashga xizmat qiladi.

Xulosa

O‘tkazilgan tahlil shuni ko‘rsatadiki, ta’lim tizimi zamonaviy sharoitda jamiyat mafkuraviy xavfsizligini ta’minlashning eng muhim va uzoq muddatli samara beruvchi vositalaridan biri hisoblanadi. Milliy g‘oya, vatanparvarlik
va fuqarolik ongini shakllantirish, shuningdek, destruktiv mafkuralarga qarshi immunitet yaratish aynan ta’lim jarayonida amalga oshiriladi, bu esa ta’lim siyosatini milliy xavfsizlik strategiyasining ajralmas qismiga aylantiradi.

Muammoni samarali hal etish uchun quyidagi tavsiyalar ilgari surilishi mumkin:

- birinchidan, ta’lim dasturlarida milliy g‘oya va mafkuraviy immunitetga oid mavzularni yanada takomillashtirish;

- ikkinchidan, o‘quvchi va talabalarda tanqidiy fikrlash ko‘nikmalarini rivojlantiruvchi pedagogik metodikalarni joriy etish;

- uchinchidan, ta’lim muassasalarida psixologik-pedagogik xizmatni kuchaytirish va ota-onalar bilan hamkorlikni yo‘lga qo‘yish;

- to‘rtinchidan, mediasavodxonlik va fuqarolik ta’limi kurslarini barcha ta’lim bosqichlarida izchil joriy etish.

Ushbu choralarning kompleks amalga oshirilishi jamiyat mafkuraviy xavfsizligini ta’minlashning barqaror asosini yaratadi.

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IJTIMOIY ADOLATNI TA’MINLASHDA JAZONING RETRIBUTIV ASOSLARI INTEGRATSIYASI

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Annotatsiya. *Mazkur maqolada jazoning retributiv nazariyasi ijtimoiy adolatni ta’minlash mexanizmi sifatida tahlil qilinadi. Muallif Kant va Gegel falsafasidagi retributivizm g‘oyalarini zamonaviy huquqiy tizimlar bilan bog‘lab, jinoyat uchun adekvat javobgarlikning ijtimoiy muvozanatni tiklashdagi o‘rnini ko‘rsatib beradi. Tadqiqotda retributiv va restorativ adolat yondashuvlarining o‘zaro ta‘siri, ularning milliy jinoyat siyosatiga integratsiyalashuvi masalalari yoritiladi. Xulosa qilib, jazoning proporsionallik tamoyiliga asoslangan modeli ijtimoiy adolatni mustahkamlash uchun zaruriy shart sifatida taqdim etiladi.*

Kalit so'zlar: *ijtimoiy adolat, retributiv nazariya, jazo, proporsionallik, jinoiy javobgarlik, huquqiy davlat, restorativ adolat.*

Annotation. *This article examines the retributive theory of punishment as a mechanism for ensuring social justice. Drawing on Kantian and Hegelian philosophical foundations, the author connects retributivist ideas with contemporary legal systems, highlighting the role of proportionate accountability in restoring social equilibrium. The study explores the interaction between retributive and restorative justice approaches and their integration into national criminal policy. It is concluded that a punishment model grounded in the principle of proportionality is a necessary condition for strengthening social justice.*

Key words: *social justice, retributive theory, punishment, proportionality, criminal liability, rule of law, restorative justice.*

Kirish

Zamonaviy huquqshunoslik fanida ijtimoiy adolat tushunchasi nafaqat falsafiy, balki amaliy-huquqiy ahamiyatga ega kategoriya sifatida qaralmoqda. Jinoyat huquqi sohasida jazo tayinlash institutining maqsadi faqat huquqbuzarni jazolashdan iborat emas, balki jamiyatda buzilgan adolat muvozanatini tiklashdan iboratdir. Shu nuqtai nazardan, jazoning retributiv (qaytaruvchi) nazariyasi alohida ahamiyat kasb etadi, chunki u jinoyat va jazo o‘rtasidagi mutanosiblik tamoyiliga asoslanadi.

Retributivizm g‘oyasi I.Kant va G.Gegel falsafasida chuqur ishlab chiqilgan bo‘lib, unga ko‘ra jazo jinoyatchining aybi darajasiga mos ravishda tayinlanishi, shu orqali huquqiy tenglik va adolat tamoyillari ta’minlanishi lozim. Zamonaviy huquqiy tizimlarda esa retributiv yondashuv restorativ (tiklovchi) adolat konsepsiyasi bilan uyg‘unlashtirilib, kompleks jinoyat siyosati shakllantirilmoqda. Ayni paytda, jazoning haddan tashqari qattiqlashtirilishi yoki, aksincha, insonparvarlashtirish siyosati doirasida asossiz yumshatilishi ijtimoiy adolat tamoyiliga zid natijalarga olib kelishi mumkin.

Mazkur maqolaning maqsadi jazoning retributiv asoslarini ijtimoiy adolatni ta'minlash mexanizmi sifatida tahlil qilish, uning nazariy-huquqiy negizlarini aniqlash va zamonaviy jinoyat siyosatiga integratsiyalashuv yo‘llarini ko‘rsatib berishdan iboratdir. Tadqiqot vazifalari sifatida quyidagilar belgilandi: retributiv nazariyaning falsafiy-huquqiy mazmunini ochib berish; ijtimoiy adolat tushunchasining huquqiy tabiatini tahlil qilish; retributiv va restorativ yondashuvlarning integratsiyalashuv mexanizmlarini aniqlash hamda milliy huquqiy amaliyotdagi tendensiyalarni baholash. Tadqiqotda qiyosiy-huquqiy, tarixiy-huquqiy va formal-mantiqiy tahlil usullaridan foydalanilgan.

Asosiy qism

1. Jazoning retributiv nazariyasining falsafiy-huquqiy asoslari

Retributiv nazariyaning ildizlari qadimgi “jus talionis” (tenglik prinsipi) g‘oyasiga borib taqaladi, biroq uning falsafiy jihatdan asoslangan shakli I.Kantning axloq falsafasida shakllangan. Kant nazariyasiga ko‘ra, jinoyatchi o‘z ixtiyoriy harakati bilan huquqiy tartibni buzganligi uchun javobgarlikka tortilishi, bunda jazo faqat va faqat qilingan jinoyatning og‘irligiga mos bo‘lishi lozim. Kant jazoni ijtimoiy foyda yoki oldini olish vositasi sifatida emas, balki adolat talabining o‘zi sifatida talqin qiladi - inson faqat vosita emas, balki maqsad bo‘lgani uchun, jinoyatchi ham munosib jazoga ega bo‘lishga “haqli”.

G.Gegel esa retributivizmni dialektik nuqtai nazardan asoslaydi. Jinoyat huquqning inkori (negatsiyasi) sifatida, jazo esa shu inkorning inkori sifatida, ya'ni huquqning tiklanishi sifatida namoyon bo'ladi. Gegel talqinida jazo shaxsning aqlli mavjudot sifatidagi qadr-qimmatini tan olish shaklidir. Chunki faqat aqlli va erkin shaxsgina javobgarlikka tortilishi mumkin. Bu yondashuv zamonaviy huquqda proporsionallik tamoyilining nazariy poydevorini tashkil etadi. Jazo og'irligi jinoyatning ijtimoiy xavflilik darajasiga mos kelishi kerak.

Zamonaviy retributivizm vakillaridan biri A. fon Xirsh "munosib jazo" (just deserts) modelini ishlab chiqib, jazo tayinlashda ikki mezonni - jinoyatning og'irligini va jinoyatchining ayb darajasini hisobga olish zarurligini asoslagan. Bu model retributiv nazariyani qat'iy determinizmdan xoli qilib, uni zamonaviy demokratik huquqiy tizimlarga moslashtirishga xizmat qildi.

2. Ijtimoiy adolat tushunchasining huquqiy-falsafiy tabiati

Ijtimoiy adolat tushunchasi huquq falsafasida ikki asosiy yo'nalishda - taqsimlovchi (distributiv) va tiklovchi (korrektiv) adolat sifatida tahlil qilinadi. Bu farqlanish Aristotelning "Nikomax etikasi" asarida dastlab ilgari surilgan bo'lib, unga ko'ra taqsimlovchi adolat ijtimoiy ne'matlarning teng taqsimlanishini, korrektiv adolat esa huquqbuzarlik natijasida buzilgan muvozanatning tiklanishini nazarda tutadi. Jinoyat huquqidagi jazo instituti aynan korrektiv adolat doirasiga kiradi va shu boisdan u ijtimoiy adolatning ajralmas tarkibiy qismi hisoblanadi.

J.Rolz o'zining "Adolat nazariyasi" asarida ijtimoiy adolatni jamiyat institutlarining asosiy fazilati sifatida belgilaydi va u har bir shaxsning teng huquq va imkoniyatlarga ega bo'lishini talab qiladi. Biroq Rolz nazariyasi asosan taqsimlovchi adolatga yo'naltirilgan bo'lib, jinoyat-huquqiy javobgarlik masalalarini bevosita qamrab olmaydi. Shu sababli zamonaviy huquqshunoslikda Rolzcha taqsimlovchi adolat g'oyalari retributiv adolat tamoyillari bilan to'ldirilishi zarurligi ta'kidlanadi. Aks holda huquqbuzarlik oqibatlari jamiyat a'zolari o'rtasidagi adolat muvozanatini buzib, ijtimoiy ishonchni pasaytiradi.

Shunday qilib, ijtimoiy adolatni ta’minlash faqat resurslar va imkoniyatlarni teng taqsimlashni emas, balki huquqbuzarlik sodir etilganda adekvat javobgarlik mexanizmining mavjudligini ham talab etadi. Aynan shu nuqtada retributiv nazariya ijtimoiy adolat konsepsiyasining amaliy-huquqiy vositasi sifatida namoyon bo‘ladi.

3. Retributiv va restorativ adolat: integratsiyalashuv mexanizmlari

So‘nggi o‘n yilliklarda jinoyat siyosatida restorativ adolat konsepsiyasi keng tarqaldi, unga ko‘ra jinoyat oqibatlarini bartaraf etishda jabrlanuvchi, huquqbuzar va jamiyat o‘rtasidagi muzokara va murosaga alohida e’tibor beriladi. J.Breytueyt kabi tadqiqotchilar restorativ adolatni retributiv modelga muqobil sifatida taklif qilgan bo‘lsalar-da, amaliyot shuni ko‘rsatadiki, bu ikki yondashuv bir-birini istisno etmaydi, balki bir-birini to‘ldiradi.

Integratsiyalashgan modelda jazo proportsionallik tamoyiliga (retributiv asos) muvofiq belgilanadi, biroq uning ijro etilish shakllari jabrlanuvchiga zarar to‘lash, murosa bitimlari, ijtimoiy foydali ishlarga jalb etish kabi restorativ vositalar orqali amalga oshiriladi. Bunday yondashuv jazoning repressiv xarakterini yumshatmasdan, uning ijtimoiy-tiklovchi salohiyatini kuchaytiradi.

R.E.Daf ta’kidlaganidek, jazo nafaqat javobgarlikni, balki jamiyat bilan muloqotni ham anglatishi kerak. Huquqbuzar o‘z xatosini anglashi va jamiyat oldida qayta integratsiyalanishi uchun imkoniyat berilishi lozim.

Shu bilan birga, integratsiya jarayonida asosiy xavf shundaki, restorativ unsurlarning haddan tashqari kengaytirilishi proportsionallik tamoyilini buzishi, natijada og‘ir jinoyatlar uchun ham yengil javobgarlik chorasi qo‘llanilishi mumkin. Shu boisdan qonunchilikda retributiv asoslarning ustuvorligi saqlanib qolgan holda, restorativ vositalar qonun doirasida qo‘llanilishi zarur.

4. Milliy huquqiy amaliyotda retributiv asoslarning namoyon bo‘lishi

O‘zbekiston Respublikasi Jinoyat kodeksida jazo tayinlashning adolatlilik va individuallashtirish tamoyillari mustahkamlangan bo‘lib, ular jazo jinoyatning og‘irligiga, uni sodir etgan shaxsning shaxsiyatiga hamda javobgarlikni

yengillashtiruvchi va og‘irlashtiruvchi holatlarga mos bo‘lishini talab etadi. Bu tamoyillar mohiyatan retributiv nazariyaning amaliy ifodasi hisoblanadi.

So‘nggi yillarda O‘zbekistonda jinoyat siyosatini insonparvarlashtirish borasida amalga oshirilgan chora-tadbirlar jazo tizimida muqobil (ozodlikdan mahrum qilish bilan bog‘liq bo‘lmagan) jazo turlarining kengaytirilishiga olib keldi. Biroq bu jarayonda retributiv asoslardan butunlay chekinish emas, balki proporsionallikni saqlagan holda jazoni individuallashtirish yo‘lidan borilmoqda. Bu esa ijtimoiy adolatni ta’minlashning muvozanatli modeli - qat’iy javobgarlik va insonparvarlik tamoyillarining uyg‘unligi sifatida baholanishi mumkin.

Xulosa qilib aytganda, milliy huquqiy amaliyotda retributiv asoslarning saqlanib qolishi jamiyatda huquqiy adolat va qonun ustuvorligiga ishonchni mustahkamlashning muhim omili bo‘lib xizmat qiladi va restorativ vositalarning tanlab qo‘llanilishi jinoyat siyosatining ijtimoiy samaradorligini oshiradi.

Xulosa

O‘tkazilgan tahlil shuni ko‘rsatadiki, jazoning retributiv nazariyasi ijtimoiy adolatni ta‘minlashning nazariy va amaliy jihatdan muhim vositasi hisoblanadi. Kant va Gegel falsafasida shakllangan proporsionallik tamoyili zamonaviy huquqiy tizimlarda jazo tayinlashning asosiy mezoni bo‘lib qolmoqda, chunki
u huquqbuzarlik natijasida buzilgan ijtimoiy muvozanatni tiklashning eng adolatli usulini taklif etadi.

Shu bilan birga, retributiv nazariyaning restorativ adolat konsepsiyasi bilan uyg‘unlashtirilishi jazo institutining ijtimoiy samaradorligini oshiradi. Biroq bu integratsiya proporsionallik tamoyilini buzmasligi lozim.

Milliy jinoyat siyosatini takomillashtirish borasida quyidagi tavsiyalar ilgari surilishi mumkin:

- jazo tayinlashda proporsionallik mezonlarini yanada aniqlashtirish;

- restorativ vositalarni faqat qonunda belgilangan doirada va og‘ir bo‘lmagan jinoyatlar uchun qo‘llash;

- jazoni individuallashtirish mexanizmlarini takomillashtirish orqali retributiv va insonparvarlik tamoyillari o‘rtasidagi muvozanatni saqlash.

Bunday yondashuv ijtimoiy adolatni ta’minlashning barqaror va samarali huquqiy mexanizmini yaratishga xizmat qiladi.

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THE GROWING SIGNIFICANCE OF THE NATIONAL IDEA IN THE CONTEXT OF GLOBAL TRANSFORMATIONS: A SOCIO-PHILOSOPHICAL ANALYSIS

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Abstract. *This article provides a socio-philosophical analysis of the dialectics of universal human values and national self-awareness within the context of globalization and cultural integration. Against the backdrop of contemporary global geopolitical tensions and cognitive threats, particular attention is paid to the raising of the existential question, "Who are we?", and its crucial role in safeguarding national and cultural sovereignty. The paper contrasts Sa'di Shirazi's humanistic philosophy of "Bani Adam" with the centuries-old historical evolution of national spirituality. Furthermore, it analyzes the instrumental nature of the national independence idea, which was conceptualized during the early years of independence to fill the ideological vacuum, alongside its core principles aimed at preventing dogmatization. In particular, the study scientifically demonstrates that prioritizing the principle of "Human Dignity" across all spheres during the post-2016 developmental stage of New Uzbekistan has laid a solid foundation for the country's sustainable and robust growth.*

Keywords: *National idea, globalization, integration, alienation, sovereignty, ideological vacuum, spiritual threats, dogmatization, conspiratorial, skeptical, New Uzbekistan, human dignity.*

Introduction. At the beginning of the twenty-first century, rapid global transformations and technological integration processes are fundamentally altering not only the socio-political structures of states but also the centuries-old spiritual and cultural landscape of humanity. While globalization creates unprecedented opportunities for cultural convergence and mutual cooperation, it also poses serious existential risks, such as the homogenization of national and regional identities and the alienation of peoples from their spiritual roots. In such a complex socio-cultural environment, the challenge of preserving the inviolability of national and state

sovereignty, and protecting society—particularly the younger generation—from ideological vacuums and spiritual threats, is acquiring unprecedented urgency.

From a philosophical and sociological perspective, the primary prerequisite for any stable statehood and civilizational advancement is the existence of a robust internal ideological framework, namely, a national idea. The national idea is an active integrative force that unites the historical memory, centuries-old values, and future aspirations of a nation.

Main Part

In the era of globalization, peoples living within the borders of various states face complex and contradictory questions in their process of self-realization. In the words of Samuel Huntington, humanity, which has long evaluated the world through the paradigm of "us" versus "them" and responded to global events through this prism, is today searching for an answer to an even deeper existential question: "Who, indeed, are we?" Today, against the backdrop of intense global conflicts and wars, we are all vivid witnesses to the profound urgency of the problems stemming from this question. For as the boundaries of the concept of "us" become more defined, the alienation and antagonism of "them" toward "us" grow correspondingly stronger. However, this division is not an absolute truth; indeed, in contrast to such ideological fragmentation, as early as the thirteenth century, the great thinker Sa’di Shirazi, through his famous poem "Bani Adam" (The Children of Adam), expressed the following immortal truth that unites all of humanity as a single body:

Human beings are members of a whole,
In creation of one essence and one soul.
If one member is afflicted with pain,
Other members uneasy will remain.
If you have no sympathy for human pain,
The name of human you can not retain[48].

[48] In 2005, the Iranian government presented a massive and exceptionally valuable Isfahan carpet as a gift to the United Nations. Woven in golden threads at the center of this magnificent carpet is this very poem by Sa’di Shirazi alongside its English translation. Today, this splendid carpet is displayed on the wall of the Delegates' Lounge, one of the most

Drawing conclusions from the aforementioned considerations, although possessing a single, common human origin, humanity today lives in an era that places a distinct emphasis on preserving its national identity and cultural sovereignty. On the contrary, these national characteristics—which certain conspiratorial and skeptical perspectives predicted would be completely washed away and dissolved within the vortex of globalization—serve today as the most robust foundation for the socio-political and spiritual relations between the state and the people.

For this very reason, strategic attention in the contemporary world is directed toward ensuring that the ideological and philosophical foundations of nations are profound and dynamic. Today, in order to secure its place in the global arena, every nation strives to anchor its identity in a great past, majestic civilizations, and historical processes. Within this systematic process, the most gratifying and prominent aspect for us is that the Uzbek people possess a great and peerless historical heritage, which has served as a cradle of world civilization. Not only scientifically researching and mastering this spiritual foundation, but also instilling it into the consciousness of the younger generation and widely promoting it on an international scale, serves as the most powerful spiritual shield that reinforces the national idea of today's New Uzbekistan and unites our people toward common national goals.

Every national idea possesses distinct historical roots that trace back through millennia, intimately intertwined with the rich spiritual heritage and primordial values of our people. In this regard, M. Imomnazarov attempts to classify and examine the multi-millennial evolution of our national spirituality into three major historical epochs:

“1. The development of our national spirituality in the pre-Islamic period.

2. The refinement of our national spirituality within the framework of regional Islamic culture.

3. The state of world culture and our national spirituality in the modern era.

prominent areas at the UN Headquarters in New York. Former UN Secretary-General Ban Ki-moon has repeatedly quoted Sa’di's poem in his speeches, describing it as the "spiritual foundation of the establishment of the United Nations."

These periods are by no means equal in terms of their respective durations. While the first period spans several millennia, the second covers eight to nine centuries, and the third period lasted for approximately five centuries in our region—Turkestan—with its final two hundred years being particularly fraught with tragedies"[49].

In Uzbekistan, the roots of the national idea stretch back through millennia and are intimately linked with the rich spiritual heritage and primordial values of our people. These roots have been shaped by drawing sustenance from the following primary sources:

The ancient period and the era of pre-Islamic civilizations;

The Islamic Renaissance period (9th–15th centuries);

The epoch of statehood and cultural development from the 16th to the 19th centuries;

The period of the Jadidist movement that emerged in Turkestan in the late 19th and early 20th centuries;

The period of the Soviet totalitarian regime.

Following the acquisition of state independence in Uzbekistan, the collapse of the totalitarian regime generated an urgent need for a systematic ideological platform to fill the resulting ideological vacuum, ensure social cohesion, and unite the people around new promising goals. The concept of the idea of national independence, put forward by the First President Islam Karimov, served precisely to satisfy this historical and existential necessity. At the same time, during the complex and perilous years of the transition period, this conceptual system served as a powerful defensive instrument—a spiritual shield—against various alien and destructive ideologies threatening state sovereignty.

At this juncture, attention must be paid to the most fundamental philosophical-methodological aspect: any idea must possess an instrumental essence that serves societal progress. Along its developmental path, Uzbekistan established it as a crucial

[49] Imomnazarov M., Milliy ma'naviyatimiz asoslari. – Toshkent: O'zbekiston faylasuflari milliy jamiyati nashriyoti, 2006 yil. – 448 b.

strategic condition that the national idea should not be artificially absolutized or transformed into a stagnant dogma that freezes society. This approach was a rational conclusion drawn from the society's bitter political experience under the previous Soviet regime, and it stood as the primary factor in securing the flexible and progressive development of the nation. For ideology is created for humankind, not humankind for ideology.

In particular, the developmental stage of New Uzbekistan after 2016 clearly demonstrated the immense vitality of this policy of de-dogmatization and ideological pragmatism. During this period, the socioeconomic, political, and educational spheres of social life were liberated from rigid ideological molds and liberalized, resulting in exponential growth rates in the development of the state. The fact that all vital spheres were not bound to dogmatic ideas, but rather that the national idea was made to serve practical-humanistic principles such as human well-being and "Human Dignity," enabled the full realization of the country's intellectual and material potential.

Conclusion. The systematic socio-philosophical, historical, and comparative-analytical research conducted in this article has yielded a series of fundamental conclusions. Globalization processes confront human society with serious clashes of values and the intensification of the "Us and Them" paradigm.

However, the historical roots of Uzbek statehood prove that preserving national identity and cultural sovereignty must be realized not through aggressive isolation, but rather in harmony with universal solidarity and tolerance. The national idea serves as a unique spiritual shield that prevents cultural assimilation in the global space. In Uzbekistan, the national idea is not a byproduct of short-term political opportunism, but rather a dialectical synthesis of a long historical epoch.

As a result of liberating the economic, political, and social spheres of social life from rigid ideological molds, high growth rates were recorded across these fields. Directing the national idea toward vital, pragmatic, and humanistic goals such as "Human Dignity" and human well-being serves as the most effective and sustainable

socio-philosophical driver for laying the foundation of the Third Renaissance in New Uzbekistan.

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NAVOIY LIRIKASIDA ISTIG‘NO VA VAHDAT TUSHUNCHALARINING KO‘RINISHI

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Annotatsiya. *Ushbu maqolada Alisher Navoiy she’riyatida uchraydigan tasavvufiy tushunchalar, ya’ni* ***istig‘no, tavhid, vahdat*** *kabilarning o‘rni va ayrim misralar misolida qanday ko‘rinishda kelishi, ularning ilmiy yondashuv asosida ochib berilishi keltirilgan. Shuningdek, Tavhid va Vahdat tushunchalarining yolg’izlik motiviga aloqador bo’lgan ko’rinishlari ochib berilgan.*

Kalit so‘zlar. *Yolg‘izlik, tavhid, Vahdat, rivoyat, zikr, iymon, zot, sifat.*

Abstract. *This article examines the role of Sufi concepts—specifically istighna (divine self-sufficiency/detachment), tawhid (divine oneness), and wahdat (unity)—in the poetry of Alisher Navoi. It analyzes how these concepts manifest in specific verses and explores them through a scholarly lens. Additionally, the article elucidates the aspects of tawhid and Oneness with Allah that relate to the motif of solitude.*

KeywordS. *Solitude, tawhid, Oneness with Allah, narrative, remembrance, faith, Divine Essence, Divine Attribute.*

KIRISH. Istig‘no va tavhid tushunchalariga o‘tishdan avval, Hadisi sharifga murojaat etsak o‘rinli bo‘lar edi:

Abu Hurayra raziyallohu anhu rivoyat qiladilar:” Rasulullоh sallollohu alayhi va sallam: “Eng to‘g‘ri so‘z- shoir Labidiyning “Haq taolodin o‘zga har narsa o‘tkinchi erur” degan so‘zidur. Umayya ibn Abu Saltning (ya’ni, Labiydning o‘zi she’rlarida) musulmon bo‘lmog‘iga oz qolib erdi”,-dedilar (ya’ni Labiyd Islom davrigacha yetib kelgan bo‘lsa-da, musulmon bo‘lmagan erdi. Ammo, o‘z se’rlarida tavhid xususida juda ko‘p zikr qilur erdi. Shu boisdan ham Janob Rasulullоh: “Umayya Ibn Abu Saltning musulmon bo‘lmog‘iga oz qolib erdi”-deb aytdilar)”

NATIJALAR VA MUHOKAMA. Ilmiy tavhid. bunda ilm foydasiga alohida e’tibor beriladi. Ilmul yaqiyn desa ham bo‘ladi, ya’ni ilm botindan kelib chiqqan tavhid ham deydilar buni. Bu shundan iboratki, solik tariqat boshida haqiqiy mavjudlik Xudovand zoti ekanligini anglab yetmog‘i yetadi. Hamda ilmiy mantiq tajriba-kuzatish natijasida o‘z zoti sifatlari, a’molu ash’ori, af’olini uning zoti tagidagi sifatlari natijasida ifoda etadi. Har bir zotni Uning nuridan bir qism deb biladi va bu martaba mutasavvif kishilar tavhidi martabasidir.

Hol tavhidiga keladigan bo‘lsak, kishi ahvoli tavhid sifatio bilan bir xil bo‘lib qoladi va birlashuvchiningvujudidagi jamiki zulmat va rasm-rusum tavhid nuri uning holi nuriga singib ketadi va muvahhid Haq jamoli mushohadasiga shunchalik g‘arq bo‘ladiki, nurlar uning jami manba’iga aylanadi. Shuningdek, vohidning zoti sifatlarinidan o‘zga uning nazariga tushmaydi. Jamming, butunning o‘zi bo‘ladi qoladi. Bu kabi Haq va Tajalli maslasiga tadqiqotimizning yuqori bo‘limlarida to‘xtalgan edik. Sufiy shunday holatda yig‘lasa, osmon unga qo‘shilib ko‘z Yoshi to‘kardi. Bunga asosan Attor shunday yozgan:

Gar tu xilvatxonni tavhilro mahram shavi,
Toji olam gardiyu, faxri bani Odam shavi.
Soyae shav, to agar xurshid gardad oshkor,
Tu chu soya mahvi xurshid oyiyu mahram shavi.

Mazmuni quyidagicha erur: garchi sen tavhid xilvatxonasiga mahram bo‘ladigan bo‘lsang, olamning toji bo‘lmish, odam farzandlarining es faxri sanalmish bo‘lib qolasan. Agar xurshid, ya’ni Tangri oshkor bo‘lsa, sen soya bo‘lgin, sababiki, soya kabi quyosh nuridan yo‘qolib, mahram bo‘lasan unga.

Ilohiy tavhidga o‘tadigan bo‘lsak, Haq taolo o‘z sifatlariga azaldan egadir, qoimdir. U hamisha vahdoniyat tavsifiga va fardoniyat ta’rifiga ega bo‘lib, abadul abad shundaydir. Unda nuqsonlar yo‘qdir. Ilohiy tavhid ana shuning aynan o‘zidir.

Istyig‘no vodiysi- Ehtiyojsizlik vodiysidir. Bunda qushlarning ehtiyojmand ekanligi va Simurg‘ning ehtiyojsizligi tasviri bayoni orqali solikning aynan mana

shunga o‘xshash ehtiyojsizlikni anglab yetishi natijasidagi holati tasvirlanadi. Navoiy bu vodiyni shunday tasvirlaydi:

Vodiy ondin so‘ngra istig‘nodurur
Onda teng a’logar adnodurur
Onda teng a’lovu gar adnodurur…
Yeti kishvar ichra sohi qahramon,
Bir gado onda hamonu ul hamon…
Onda teng ko‘r gumrahu ogohni,
Dayr ko‘yi birla Baytullohni.

Vodiyni yanada ochiqroq tasvirlash uchun Navoiy Shatranj o‘yinini misol qilib keltiradi. Unda, Shatranj ustasi ikki tomonda o‘tirib, o‘rtaga taxtasini qo‘yishadi, unga Shatranj donalarini terib olishadi. Ikki tomonlama kurash boshlanadi. Bunda esa shatraj taxtasi o‘rab olingan qal’aga, kurash esa haqiqiy urushga, urush maydoniga o‘xshab turadi. Agar o‘yin tugasda-da, Shatranj o‘ynaydigan odam taxtaning bir uchini ko‘tarsa, bu o‘yinning barchasi bir deganda puchga chiqadi. Chunki Shatranj ustasi uchun o‘yin tugagach, Shatranj donalarining, ularning har qanday vazifasining hech qanaqa ahamiyati qolmaydi. Shatranj donalari esa xaltaga solingach, “shoh” quyiga, “piyoda” esa yuqorida qolishi mumkin. Xulosa qilib aytadigan bo‘lsak, Haq nazdida barcha insonlar Shatranj donalari kabidir. Ya’ni “hayot o‘yinidan” so‘ng kim yuqori, kim past tabaqa sanamasin o‘zini baribir oxirida hamma bir joyga bir xil boradi, bir xil daraja kasb etadi.

Tavhid vodiysi- Birlik vodiysi. Butun borliq Yagona ruhdan iborat ekanligini tushunish, ya’ni Simurg‘dan iborat ekanligini tushunishdir.

Chun bu vodiy sori sayring qo‘ydi gom,
Fardu yaktolig‘ sanga bo‘ldi maqom…
Birda birdin hosil o‘ldi bir adad,
Yo‘q xiradqa munda dam urmoqqa had…
Bir bo‘lu, bir ko‘ru, bir de, bir tila,
Mayl qilma munda ikkilik bila.

Vodiyning mohiyatini yana ham aniqroq tasvirlab berish maqsadida Navoiy Mansur Xalloj bilan bog‘liq bir voqeani keltirib o‘tadi. Unda, Mansur Xalloj doimo tilida “Anal Haq” degan jumlani takrorlab yuradi. Din arboblari esa: “Senga yuzlangan holat suluk ahlining ko‘piga ayon, lekin ular odob saqlab, o‘z da’volarini oshkor qilmaganlar. Sen ham nafsingni dorga sazovor qilma”, - deb nasihat qiladilar.

Ammo Mansur Xalloj bu jumlasini takrorlashdan qaytmaydi. Hatto u bir kuni tushida Rasulullоh (s.a.v.) ni ko‘radi. Uning dilidagi “Nega Muhammad (s.a.v.) me’roj kechasi faqat islom ummatining gunohini so‘radilar, barcha osiylarning gunohini tilaganda nima bo‘lardi” degan o‘y-xayollari uchun unga tanbeh beradilar:

Onda menlikning xayoli yo‘q edi,
Balki bu lafz ehtimoli yo‘q edi.
Eltgan ul erdi boshlag‘on ham ul,
Istag‘on ham ul, bag‘ishlag‘on ham ul…
Ul edi degon o‘zi, berg‘on o‘zi,
Bazl aro sochqon o‘zi, terg‘on o‘zi.

Keltirilgan hikoyatdan shunday xulosa kelib chiqadi: Mansur Xalloj Tavhid mohiyatini to‘la anglab yetmagani uchun “menlik” xayoli bilan “Anal Haq” jumlasini takrorlab yurar edi. Aslida Tavhid vodiysida “menlik”ka o‘rin yo‘q.

Shunday qilib, Tavhid Haq taolo nuriga g‘arq bo‘lish va yo‘qolishdir. Demak, banda haqqa orif bo‘lsa, Haqning mohiyatini, haqiqatini haqiqatan anglab yetsa, uning vahdoniyatiga hukm qila oladi. Bundan ma’lum bo‘ladiki, Tavhid faqat yagonalikni tan olishgina emas, balki shu yagonalik ichra yo‘q bo‘lib ketishlikdir. Ya’ni tavhid insonning Mutlaq ruh tomon intilishini aytadigan jarayondir. Bu aniq tushuntirish uchun dengiz va tomchi tushunchalari olinadi. Dengiz va tomchi, bu- bir vujuddek gap. Aynan mana shu haqiqatni tan olish vahdatni tasdiqlashdir. Tomchining dengizga qarab intilishida tozalanib, musaffolanib boradi. Bu esa tajriddir. Mansur Halloj esa tavhidni shunday deb tushuntirgan: “Tavhid sari birinchi qadam tafridning fanosidir”.

Shuning uchun ham Navoiy she’rlarida Tarsoparastlik va butparastlik g‘oyasi izchil va keng targ‘ib etilgan. Navoiy “Riyoiy Ka’badan” “Dayri fanoni” ustun qo‘yib deganki:

Riyovu Ka’badin dayri fanog‘a
Kirib gar butqa zohir qildim imon.
Meni yozg‘urma, ey shayxi riyoiy,
Ki gar kofir edim, bo‘ldim musulmon.

Alisher Navoiyning g‘azallarining mavzu doirasi keng bo‘lib, uning g‘azallarining shakli ya’ni qolipini shu mazmunga xizmat qildiradi. Natijada, ular rasmiy g‘azallarga tashqi tomondan o‘xshasa ham, lekin, mavzu, mazmun, timsol va badiiy jihatdan rasmiy g‘azallardan farqlanadi. Bu kabi qarashlar shoirning ijtimoiy, axloqiy, falsafiy-tasavvufiy mavzulardagi g‘azallariga ham tegishlidir.

Ba’zi aqidalardan biri bu komil insonni shakllantirish bo‘lib, uni amalga oshirish yo‘llarini aniqash ko‘pchilikning, jumladan Alisher Navoiyning diqqatini o‘ziga tortgan edi. Quyida keltirayotganimiz g‘azal ham ana shu masalaga bag‘ishlangan.

Alisher Navoiyning “Badoye’ ul-bidoya” va so‘ngra devonlar turkumidan iborat “Xazoyin ul-maoniy”ning shu g‘azal bilan bashlangani bejiz emasdek tuyuladi:

Ashraqat min aksi shams il-ka’si anvor ul-hudo,
Yor aksin mayda ko‘r deb jomdin chiqdi sado.

G‘ayr naqshidin ko‘ngul jomida bo‘lsa zangi g‘am,
Yo‘qtur, ey soqiy, mayi vahdat masallik g‘amzudo.

Keltirilgan g‘azal “Xazoyin ul-maoni” tarkibiga kiruvchi birinchi devon – “G‘aroyib us-sig‘ar” dagi birinchi g‘azaldir. U to‘qqiz baytdan iborat bo‘lib, aruzning “ramali musammani mahzuf” (foilotun, foilotun, foilotun, foilun) bahrida mulamma’ san’ati ishlatilib (birinchi misra va maqta’dagi oxirgi misraning bir qismi arab tilida, qolganlari esa o‘zbek tilida) yozilgan g‘azaldir. Bu g‘azal majoziy “ishq-oshiq-ma’shuqa” tasviriga bag‘ishlangan g‘azallardan mavzuning tasavvufiy ekanligi bilan

farqlanib, unda haqiqiy ishq – komil inson muammolaridan falsafiy mushohada yuritiladi. Shuning uchun unda an'anaviy g'azallardagi ma'shuqa "qoshi, ko'zi, sochi…" tasviri ham yoki uning "bevafoligi", "zolimligi", "firibomiz" iltifotlari haqida ham so'z bormaydi; g'azalda an'anaviy timsollar ham (ma'shuqa, raqib…), shunga bog'li bo'lgan tasvir vositalari ham ko'rinmaydi. Mazkur g'azalda yangi timsollar va ular bilan bog'liq tasvir vositalari qo'llanilgan. G'azalda "jom, may, ko'ngul jomi, sing'on safol, chehrayi maqsud, vahdat mayi, azal soqiysi" kabi timsol va "kalit" so'z – ibora borki, ular tasvirlanayotgan mavzuning mohiyatini o'zlarida aks ettiradilar. G'azalda "jom va may" ihom san'atida qo'llanilib, ular zohiriy ma'nodagina emas, balki yana boshqa – botiniy ma'noda ham ishlatilganligini Alisher Navoiyning o'zlari ham alohida ta'kidlaydilar: "Sen gumon qilg'ondin o'zga jomu may mavjud erur". Bu savolga Alisher Navoiyning o'zlari butun g'azal davomida chiroyli javob beradilar. Buni anglash uchun g'azalning baytlarini ko'zdan kechiraylik:

Ashraqat min aksi shams il-ka'si anvor il-hudo,
Yor aksin mayda ko'r deb jomdin chiqdi sado.

Birinchi misra' arabcha bo'lib, uning mazmuni quyidagicha: "Quyosh kosasining aksidan hidoyat nurlari porlab chiqdi" hamda (ikkinchi misra') "Yor aksini mayda ko'r, deb jomdan sado chiqdi". Bu bilan shoir nima demoqchi? Quyosh kosasining aksi va hidoyat nurlarining porlashini qanday tushinmoq darkor? Bu savollarga javob "kalitlari"ni Alisher Navoiyning "Favoyid ul-kibar" devoniga kiritilgan na't g'azalning quyidagi baytidan topish mumkin:

Ravshandururki, mehr yuzingdin olur safo,
Yo'qsa, ne vajh ila qamar andin topar ziyo.

Baytda so'z Alloh taolo haqida bo'lib, u shunday ma'noni anglatadi: Ey Alloh, hammaga ma'lumki, Mehr (Quyosh) sendan poklik nurlarini oladi, agar shunday bo'lmasa, Oy (Qamar)ning yorig'ligi – nurlari qayerdan ham bo'lardi. Bunday mazmunni "Badoye' ul-vasat" devoniga kiritilgan g'azalning quyidagi baytida ham kuzatish mumkin:

Quyosh yuziga boqardin nazar erur ojiz,

Yuzungdin etti magar aks zohir ul ko‘zgu.

Shu g‘azalning: Magar tajalliyi husnungg‘a mazhar o‘ldi quyosh, Ki zohir ayladi oncha bila yog‘du, - baytida ko‘rilayotgan masalaga doir mulohaza ochiq-oydin ifoda etilgan. Demak, birinchi misoldagi “quyosh kosasi aksi” iborasida quyoshning Alloh taolodan poklik nurlarini olishi va u nurlarning kosasi ko‘zgusida aks ettirishi ma’nosi singdirilgan. Quyoshdan kelayotgan ana shu hidoyat - yo‘lboshchilik qiluvchi ilohiy nurlarda esa yorning aksini (Alloh taoloning tajalliysini) ko‘rmaqchi bo‘lsang, uni mayda ko‘r, deb jomdan nido (tovush) keldi.

Bu bayt husni matla’ bo‘lib, unda shoir butun g‘azalda ifoda etmoqchi bo‘lgan fikrning qaymog‘ini bayon etgan hamda “jom va may”ning o‘zga-botiniy-tasavvufiy ma’nosini ham ochib bergan. Boshqacha qilib aytganda, shoir aytmoqchiki, Alloh taoloning nurlari Quyosh kosasiga tushgach, ana shu kosada tajalliy topgan (jilolangan, ko‘ringan) ilohiy nurlarni Quyosh butun olamga yoyadi. Bunda Quyosh tajalliygoh kosa bo‘lib, unda jilolangan nurlarda Alloh taoloning buyukligi va g‘ozalligini ko‘rish mumkin. Bas shunday ekan, Quyosh taratayotgan ilohiy nurdan bahramand bo‘lgan barcha mavjudot va maxluqotda Alloh taoloning g‘ozalligi va buyukligini ko‘rish hamda tasavvur etish mumkin. Shunday ekan, “yor aksin mayda ko‘r” degan nido (tovush)ning ma’nosi oydinlashadi, ya’ni Alloh taoloning o‘zi emas, balki uning barcha zotiy va sifotiy fazilatlari ilohiy nurlar tajalliysida namoyon bo‘ladi. Buning mohiyatini esa hamma ham emas, balki undan ogohlargina, ya’ni komil insonlargina anglaydilar va bahramand bo‘ladilar. Bunday darajaga erishishning sharti ikkinchi baytda bayon qilingan:

G‘ayr naqshidin ko‘ngul jomida bo‘lsa zangi g‘am,
Yo‘qtur, ey soqiy, mayi vahdat masallik g‘amzudo.

Baytning ma’nosi: agar kishining ko‘nglida Alloh taolo zikridan boshqa narsalar fikru xayoli, ya’ni mol-dunyoga hirs qo‘ymoqlik, amalparastlik va hokazolar g‘amining zangi-gardi, g‘ubori to‘plangan bo‘lsa, ko‘ngulni bunday zang-g‘uborlardan tozalaguvchi asosiy omil bu – **vahdat** mayidir.

XULOSA. Ya’ni Alloh taoloni doimo zikr qilish va uning zotiy sifatlari nurlari bilan zanglarni ketkizishdir. Demak, insonning komilikka erishuvining asosiy omili **Alloh taoloning yakka-yagonaligi (vahdati)** va buyukligini (akbar) e’tirof etish bilan o‘zligini tanishi, barcha olijanob fazilatlarni o‘zida mujassam eta olishidadir.

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HUJJATLI FILMLARNING O‘ZIGA XOSLIGI VA XUSUSIYATLARI

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Annostatsiya. *Mazkur maqolada hujjatli filmning maqsadi, vazifasi va o‘ziga xos xususiyatlari haqida talqin qilinadi. Film xaqiqatga asoslanishi, ta’limiy va tarbiyaviy vazifasi, badiiy bo‘shliqlardan chegaralanganligi, jurnalist pozitsiyasida o‘ziga xosligi talqin qilingan va ilmiy nazariy jihati asoslanadi. Shuningdek shaxs va jamiyat uchun pedagoik va psixologik tasir etish funksiyasi bayon etilgan.*

Kalit so‘zlar: *Hujjatli film, tasvir, tahlil, axborot makoni, media, reallik, milliy kontent, kino san’ati.*

Annotation. *This article explains the purpose, purpose, and specific characteristics of a documentary film. The film is based on truth, its educational and upbringing role, its limitation on artistic gaps, its specific aspects in the journalist’s position are interpreted and its scientific-theoretical aspect is substantiated. The function of pedagogical and psychological influence on the individual and society is also described.*

Keywords: *Documentary film, image, analysis, information space, media, reality, national content, cinema art.*

Аннотация. *В данной статье рассматриваются цель, задачи и особенности документального фильма. Фильм основан на правде, его образовательная и воспитательная роль, его ограничение художественными пробелами, его специфические аспекты с позиции журналиста интерпретируются и основываются на его научно-теоретическом аспекте. Также описана функция педагогического и психологического воздействия на личность и общество.*

Ключевые слова: *Документальный фильм, изображение, анализ, информационное пространство, медиа, реальность, национальный контент, киноискусство.*

Bugungi globallashuv davrida ommaviy axborot vositalari orqali haqiqatni yoritish va uni jamoatga taqdim qilish vazifasi tobora dolzarb ahamiyat kasb etmoqda. Bu jarayonda kino san’atining hujjatli film janri o‘zining real voqelikni aks ettirishdagi yondashuvi, uslubiy xilma-xilligi va g‘oyaviy yo‘nalishlari bilan ajralib turadi. Boisi, hujjatli film jamiyatning ijtimoiy-siyosiy, madaniy va tarixiy jarayonlarning keng jamoatchilikga tushunarli tarzda yetkazib, tomoshabinning ongiga ta’sir etadi, fikrini saralaydi, tahlil qiladi va jamiyatda ma’naviy-ma’rifiy qadriyatlar shakllanishida muhim vazifa o‘taydi.

Umuman olganda, hujjatli film jamiyatni bir maqsad yo‘lida birlashtiruvchi,

tabiiyligi bilan ishonch uyg‘otuvchi va ma’naviy ta’sir kuchiga egaligi bilan farqlanadi. Shu bois, mazkur tadqiqot doirasida, avvalo hujjatli film nima? Filmning o‘ziga xosligi va xususiyatlari nimada aks etadi? kabi savollarga yechim topishda bir nechta olimlarning nazariy qarashlarini ilmiy xususiyatini tadqiq qilamiz.

Bu borada hujjatli film nazariyasi va amaliyoti bo‘yicha tadqiq olib bogan bir qator amaliyotchi tadqiqotchilar va nazariyotchi olimlar Bill Nichols A. Yuroviskiy, E.Bagirov, A.Vartanov, S.Muratov, R.Il’in, R.Kopilova, O.Nechay kabi tadqiqotchilar ilmiy yondashuvida hujjatli filmning o‘ziga xosligi va rivojlanish tendensiyalarini o‘rganishga arziydigan yutuqlarga erishildi. Ilmiy tahlillar natijasiga ko‘ra olimlar, hujjatli filmning o‘ziga xoslik jihatlari aynan nimada aks etishi, alohida e’tibor markazida bo‘ldi.

Xususan, hujjatli filmning nazariy jihatdan asoslanishiga Shotlandiyalik rejissyor, “hujjatli kino” atamasining muallifi John Grierson “Hujjatli film-bu hayotiy voqelikni ijodiy tarzda talqin etishdir.”[50] – deya ta’riflaydi.

Bizning fikrimizcha, tadqiqotchi rejissyor birinchidan, hujjatli filmni faqatgina tabiiylikni badiiylikga uyg‘unlashtirib, tomoshabinga hayotning turli qirralarini anglashga, his qilishga yordam beruvchi vizual hujjat emas, balki ijtimoiy haqiqatni badiiy-nazariy idrok etish shakli sifatida talqin qilinishi nazarda tutilgan. Shuningdek, hujjati filmning asosiy manbai dalil, fakt, voqea hodisa va insonlar bilan bog‘liq bo‘lib, ayni mana shu jihat badiiy filmdan farqlashlanishligi e`tirof etilgan.

Ikkinchi jihati, hujjatli filmda muallif pozitsiyasi muhim ahamiyatga ega bo‘lib, u ijodiy jamoa bilan yakdillikda ishlaydi. Faqatgina voqelikni boricha tasvirga olish bilan cheklanmaydi. Balki film mavzusini tanlaydi, tadqiq qilinadi, tartiblaydi, montaj orqali ma’no yuklaydi.Ya'ni filmni muayyan g‘oya asosida unga estetik yo‘nalish berib tomoshabinga havola etadi.

Shu jarayonlardan muvofaqqiyatli chiqishida ijodiy jamoa o‘zaro hamkorlikda ish olib borilishi muhim ahamiyat kasb etadi. Chunki, yuqori saviyaga ega bo‘lgan hujjatli filmning yutug‘ida rejissyorning fantaziyasi, jurnalistning g‘oyasi, tasvirchilarning zehn zakovati va badiiy qarashlari orqali film haqiqatini tasvirlaydi, hissiyotlari va estetik

[50] https:// en.wikipedia.org/wiki/Dokumentary_film

yondashuvlari orqali boyitiladi. Natijada, global va ijtimoiy muammolar, tasvirlarda ko‘zgu kabi namoyon bo‘ladi.

Amerikalik aktyor Richard Gir hujjatli film haqida quyidagicha izohlaydi: “Men umuman kino biror narsaga o‘rgata oladi, deb hisoblamayman. Ko‘p xollarda u huddi Ko‘zgu kabi ishlaydi, biz bu ko‘zgudagi o‘zimizni va qilmishlarimizni ko‘rishimiz hamda xulosa chiqarishimiz mumkin. Har kimning o‘z Ko‘zgusi bor”[51] - deya takidlaydi .

Demak, aktyorning fikricha, hujjatli film hayotni aks ettiruvchi oyna vazifasi bo‘lib, unda shaxsiy hikoyalardan tortib, global hodisalarni o‘ylantiruvchi tadqiqlargacha, tomoshabinlarni xabardor qilish, tarbiyalash va ilhomlantirish xususiyatlari nazarda tutilgan. Ayniqsa, tarbiyaviy jihati kuchli bo‘lgan global mavzudagi hujjatli filmning ta’sirida tomoshabin ekologiya inqirozidagi yo‘l qo‘ygan xatosini, suv tanqisligi va qurg‘oqchilikdagi e’tiborsizligini, havoni ifloslanishidagi noo‘rin xatti xarakatini anglab yetadi. Avval ahamiyat bermay e’tiborsiz bo‘lgan jarayon uchun xatosini anglashi va xulosa chiqarishi mumkin. Filmning tarbiyaviy xususiyati ham shundaki, tomoshabin ma’lumot orqali ta’lim oladi, axloqiy-tarbiya bilan birgalikda vatanparvarlik tuyg‘usi uyg‘onadi. Natijada, tomoshabin to‘g‘ri yo‘lni tanlashi, xulosa chiqarishida turtki bo‘ladi. Ijtimoiy va gloval muammolarga loqaydlik kamayadi.

Hujjatli filmning yana bir o`ziga xos xususiyati statistik ma`lumotlarni o`ziga jamlaydi. Chunki, har bir davr bosqichining mamlakat rivojidagi ijtimoiy-iqtisodiy strategik yo‘lni bosqichma-bosqich suratlarga muhrlanadi. Bu esa davlat taraqqiyot yo‘lini baholash, solishtirush va tahliliy ma`lumotlar bilan taqqoslash imkoniyatini beradi. Shuningdek yosh avlodning vatanparvarlik tuyg‘usini uyg‘otish, fahr va iftixor hissini namoyon bo‘lishi va mamlakatning buguni bilan ertasini tarixga muhrlanishida muhim manbadir.

Mazkur fikrimizni tasdig‘i sifatida o‘zbek hujjatli filmlari asoschisi Malik Qayumov ham quyidagicha izohlaydi: “Biz, hujjatli kinochilar haqida aytishadi: zamon bilan qadamba-qadam yuradilar. Aniqroq aytsak: hujjatli kinochi go‘yo zamonning ichida yashaydi. Mening respublikamda nima yuz bersa, hammasini suratga oldim-tramvay

[51] Richard Gir Teatr..Kino...Televideniye… (Dono fikrlar) T. 2022. 166-b

ishga tushsa suratga olaman. Zavod quriladi-suratga olaman. Kanal qazishadi-suratga olaman. Dasht qo‘ylarini haydab, boqishadi-suratga olaman. Temir yo‘l o‘tkazishadi, shahar qurishadi, cho‘lda vagon uycha o‘rnatishadi-suratga olaman…” [52]

Rejissyorning quyidagi fikrlaridan ko`rinib turibdiki, hujjatli film mamlakatning tarixi va bugunini taqqoslash imkonini qayd etgan. Hujjatli film orqali inson jamiyatdagi o‘zgarishlarni, muammolarni va ularni yechimlarini chuqurroq tushunib yetadi. Turli davrdagi hujjatli filmlar o‘sha davr islohot ifodachisidir. Bunda har bir davrning siyosiy qarorlari, iqtisodiy o‘zgarishlar va ijtimoiy hayotdagi yangilanishlar aks ettiriladi. Har bir davrning hujjatli filmi o‘z davrining guvohi sifatida tarixiy voqealarni jonli tasvirlar bilan tasdiqlaydi. Masalan, sovet davrida ishlangan hujjatli filmlar ko‘proq ideologik ruhda bo‘lgan bo‘lsa, mustaqillikdan keyingi filmlar esa milliy tiklanish, o‘zligimizni anglash va taraqqiyot jarayonlari keng yoritilgan.

Hujjatli filmning o‘ziga xos bo‘lgan yana bir muhim jihati, ko‘pincha e’tibordan chetda qolgan mavzularni yoritadi, tomoshabinga ko‘plab yangi savollarni ochib beradi. Bu esa filmdagi dolzarb mavzuni ta’sirchanligini oshiradi. Ayniqsa, ijtimoiy adolatsizlik, ekalogiya muammolari, tarixiy haqiqatlar yoki oddiy insonlarning qiyin taqdiri haqida hikoya qiluvchi filmlar orqali tomoshabin faqat ma’lumot emas, balki hissiy tajriba ham oladi. Bu filmlar jamiyatda muhokama va fikr almashinuviga sabab bo‘ladi va ongli qaror qabul qilishga undaydi.

Fikrimizning tasdig‘i sifatida taniqli kinorejissyor bir qator o‘zbek hujjatli filmlar muallifi Baxodir Ahmedov hayotiy tajribaga asoslanib, “Hujjatli kino-bu hodisaning qayd etilishidir, hujjatlashidir, badiiy kinoda bu narsa yo‘q. U shunisi bilan qadrli...unga ko‘proq ishonasan! Uni qayta o‘zgartirib bo‘lmaydi, biroq uni qayta mushohada qilish mumkin…va u baribir Hujjat bo‘lib qoladi![53] - deb takidlaydi.

Demak, matn muallifining fikridan ma`lumki hujjatli film - bu hayotiy haqiqatdir, ijodkor uni yaratmaydi, balki boricha ko‘rsatib beradi. Filmda hayotning tabiiyligi, rostgo‘yligi mavjud. Shu bois, tomoshabin hujjatli filmga ko‘proq ishonadi. Chunki film

[52] Malik Qayumov Teatr, Kino, Televideniye (dono fikrlar) Toshkent 2022 194-bet
[53] B. Ahmedov “Teatr, Kino, Televideniye (dono fikrlar) Toshkent 2022. 137-bet

sahnalashtirilgan kino emas, real voqelik va insoniyat va borliq taqdirini ko‘radi. Filmni suratga olishda ijodkorlar fikrini bildiradi, g‘oyaviy qarashlarini ilgari surar ammo, bu hayot tasvirlari asosida shakllanadi. Shu sababli hujjatli film vaqt o‘tishi bilan qadri ortib boradi va tarixiy manbaga aylanadi. Vaqtlar, davrlar hujjatli filmning qadrini, qiymatini yuqori baholaydi.

Biroq, filmning tasirchanligini oshirish natijasida hujjatli filmda bo‘rttirish, film tabiiyligini zaiflashtirish xolatlari ham mavjud. Bu borada fransus dengizkashfiysi, kinorejissyor va muallif Jak Iv Kusto quyidagicha ta’kidlaydi: “Hujjatli filmdagi yangi kishilarning aksariyati, o‘zlarining o‘ziga xosliklarini namoyon qilishim kerak, deb o‘ylaydilar. Ular nimani ko‘rganlarini va qanday ko‘rganliklarini ko‘rsatish o‘rniga, bo‘rttiradilar, aqlliklarini ko‘rsatmoqchi bo‘ladilar.”[54] Natijada hujjatli filmning o‘ziga xos jihatlari o‘z kuchini yo‘qotadi.

Tadqiqotchilarning ilmiy nazariyasi va amaldagi kuzatishlarim davomida hujjatli filmlarning bir qator o‘ziga xos xususiyatlari ma’lum bo‘ldi. Ularning asosiy o‘ziga xosliklari quyidagilar:

- haqiqatga asoslanishi - hujjatli filmlar real voqea, shaxslar yoki holatlar asosida ishlanadi. Ular badiiy filmlardan farqli o‘laroq, to‘qima yoki fantastik elementlardan qochadi;
- ma’lumot berish va ta’limiy roli - bu filmlar tomoshabinlarga ma’lum bir mavzu bo‘yicha aniq va batafsil ma’lumot yetkazishni maqsad qiladi. Masalan, tarixiy voqealar, ilmiy kashfiyotlar yoki ijtimoiy muammolar haqida;
- haqiqiy tasvir va intervyulardan foydalanish - hujjatli filmlar ko‘pincha real tasvirlar, tarixiy hujjatlar, arxiv materiallari va intervyulardan foydalanadi, bu esa ularni yanada ishonchli qiladi;
- jurnalistik yondashuv- hujjatli filmlar odatda jurnalistik yondashuvni qo‘llaydi: ular tadqiqot olib borish, dalillarni yig‘ish va ularni tizimli ravishda taqdim etishga intiladi.
- muayyan ijtimoiy yoki madaniy mavzularga e’tibor - ko‘plab hujjatli filmlar ma’lum bir ijtimoiy, ekologik yoki siyosiy masalalarni yoritib, tomoshabinlarni ongli qilish yoki muammoga e’tibor qaratishni maqsad qiladi,

[54] Jak Iv Kusto “Teatr, Kino, Televideniye (dono fikrlar) Toshkent 2022. 212-b

- badiiy bo‘shliqlardan chegaralanganligi - hujjatli filmlarda badiiy filmlarga xos dramatik voqealar yoki ijodiy bo‘shliqlar kamroq bo‘ladi. Ular iloji boricha haqiqatni aniq aks ettirishga harakat qiladi;
- statistic tahlil - jamiyatning ijtimoiy-iqtisodiy siyosatini solishtirish, taqqoslash va tahlil qilish;
- rejissorning nuqtayi nazari - hujjatli filmlar faktlarga asoslansa-da, ular rejissorning o‘ziga xos qarashlari va ma’lum bir mavzuni qanday taqdim etishni tanlashiga ham bog‘liq. Bu jihatlar esa filmning o‘ziga xoslik xususiyatlarini namoyon qiladi.

Hujjatli film yaratishda yana muhim uslubning o‘ziga xosligi, yashirin kamera va tovushni sinxron yozib olish, shuningdek, “kinohaqiqat”deb ataluvchi usullardan muvofaqqiyatli foydalanib kelinganligi. Mazkur uslubdan 1970-1980-yillarda kengroq foydalanilgan. Tabiatni kuzatish, o‘simliklarning bo‘y cho‘zib rivojlanishi, hayvonot olamining yashash tarzi, suvlarning shildirashiyu, yomg‘irning sharros quyishidek jarayonlarni kuzatuv janri orqali tasvirga olingan.

Xulosa qilib shuni aytish mumkinki, hujjatli filmlardagi o‘ziga xos xususiyatlari bilan bizning dunyo haqidagi tushunchalarimizni shakllantirishda va ijobiy o‘zgarishlarni amalga oshirishda kuchli vosita ekanligini isbotladi. Ushbu maqolada, hujjatli filmlarning badiiy va informativ sifatlari, uning o‘ziga xos xususiyatlari, tarixiy haqiqatni yoritilishidagi roli va ijtimoiy ongga ijobiy ta’siri tahlil qilindi.

Ilmiy tadqiqotlar shuni ko‘rsatdiki, hujjatli filmning asosiy o‘ziga xosligi - real voqelikni san’at orqali talqin qilish, voqea va shaxsni badiiy vositalar yordamida ochib berish, tomoshabinda ishonch va tafakkur uyg‘otish qobiliyatidir. Uzoq yillar davomida hujjatli film aniqlikga asoslangan bo‘lsada, zamonaviy hujjatli film badiiylik va estetik ifoda yordamida yanada boyitmoqda.

Tomoshabinlarni tarbiyalaydimi, ilhomlantirishiga harakat qiladimi, yoki badiiy ifoda chegaralarini kengaytiradimi, bu filmlar jamiyatda o‘chmas iz qoldirdi va bizning rivojlanayotgan media landshaftimizda katta ahamiyat kasb etishda davom etmoqda.

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ALISHER NAVOIYNING "MAHBUB UL-QULUB" ASARIDA METAFORIK TAFAKKURNING NAMOYON BO‘LISHI

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Annotatsiya: *Ushbu maqolada Alisher Navoiyning **“Mahbub ul-qulub”** asaridagi metaforalar lingvomadaniy nuqtayi nazardan tadqiq etilib, ularning shakllanishida madaniy kodlarning tutgan o‘rni tahlil qilinadi. Tadqiqot davomida metaforalar madaniy kodlarning namoyon bo‘lish xususiyatiga ko‘ra tabiat, makon (lokativ), antropomorf, harbiy, aksiologik, predmet-maishiy hamda musiqiy-madaniy kodlar asosida tasniflanadi. Har bir guruhga mansub metaforalarning semantik mazmuni, milliy-madaniy asoslari va badiiy-estetik vazifasi asardan olingan misollar orqali yoritiladi. Tadqiqot natijalari Navoiy metaforalarida xalqning madaniy tajribasi, qadriyatlari va dunyoqarashi o‘ziga xos badiiy vositalar orqali ifodalanganligini ko‘rsatadi.*

Kalit so‘zlar: *metafora, lingvomadaniyat, madaniy kod, tabiat kodi, makon kodi, antropomorf kod, harbiy kod, aksiologik kod, predmet-maishiy kod, musiqiy-madaniy kod.*

Аннотация (русский)

*В статье исследуются метафоры произведения Алишера Навои **«Махбуб ул-кулуб»** в лингвокультурологическом аспекте с особым вниманием к их культурно-кодовому содержанию. Метафорические единицы классифицируются по типам культурных кодов: природному, пространственному (локативному), антропоморфному, военному, аксиологическому, предметно-бытовому и музыкально-культурному. На основе текстового материала раскрываются семантические особенности каждой группы, их национально-культурная специфика и художественно-эстетические функции. Проведённый анализ показывает, что система метафор в произведении отражает ценностные ориентиры, культурную память и особенности мировосприятия, характерные для художественного мышления Алишера Навои.*

Ключевые слова: *метафора, лингвокультурология, культурный код, природный код, пространственный код, антропоморфный код, военный код, аксиологический код, предметно-бытовой код, музыкально-культурный код.*

Annotation (English)

This article investigates the metaphors found in Alisher Navoi's ***Mahbub ul-Qulub*** *from a linguocultural perspective, focusing on the role of cultural codes in the formation of metaphorical meaning. The identified metaphors are categorized into several cultural-code groups, including nature, spatial (locative), anthropomorphic, military, axiological, object-domestic, and musical-cultural codes. Drawing on examples from the text, the study examines the semantic features, cultural background, and artistic functions of each category. The findings demonstrate that Navoi's metaphorical system embodies national cultural values, collective experience, and a distinctive conceptualization of reality, thereby contributing to a deeper interpretation of the literary text.*

Keywords: *metaphor, linguocultural studies, cultural code, nature code, spatial code, anthropomorphic code, military code, axiological code, object-domestic code, musical-cultural code.*

KIRISH VA DOLZARBLIGI.

So‘zning lug‘aviy ma'nosini kengaytirib, unga yangi mazmun va badiiy bo‘yoq baxsh etadigan eng muhim tasviriy vositalardan biri metaforadir. Metafora yordamida fikr nafaqat obrazli, balki ta'sirchan va estetik jihatdan jozibali tarzda ifodalanadi. U voqelikni yangicha nigoh bilan idrok etishga imkon berib, tasavvur va real hayot o‘rtasida mazmuniy bog‘liqlikni yuzaga keltiradi. Shu sababli metaforani oddiy hodisa va predmetlarda yashirin ma'no hamda yangi mazmunni ochib beruvchi badiiy tafakkur vositasi sifatida baholash mumkin.

METODLAR VA O‘RGANILISH DARAJASI.

Ilk bor metafora atamasi Izokratning “Evagorus” asarida uchraydi. Metafora-ikki narsa yoki hodisaning o‘xshashligi asosida birining nomi, belgisini boshqasiga ko‘chirish orqali nutqning ta’sirchanligini oshiradigan uslubiy vosita (ko‘chim) hisoblanadi. Metaforik ma’nolar insonning tashqi qiyofasi, jismoniy va ruhiy holati, tana a’zolari harakati, hayotiy bosqichlari, shuningdek kiyim-kechak va ularning tarkibiy qismlariga tayanib shakllanishi mumkin. Aristotel davridan boshlab “metaforaning “san’at”, uning qo’llay olish qobilyatini esa “iste’dod”[1, 208]” deya metaforaga berilgan bunday baho uning milliy ong va tafakkur natijalarini o‘ziga xos shaklda aks ettiruvchi bebaho hodisa ekanidan darak beradi. Metafora atamasi asrlar davomida insonlar nutqida qo’llanilib kelingan. Metaforaning fikriy jarayondagi ishtirokini birinchi bo’lib e’tirof etgan olim Germogen hisoblanadi. “Metaforalar nafaqat kundalik hayot, til balki, tafakkur va faoliyatimizga ham kirib boradi. Bizning

kundalik tushunchaviy tizimimiz ham o’z mohiyatiga ko’ra metaforikdir” degan edi George Lakoff va Mark Johnsonlar o’zining “Metaphors we live by” asarida. Har bir xalq metaforalardan turli shaklda o’ziga xos tarzda foydalanadi. Chunki har bir xalqning o’ziga xos milliy, mental, madaniy qarashlari mavjud. “Metaforik ifodalar tilning asosiy lingvomadaniy birliklari hisoblangan maqollar, iboralar, o’xshatishlar(epitetlar) bilan bir qatorda turadi[2, 208]. Zotan metafora o’zida “…fundamental madaniy qadriyatlarni aks ettiradi, chunki u milliy madaniy dunyoqarashga asoslangandir”[2, 91]. Metafora — lingvistik vosita, madaniy kod esa lingvomadaniy mazmunni tashkil etuvchi konseptual tizimdir. Yuqorida keltirilgan qoidalar metafora madaniy kodni ifodalovchi vosita ekanligini ifodalamoqda. G.D.Gachev “milliy madaniy kod” tushunchasini shakllantirgan olimlardan biridir. Lingvokulturologiya nuqtai nazaridan madaniy kodlar — bu har bir madaniyatga xos bo‘lgan ijtimoiy amaliyot usullari majmui, jamoaviy yashashning qadriyatlari va qoidalari yig‘indisi, inson tomonidan ishlab chiqilgan me’yoriy va baholovchi mezonlar tizimi bo‘lib, ular orqali inson dunyoni idrok etadi.

Bu — muayyan madaniy ma’nolar va qadriyatlarni ifodalovchi realliklar majmuidir.

Kodlar tarkibiga madaniyat belgisi bo‘lmagan birliklar ham kirishi mumkin, biroq ular kodning mental makoniga kiritilganda madaniy belgiga aylanadi.
Masalan, yo‘lda yotgan tosh — shunchaki tabiiy obyekt (Aristotelga ko‘ra birlamchi mavjudlik), ammo u qabarga qo‘yilsa, madaniy belgiga, ya’ni yodgorlikka aylanadi.
Shunday qilib, jismoniy dunyo obyektlari o‘zining bevosita funksiyalaridan tashqari madaniyatda belgilik (sign) funksiyasini ham kasb etadi, ya’ni ular qo‘shimcha axborotni saqlaydi[2, 96].

Til madaniy kodlarni saqlovchi va uzatuvchi asosiy vosita hisoblanadi. Har bir til birligi so‘z, frazeologizm, metafora o‘zida ma’lum madaniy axborotni mujassamlashtiradi. Madaniy kod — bu madaniyatda muhim bo‘lgan ma’nolarni, tasavvurlarni va qadriyatlarni ifodalovchi belgilar tizimidir. U til birliklari orqali namoyon bo‘lib, insonning dunyoni qanday idrok etishini aks ettiradi[2, 60].

Keltirilgan ma’lumotlar shuni ko’rsatib turibdiki madaniy kod orqali muayyan bir tilga xos bo’lgan milliy an’analar va o’ziga xos nuqtai nazar asosida shakllangan so’z va birikmalarni tushunish mumkin. Metaforalar madaniy kodlarning eng faol ifoda vositalaridan biridir, chunki ular orqali inson tajribasi va milliy tafakkur obrazli shaklda namoyon bo‘ladi[2, 63] Aslida tilshunoslikda kod tushunchasi qanday o’ringa ega degan savolga javob topish lozim. “Kod” tushunchasini lingvokulturologiya nuqtai nazaridan anglash kerak. Hozirgi vaqtda lingvokulturologiyada “madaniy kod” atamasi ham turlicha ta’riflanadi. Masalan, V.N. Teliya, M.L. Kovshova, D.B. Gudkov madaniy kodlarni ikkilamchi belgilar tizimi sifatida talqin qiladilar, madaniyat esa ikkilamchi belgilar tizimlari bo‘lgan madaniy kodlar makoni sifatida tushuniladi[3, 61] Biz esa V.N. Teliya qarashlariga ergashgan holda, madaniyatni madaniy kodlar makoni sifatida tushunamiz. Kognitivistlar fikriga ko‘ra, makon koordinatalar tizimi orqali emas, balki undagi obyektlar o‘rtasidagi munosabatlar orqali anglanadi. Shu sababli biz madaniy kodni chuqur madaniy makon, ya’ni turli til birliklari turli madaniy ma’nolar bilan to‘ldiriladigan va shu orqali kod shakllanadigan “konteyner” sifatida belgilaymiz[3,41] Inson nutqida metaforalarning keng qo‘llanishi ularni muayyan tizim asosida o‘rganish zaruratini yuzaga keltiradi. Ayniqsa, uni lingvokulturologik jihatdan tahlil qilishda bu to’g’ri yo’nalish hisoblanadi.

“Barcha metaforalar antropotsentrikdir, metaforalar inson tomonidan kashf etiladi hamda so’zlovchi realiyasini ifoda etadi. Har bir inson alohida realiya: harbir ijodkor uslubi ya’ni idiolektining uslubiy bayonining namoyishchisi sifatida metafora obrazli ifoda, tasviriy vositalarda o’z aksini topadi. Bunda metaforik ifodaning hosil bo’lishida insonga xos qaysi belgi asos bo’lganligini aniqlash muhim. Buni biz bazaviy metafora turi –antropomorf metafora (insonga xos belgilarning somatic kodlarning predmetlarga ko’chirilishi) ni tasniflash orqali tushuntiramiz”[4, 255]

TADQIQOT NATIJALARI.

Alisher Navoiyning “Mahbub ul-qulub” asarida qo’llanilgan metaforik birliklarni lingvokulturologik nuqtai nazardan tahlil qilishda ularni insonning biologik hodisa sifatidagi xususiyatlariga emas, balki madaniy tajriba va ramziy tafakkur

asosida shakllangan madaniy kodlar tizimiga tayangan holda tasniflash maqsadga muvofiqdir.

Shu asosda metaforik ma’nolarni quyidagi guruhlarga ajratib o‘rganish mumkin:

1. Tabiat kodi asosidagi metaforik ma’nolar

(o‘simlik, olov, suv, havo kabi tabiat unsurlari orqali ifodalangan birliklar)

2. Makon (lokativ) kodi asosidagi metaforik ma’nolar

(uy, qal’a, yo‘l, eshik, makon va hudud bilan bog‘liq obrazlar)

3. Antropomorf (insoniylashtirish) kodi asosidagi metaforik ma’nolar

(inson tana a’zolari va tashqi ko‘rinishi orqali berilgan birliklar)

4. Harbiy (jang) kodi asosidagi metaforik ma’nolar

(tig‘, o‘q, kurash, zarba kabi konflikt obrazlari asosida shakllangan birliklar)

5. Qadriyat (aksiologik) kodi asosidagi metaforik ma’nolar

(gavhar, javhar, boylik, qimmat kabi qadriyatni ifodalovchi birliklar)

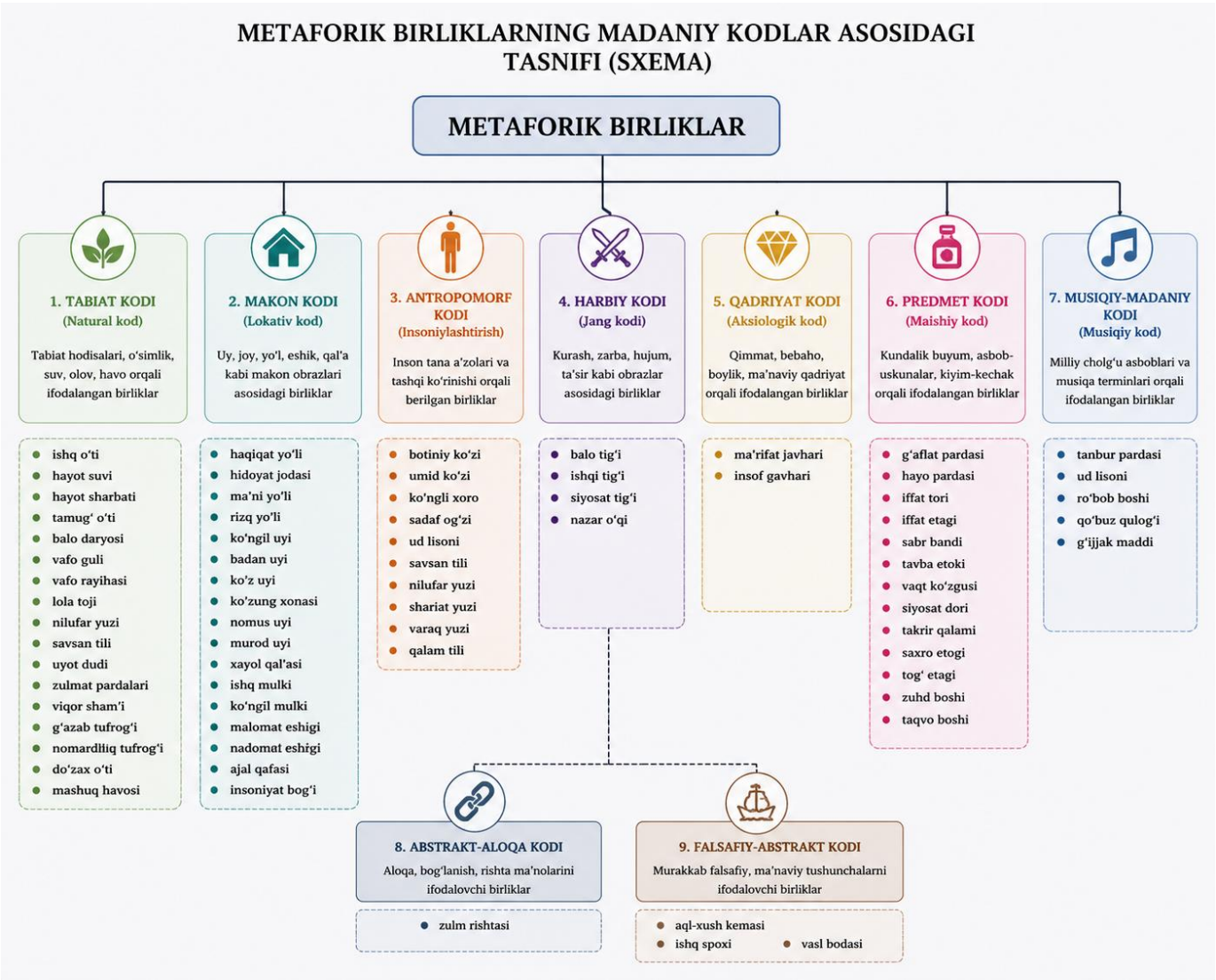
6. Predmet-maishiy kodi asosidagi metaforik ma’nolar

(parda, tor, band, dori kabi kundalik buyumlar orqali ifodalangan birliklar)

7. Musiqiy-madaniy kod asosidagi metaforik ma’nolar

(milliy cholg‘u asboblari va musiqa terminlari orqali ifodalangan birliklar)

Mazkur tasnif asosida metaforik birliklarning ma’no tuzilishi, ularning madaniy asoslari hamda milliy tafakkurdagi o‘rni quyidagi jadval misollarida tahlil qilinadi.



Alisher Navoiyning “Mahbub ul–qulub” asarida qo’llanilgan metaforalar so’z, birikma va gap ko’rinishida keltirilgan. Bu metaforalarni madaniy kod asosida tahlil qilishda obyektga xos bo’lgan belgilarning qanday subyektga ko’chirilishiga qarab guruhlarga bo’lindi. Masalan: Tabiat kodi guruhida tadqiq etilayotgan asarda adib tomonidan qo’llanilgan metaforalar tabiat hodisalari, o’simlik, suv, olov va havoga oid belgilarni boshqa birliklarga ko’chishi asosida hosil bo’lganini yoki aksincha holatini ko’rish mumkin. Bularga quyidagi misollarni namuna sifatida keltirish mumkin: *Va nazimlarida har she’r bila ishq o‘tin olamg‘a urubturlar, she’rlarida har bayt bila dard ahli jonu ko‘ngul olamin ko‘ydurubdurlar*. bu misrada ishqdagi kechinmalar o’tga ya’ni olovga ko’chirilishi natijasida metafora hodisasi yuzaga kelgan. Adib “Mahbub ul-qulub” asarida o’t orqali ifodalangan metaforalari bir nechtani tashkil

qiladi. Ular: *Omiy qoziki may ichkay - o‘lturgulukdur va do‘zax o‘tiga yetmasdin burun kuydurgulukdur.*

Chun o‘z rizosin bilkull fano o‘tig‘a otti va haq subhonahu taolo rizosi bila o‘zin tuzatti.

So‘z terguvchining agar ulug‘i, agar kichigi - balki erurlar tamug‘ o‘tining tutrug‘i

Bu g‘olib dushmandin bir dam g‘ofil qolma, o‘churolmas isyon o‘tin o‘z xirmaningga solma

Yuqorida keltirilgan misollar orqali Alisher Navoiy asarida o’t so’zini metaforik shaklida turli xil ma’nolarda qo’llaganini ko’rish mumkin. Qo’llanilgan metaforalar asarga o’zgacha ma’no yuklagan. Alisher Navoiy foydalangan o’t so’zi orqali berilgan metaforalarning ba’zilari hozirgi o’zbek adabiy tilida ham qo’llanilib kelinmoqda. Masalan quyidagi misralar orqali buni ko’rish mumkin. Kishi ruhiyatidagi, qalbidagi alanga, olov kabi “yonuvchi” “kuydiradigan” holat; “olov”. Ishq o ‘ti. Hijron o ‘ti. — ...ko‘zlarida g'azab, nafrat o'tlari chaqnagan ayolning surati tushirilgan plakatlar yopishtirilgan. R.Fayziy [6, 453]. Erkin Vohidovning “Sevgi otashi” she’rida *ishq o’ti* metaforasini qo’llanilganini ko’rish mumkin:

Qon emasdur jism aro ul,
Shulasidur ishq o’tin.
Mo’y emasdur tan uza bo’l,
So’xta jonimdan tutun [7, 11].

Bu misollar orqali Alisher Navoiy tomonidan qo’llanilgan metaforalar asrlar osha o’z ahamiyatini yo’qotmagan holda qo’llanilib kelayotganidan dalolat beradi. Tadqiq etilayotgan asarda qo’llanilgan metaforalarning ikkinchi madaniy kod guruhi makon kodidir. Unda uy, joy, yo’l eshik, qal’a kabi makon obrazlari asosidagi metaforik birliklar o’rin olgan. Bu metaforik birliklar orasida *uy* asosidagi metforik birliklar bir nechtani tashkil qiladi. Ular tasavvufiy ma’noni ifodalab kelmoqda: *Ko'ngil uyi* - bu insonning ichki dunyosini ifodalaydi. *Badan uy* – ruh uchun makon ma’nosini, *ko’z*

uyi– idrok maskani, *nomus uyi* – axloqiy hudud, *murod uyi* esa maqsad joylashgan makon ma’nolarini ifodalab kelmoqda.

Yo’l so’zi odatda yo’nalish ma’nosida qo’llaniladi ya’ni odamlar, jonivorlar va boshqa narsalar qatnovi natijasida yer sathida iz bosilib hosil bo’lgan uzun, davomli qism, qatnov qismi [6, 303] ammo unga metaforik ma’no yuklansa, gaplarda turli xil badiiy ma’nolarni yuklaydi. Tadqiqot obyekti bo’lgan asarda yo’l so’zi orqali ifodalangan metaforalar mavjud. Ular: haqiqat yo’li, mani yo’li, rizq yo’li va hidoyat jodasi kabi. Yuqorida sanab o’tilgan metaforalar asarda quyidagi misralarda qo’llanilgan : *Dehqonki, dona sochar, yerni yormoq bila rizq yo‘lin ochar[5, 35]* Misrada qo’llanilgan rizq yo’li metaforasi dehqon mehnati orqali moddiy ne’matlarga eltuvchi ilohiy yo’lni ochishi ma’nosini ifodalagan.

Asarda keltirilgan yana bir misrada *haqiqat yo’li* metafora vazifasida qo’llanilgan. *Chun ogah bo‘ldi hayotidin toriqqay va uyot dudi dimog‘idin chiqqay va e’tizol bila qiladurg‘onidin ibo qilg‘ay va istig‘for bila qiladurg‘on jurmidin iste’fo qilg‘ay va nohamvor af’olig‘a andom bergay va birovning berohlig‘idin chiqib, haqiqat yo‘lig‘a kirgay [5, 46]*

Bu misrada insonning noto’g’ri nomaqbul ishlardan to’g’ri yo’lga ya’ni inson uchun to’g’ri deb hisoblangan ishlarni qilishni boshlashi nazarda tutilgan. Haqiqat yo’li tasavvufiy ma’noda Allohning asl mohiyatini idrok etishga olib boruvchi ruhiy kamolot yo‘li ma’nosini ifodalaydi. *Haqiqat yo’li* metafora sifatida hozirgi davrda ham o’zbek adabiy tili va badiiy asarlarida qo’llanilib kelinmoqda. Masalan: Komil Yashinning “Hamza” asarida bu metaforani ko’rish mumkin: Hamza haqiqat yo’lidan, ma’rifat yo’lidan, Furqat vasiyat qilgan yo’ldan boradi.

Shakovat tariqining nihoyatidur, hidoyat jodasining bidoyatidur,[5,45]

Agar ahyonan yuzdin bir solik zohir yuzidin murshid piri nobud ekandur, ammo ma’ni yo‘lidin mavjud ekandur yo g‘oyib murshid taqviyati birla yo mutavaffoyi komil ruhoniyati tarbiyati bila azm etibdurlar va matlubig‘a yetibdurlar.

Yuqorida keltirilgan misollar orqali shuni takidlash mumkinki “haqiqat yo‘li, ma’ni yo‘li, hidoyat jodasi va rizq yo‘li” kabi birliklar tasavvufiy tafakkurda insonning ruhiy

kamolot sari harakatini ifodalovchi konseptual metaforalar hisoblanadi. Ular orqali insonning Alloh bilan bog‘liqligi, ichki poklanish jarayoni hamda ilohiy taqdirga bo‘lgan munosabati aks ettiriladi.

Xulosalar

Xulosa qilib aytganda, Alisher Navoiyning **“Mahbub ul-qulub”** asarida qo‘llangan metaforik birliklar muallifning individual badiiy tafakkuri va uslubiy mahoratini yorqin namoyon etuvchi muhim lingvopoetik vositalardan biri hisoblanadi. Asarning saj uslubida yaratilganligi metaforalarning nafaqat obrazlilikni kuchaytirish, balki matnning ohangdorligi, ritmik yaxlitligi hamda qofiyaviy uyg‘unligini ta'minlashdagi o‘rnini yanada muhimlashtiradi. Metaforalar mazmun va shakl uyg‘unligini yuzaga keltirib, asarning estetik qimmatini oshirishga xizmat qiladi.

Metaforalarni madaniy kodlar nuqtayi nazaridan tahlil qilish esa Navoiyning obraz yaratishda qanday milliy-madaniy, ma'naviy va moddiy manbalarga tayanganini aniqlash imkonini beradi. Tabiat, makon, inson, harbiy hayot, qadriyatlar, maishiy buyumlar hamda musiqa bilan bog‘liq tasavvurlar metaforik ma'nolarni shakllantirishda asosiy konseptual manba vazifasini bajarganligi kuzatiladi. Bu esa metaforalarning faqat badiiy tasvir vositasi emas, balki xalqning madaniy xotirasi, dunyoqarashi va qadriyatlarini o‘zida mujassam etgan lingvomadaniy birliklar ekanligini ko‘rsatadi. Shunday qilib, **“Mahbub ul-qulub”** metaforalari madaniy kodlar tizimi orqali Navoiy badiiy tafakkurining o‘ziga xosligini, uning olamni idrok etish usulini hamda milliy madaniyat bilan uzviy bog‘liqligini chuqurroq anglashga xizmat qiladi.

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O‘ZBEK TILSHUNOSLIGIDAGI AYRIM TERMINLARNING DIAXRON TARAQQIYOTI VA IZOHLI LUG‘ATLARIDA BERILISHI XUSUSIYATLARI

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Annotatsiya: *Ushbu maqolada o‘zbek tilshunosligidagi ayrim terminlarning tarixiy shakllanishi,ya’ni diaxron taraqqiyoti, rivojlanish bosqichlari hamda turli davrlarda yuz bergan semantik va strukturaviy o‘zgarishlari va ularning izohli lug‘atlarda berilishi tahlil qilinadi. Tahlil natijasida terminlarning izohlanishida kuzatiladigan o‘zgarishlar, ilmiy izchillik darajasi hamda zamonaviy terminografiya talablariga muvofiqligi baholanadi. Tadqiqot natijalari o‘zbek tilshunosligi terminologiyasini takomillashtirish va izohli lug‘atlarni yanada mukammallashtirishga xizmat qiladi.*

Kalit so‘zlar: *o‘zbek tilshunosligi, tilshunoslik terminlari, diaxron taraqqiyot, tarixiy-qiyosiy tahlil, termin taraqqiyoti, leksikografiya, terminografiya,izohli lug‘at, semantik taraqqiyot.*

DIACHRONIC DEVELOPMENT OF SELECTED TERMS IN UZBEK LINGUISTICS AND THE PECULIARITIES OF THEIR REPRESENTATION IN EXPLANATORY DICTIONARIES

Annotation: *This article analyzes the historical formation, namely the diachronic development of certain terms in Uzbek linguistics, the stages of their evolution, as well as the semantic and structural changes that occurred during different historical periods and the ways these terms are presented in explanatory dictionaries. The analysis evaluates the changes observed in the interpretation of terms, the level of scientific consistency in their description, and their compliance with the requirements of modern terminography. The results of the study contribute to the improvement of the terminological system of Uzbek linguistics and the further development of explanatory dictionaries.*

Keywords: *uzbek linguistics, linguistic terms, diachronic development, historical-comparative analysis, term development, lexicography, terminography, explanatory dictionary, semantic development.*

Kirish (Introduction)

Har bir fan sohasining rivojlanish darajasi uning terminologik tizimining shakllanganligi, izchilligi va me’yoriy jihatdan mukammalligi bilan belgilanadi. A.Hojiyev ta’kidlaganidek, termin ilmiy tushunchani aniq ifodalovchi va ilmiy tizimlilikni ta’minlovchi birlikdir[Hojiyev,2002,3-b].Tilshunoslik terminlari tilshunoslik fanidagi ilmiy tushunchalarni aniq va ixcham ifodalashga xizmat qiluvchi muhim vosita bo‘lib, ularning shakllanishi hamda rivojlanishi mazkur soha taraqqiyoti bilan uzviy bog‘liqdir. Zamonaviy tilshunoslikda terminologik tizimni takomillashtirish, ilmiy terminlarning mazmuniy aniqligi va izchilligini ta’minlash, shuningdek, ularni terminografik manbalarda yagona tamoyillar asosida izohlash muhim ilmiy vazifalardan biri sanaladi. Shu jihatdan o‘zbek tilshunosligi terminlarining tarixiy rivojlanishini o‘rganish va ularning izohli lug‘atlarda aks etish xususiyatlarini tahlil qilish dolzarb ilmiy masalalardan hisoblanadi.

O‘zbek tilshunosligi terminologiyasi ham boshqa sohalar kabi o‘zining shakllanishi va rivojlanishi jarayonida bir necha tarixiy bosqichlarni bosib o‘tgan. Bu davrlar mobaynida ayrim terminlarning semasi kengaygan yoki toraygan, ba’zilarining shakli va qo‘llanish doirasi o‘zgargan, ayrimlari esa ilmiy qarashlarning rivojlanishi natijasida yangicha izohlangan. Mazkur o‘zgarishlar turli davrlarda yaratilgan izohli lug‘atlarda berilgan ayrim tilshunoslik terminlari izohida va tavsiflanishida ham o‘z ifodasini topgan. Shu bois tilshunoslik terminlarining diaxron taraqqiyotini izohli lug‘atlar materiallari asosida qiyosiy tahlil qilish ularning tarixiy rivojlanish qonuniyatlarini aniqlash, bugungi terminologik tizimdagi o‘rnini belgilash hamda izohlash tamoyillarini baholash imkonini beradi. Aynan shu jihat mazkur tadqiqotning ilmiy yangiligini belgilaydi.

Mazkur tadqiqotning maqsadi o‘zbek tilshunosligidagi ayrim terminlarning diaxron taraqqiyotini hamda ularning izohli lug‘atlarda berilish xususiyatlarini tahlil qilishdan iborat. Tadqiqotda tarixiy-qiyosiy, tavsifiy va qiyosiy tahlil usullaridan foydalanilib, tanlangan terminlarning tarixiy shakllanishi, semantik taraqqiyoti hamda lug‘atlarda izohlanish tamoyillari o‘rganiladi. Tadqiqot natijalari o‘zbek tilshunosligi terminologiyasini takomillashtirish, terminlarni izohlashning ilmiy mezonlarini aniqlashtirishga xizmat qiladi. Shuningdek, ular terminografiya va leksikografiya sohalarida olib boriladigan keyingi tadqiqotlar uchun nazariy hamda amaliy asos bo‘lib xizmat qilishi mumkin.

Asosiy qism(Main Body)

O‘zbek tilshunoslik terminologiyasi bir necha tarixiy bosqichda shakllangan. Dastlab arab tilshunosligi ta’sirida *ism, fe’l, nahv* kabi terminlar qo‘llangan. Keyingi davrlar,ya’ni jadid davrida milliy terminlar (*gap, tovush, bo‘g‘in*) yuzaga keldi. Sovet davrida esa *fonetika*, *morfologiya*, *sintaksis* kabi xalqaro miqyosda keng qo’llana boshlangan terminlar kirib keldi. Mustaqillik yillarida esa terminlarni milliylashtirish va ularni qayta ishlash jarayoni ancha kuchaydi (Mahkamov, Ermatov, 2013,4-b). Shu sababdan o‘zbek tilshunosligi terminlarining diaxron taraqqiyotini o‘rganish ularning tarixiy, semantik va funksional o‘zgarishlarini yoritishda muhim ahamiyatga ega. Manba sifatida A.Hojiyev (1985; 2002), N.Mahkamov va I.Ermatov (2013) lug‘atlari hamda “O‘zbek tilining izohli lug‘ati” nashrlari asos qilib olindi. Shuningdek, I.Ermatov (2019) tadqiqotlari ilmiy asos bo‘lib xizmat qildi.

1. Arab-fors terminologik qatlamining yetakchilik qilishi. O‘zbek tilshunoslik terminologiyasining diaxron taraqqiyotining dastlabki bosqichida arab tilshunosligi ta’siri kuchli bo‘lgan. Masalan, bu davrada ***ism***, ***fe’l***, ***harf***, ***nahv***, ***sarf*** va shu kabi terminlar ilmiy muomalada faol ishlatilgan(Jamolxonov, 2013). Masalan: **fe’l** termini dastlab umumiy “*harakat*” ma’nosini bildirgan bo‘lsa, keyinchalik grammatik kategoriya sifatida qat’iylashgan; **nahv** termini dastlab sintaksis terminidan oldin keng qo‘llanilgan, biroq keyinchalik uning o‘rnini “*sintaksis*” termini egallab faol qo‘llanila boshlandi.

Bu jarayon terminlarning semantik torayishi va ixtisoslashuvi bilan izohlanadi.

2. Jadid davrida milliy terminlar yuzaga kelishi. XX asr boshlarida jadid ma’rifatparvarlari tomonidan milliy terminologiyani yaratishga katta e’tibor qaratildi va ko’plab izlanishlar olib borildi. Fitrat va boshqa ziyolilar tomonidan bir qator o‘zbekcha terminlar ilmiy muomalaga kiritildi. Masalan: **gap** – “jumla” terminiga muqobil sifatida; **tovush** – “sado” yoki “savt” o‘rnida; **bo‘g‘in** – *“hijo”*,fonetik birlik sifatida; asos – *“o‘zak”*(faol,grammatik termin sifatida), *“ildiz”*.

Bu davrning muhim jihati shundaki, terminlarning chetdan kirib kelgan nomi tayyor holda qabul qilinmasdan xalq tiliga yaqinlashtirildi va milliylashuv jarayoni boshlandi (Fitrat, 1925). Natijada terminlarning tushunarliligi oshdi.

3. Sovet davrida xalqaro va ruscha terminlar kirib kelishi. Sovet davrida o‘zbek tilshunoslik terminologiyasiga rus va xalqaro terminlar keng kirib keldi. Bu jarayon ilmiy standartlashuv bilan bog‘liq bo‘lib, quyidagi terminlar keng qo‘llanila boshladi: *fonetika, morfologiya, sintaksis, leksema, affiks, predikat.*

Masalan, Hojiyev lug‘atlarida *“affiks”* termini quyidagicha izohlanadi: *“so‘zga zid qo‘yiladigan birlikning so‘zga qo‘shilib, yangi ma’no yoki grammatik shakl hosil qiluvchi birlik”* [A.Hojiyev, 2002: 19-b.]. Ushbu manbada berilgan “*affiks”termini* izohi xalqaro ilmiy standartga mos ravishda shakllanganini ko‘rsatadi. Shu bilan birga, ayrim milliy terminlar siqib chiqarildi yoki ikkilamchi holatga tushib qoldi. Masalan:*“qo‘shimcha”* termini bilan bir qatorda *“affiks”* ishlatila boshlandi;*“kesim”* bilan birga *“predikat”* qo‘llanildi. Bu holat o‘zbek tilshunosligi terminologiyasida sinonimiyaning kuchayishiga olib keldi.

4. Mustaqillik davrida terminlarning milliylashuvi. Mustaqillik yillarida o‘zbek tilshunoslik terminologiyasida qayta milliylashuv jarayoni yuz berdi. Terminlarni o‘zbekchalashtirish, ularning izohini takomillashtirish va yagona standartga solish ishlari amalga oshirildi. Masalan:*“predikat”* termini bilan bir qatorda *“kesim”* faol qo‘llanmoqda;*“affiks”* termini ko‘pincha *“qo‘shimcha”* bilan izohlanadi;*“tekst”* o‘rniga *“matn”* normallashgan.

Yangi nashrdagi “O‘zbek tilining izohli lug‘ati”ida terminlarning izohi yanada aniqlashtirilgan va zamonaviylashtirilgan tarzda berilgan:

KESIM 3 ***tlsh.*** Gapning bosh bo‘laklaridan biri; gapning asosini tashkil etib, ega ifodalagan shaxs, predmet va hodisaning harakatini, holati yoki belgisini bildiruvchi bo‘lak (O‘zbek tilining izohli lug‘ati, 2023,2-j,537-b).

MATN [a.– yelka; nutqning yozma ifodasi, tekst] **1** Ma’lum bir axborotni o‘zida aks ettiruvchi, umumiy mavzuga va tugallangan fikrga ega bo‘lgan hamda mantiqiy izchillikka asoslangan gaplar (xatboshilar – abzaslar) yig‘indisi. Begona tildagi matnni tarjimon o‘zi uchun talqin etishi bilan uni o‘z tilida boshqalarga atab qayta yaratishi o‘rtasida ulkan tafovut bor. G‘.Salomov,Tarjima nazariyasiga kirish.

2 Bosma nashrning rasm, chizma va izohlarsiz asosiy qismi (O‘zbek tilining izohli lug‘ati, 2023,3-j,126-b).

AFFIKS [*lot*. affixus – birlashtirilgan, biriktirilgan] ***tlsh.*** So‘zga qo‘shilib, yangi so‘z yoki so‘z shaklini hosil qiluvchi til birligi. Mas., *-chi* (xizmatchi), *-lar* (bolalar)(O‘zbek tilining izohli lug‘ati, 2023,1-j,25-b).

Yuqoridagi “O‘zbek tilining izohli lug‘ati”dan keltirilgan *kesim, matn, affiks* terminlarinining izohidan ma’lumki, oldingi davrlardagi izohlar va talqinlar birlashtirilib, soha uchun maqbul variantlar tizimlashtirishga harakat qilingan.

Bundan tashqari, diaxron tahlil asosida o‘zbek tilshunosligi terminologiyasining quyidagi rivojlanish qonuniyatlari aniqlandi. Masalan, o‘zlashgan qatlam va milliy qatlam kabi terminlarning qatlamlashuvi, semantik evolyutsiya, ya’ni terminlarning ma’nosi torayib, ilmiylashishi, milliy hamda xalqaro terminlarning yonma-yon qo‘llanilishi, zamonaviy tilshunoslikda yagona terminologik tizimning shakllana boshlashi, lug‘atlardagi terminlar izohining mukammallashib borishi. Ayniqsa, terminlarning tarixiy o‘zgarishi ularning faqat lingvistik emas, balki ijtimoiy va madaniy omillar bilan ham bog‘liqligini ko‘rsatadi (Yevloyeva, 2006).

Xulosa(Conclusion)

Mazkur tadqiqot o‘zbek tilshunoslik terminlarining diaxron taraqqiyoti murakkab va ko‘p bosqichli jarayon ekanini ko‘rsatdi. Tarixiy-qiyosiy tahlil natijalari shuni tasdiqlaydiki, terminologik tizimning shakllanishi til ichki qonuniyatlari bilan bir qatorda tashqi – ijtimoiy, siyosiy va madaniy omillar ta’sirida ham yuzaga keladi. Xulosa qilib aytganda, o‘zbek tilshunoslik terminlarining diaxron taraqqiyotini o‘rganish nafaqat nazariy ahamiyatga ega, balki amaliy jihatdan ham muhim bo‘lib, milliy ilmiy tilni rivojlantirish, terminologiyani standartlashtirish va uni xalqaro ilmiy maydonga integratsiya qilishda muhim rol o‘ynaydi.

Foydalanilgan adabiyotlar

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FUNCTIONAL FEATURES OF PUNCTUATION MARKS IN THE MODERN UZBEK LANGUAGE

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Abstract. *Punctuation is an essential component of written language, ensuring semantic clarity, logical organization, and effective communication. This study examines the functional features of punctuation marks in the modern Uzbek language from linguistic and pragmatic perspectives. The article discusses the grammatical, semantic, stylistic, and communicative roles of punctuation in various types of texts. It also highlights recent tendencies in punctuation usage influenced by digital communication. The findings emphasize that punctuation contributes significantly to text coherence and interpretation in contemporary Uzbek.*

Keywords: *punctuation, Uzbek language, punctuation marks, syntax, pragmatics, written discourse, stylistics.*

Introduction. Punctuation is an indispensable component of every written language because it ensures the clarity, coherence, and logical organization of texts. Although punctuation marks do not carry lexical meaning independently, they perform important grammatical, semantic, and pragmatic functions that facilitate communication between the writer and the reader. Appropriate punctuation enables readers to interpret syntactic relationships correctly, identify the communicative intention of the author, and perceive emotional or stylistic nuances expressed in written discourse. Therefore, punctuation should not be regarded merely as a set of orthographic rules but also as an essential linguistic mechanism that contributes to effective communication.

The development of punctuation is closely related to the evolution of written language. As written communication became increasingly complex, punctuation systems emerged to indicate pauses, sentence boundaries, logical connections, and expressive meanings. Today, punctuation is recognized as an integral part of language structure and an important means of organizing information in academic, literary, journalistic, and official texts. Advances in functional linguistics and discourse analysis have further expanded the understanding of

punctuation by emphasizing its role in shaping textual meaning and communicative effectiveness.

The Uzbek punctuation system has developed alongside the historical evolution of the Uzbek literary language and its writing systems. Modern Uzbek punctuation is regulated by orthographic norms and is based on both grammatical principles and semantic considerations. The system includes the period, comma, semicolon, colon, dash, parentheses, quotation marks, ellipsis, question mark, and exclamation mark, each of which performs specific linguistic functions depending on the communicative context. These punctuation marks contribute not only to the grammatical organization of sentences but also to the expression of emphasis, evaluation, emotional attitude, and pragmatic meaning.

Recent developments in digital communication have introduced new challenges to punctuation usage. The widespread use of social media, instant messaging, and online platforms has resulted in noticeable changes in punctuation practices. In many informal contexts, traditional punctuation rules are simplified, omitted, or intentionally manipulated to express emotions, irony, hesitation, or emphasis. Consequently, the study of punctuation has become increasingly relevant not only from a grammatical perspective but also from the viewpoints of pragmatics, discourse analysis, and sociolinguistics.

Despite numerous studies on Uzbek orthography and syntax, the functional potential of punctuation marks in contemporary Uzbek discourse remains insufficiently investigated. Most previous studies have primarily focused on normative rules, while relatively little attention has been paid to the communicative and pragmatic functions of punctuation in different discourse types. A comprehensive functional analysis is therefore necessary to demonstrate how punctuation contributes to textual coherence, information structure, and the interpretation of meaning in modern Uzbek.

The purpose of this article is to examine the functional characteristics of punctuation marks in the modern Uzbek language and to analyze their grammatical, semantic, stylistic, and pragmatic roles in written discourse. The study also seeks to demonstrate the significance of punctuation in ensuring textual cohesion and communicative efficiency, thereby contributing to contemporary research in Uzbek linguistics and functional language studies.

Main Part. Punctuation marks constitute an integral part of the Uzbek writing system. Their primary function is to organize written discourse by indicating syntactic boundaries, semantic relationships, and communicative intentions. Unlike lexical units, punctuation marks do not possess independent meanings; however, they significantly influence the interpretation of written texts. They facilitate reading comprehension by separating linguistic units, highlighting logical connections, and reducing ambiguity.

From a grammatical perspective, punctuation reflects the syntactic structure of sentences. The period marks the completion of a declarative statement, while the comma separates homogeneous sentence elements, introductory words, parenthetical constructions, and subordinate clauses. The colon introduces explanations, definitions, or enumerations, whereas the semicolon separates closely related independent clauses that require a stronger division than a comma but weaker than a period. The dash is frequently employed to indicate omission, contrast, emphasis, or unexpected transitions in discourse.

Besides their grammatical functions, punctuation marks perform important semantic functions. The same sequence of words may express different meanings depending on punctuation placement. For example, commas may distinguish explanatory information from restrictive modifiers, thereby changing the interpretation of a sentence. Similarly, the dash often draws the reader's attention to new or emphasized information, contributing to the informational structure of discourse.

Punctuation also possesses considerable pragmatic value. In written communication, punctuation serves as an indicator of the writer's communicative intention. Question marks express requests for information, exclamation marks convey emotional intensity or evaluation, and ellipses indicate hesitation, incompleteness, or emotional suspense. These functions enable punctuation to compensate for the absence of prosodic features such as intonation, stress, and pauses that naturally occur in spoken language.

Another important function of punctuation is its stylistic role. Literary texts frequently employ punctuation creatively to express psychological states, emotional experiences, or artistic effects. Contemporary Uzbek writers occasionally manipulate conventional punctuation rules to achieve expressive purposes, emphasizing silence, uncertainty, or dramatic

tension. Such stylistic variation demonstrates that punctuation is not merely a mechanical system of rules but also an effective expressive device.

The role of punctuation has become increasingly significant in digital communication. Social media platforms, messaging applications, and online discussions have introduced new punctuation practices. Users often omit punctuation marks for brevity or intentionally repeat question marks, exclamation marks, or ellipses to strengthen emotional expression. Although these practices differ from standard orthographic norms, they illustrate the dynamic nature of punctuation and its adaptation to modern communicative environments.

Overall, punctuation in the modern Uzbek language performs grammatical, semantic, pragmatic, and stylistic functions simultaneously. These functions interact to ensure textual coherence, facilitate accurate interpretation, and improve the effectiveness of written communication. Consequently, punctuation should be regarded not only as an orthographic phenomenon but also as an essential component of functional linguistics and discourse analysis.

Conclusion. Punctuation marks play a crucial role in the organization and interpretation of written discourse in the modern Uzbek language. Although they do not possess lexical meaning, they contribute significantly to the grammatical structure, semantic clarity, and communicative effectiveness of texts. The findings of this study demonstrate that punctuation functions as an essential linguistic tool for expressing syntactic relationships, highlighting logical connections, and conveying pragmatic meanings.The analysis also reveals that punctuation marks perform multiple functions simultaneously. Beyond their grammatical role, they serve semantic, stylistic, and pragmatic purposes by indicating emphasis, emotional attitude, communicative intention, and textual cohesion. Consequently, punctuation should be considered not only as a component of orthography but also as an important element of discourse organization and functional language use.

Furthermore, contemporary digital communication has introduced new patterns of punctuation usage, reflecting the dynamic nature of written language. While informal communication often modifies or simplifies traditional punctuation rules, standard punctuation remains indispensable in academic, official, and literary texts, where precision and clarity are essential.

In conclusion, the functional analysis of punctuation marks contributes to a deeper understanding of the relationship between language structure and communication in modern Uzbek. Future research may expand this topic through corpus-based investigations, comparative studies with other Turkic languages, and analyses of punctuation usage in different discourse genres, thereby enriching contemporary Uzbek linguistics and functional language studies.

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SAYLOV TIZIMLARIGA BO‘LGAN ISHONCH EVOLYUTSIYASI: DEMOKRATLASHTIRISH DRAYVERI SIFATIDA MARKAZLASHTIRILMAGAN VA NEYRON TARMOQLARDAN FOYDALANISHNING XALQARO TAJRIBALARI

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Abstract. *This paper investigates the problem of the crisis of political trust and electoral absenteeism in the context of the digital transformation of public administration. It analyzes the institutional potential of integrating distributed ledger technologies (blockchain) and artificial intelligence (AI) as fundamental drivers for the formation of "algorithmic trust" in electoral systems. Based on a comparative analysis of international experience (Estonia, Switzerland, USA, Sierra Leone), the study examines the specifics of using decentralized networks for recording votes and neural networks for election forensics and countering cognitive threats. The necessity of adapting advanced international experience for transitional political systems is substantiated using the example of the Republic of Uzbekistan. A conceptual model for integrating a consortium blockchain network with the sovereign identification infrastructure (OneID) is proposed, aimed at ensuring mathematically provable transparency of elections and the political mobilization of society.*

Keywords: *algorithmic trust, artificial intelligence, blockchain technology, electoral process, political absenteeism, electronic voting, election forensics, transitional democracies, Republic of Uzbekistan.*

Annotatsiya. *Mazkur tezislarda davlat boshqaruvining raqamli transformatsiyalashuvi sharoitida siyosiy ishonch inqirozi va saylov absenteizmi muammosi tadqiq etiladi. Saylov tizimlariga nisbatan “algoritmik ishonch”ni shakllantirishning fundamental drayverlari sifatida taqsimlangan reyestr texnologiyalari (blokcheyn) va sun’iy intellektni (SI) integratsiyalashning institutsional salohiyati tahlil qilinadi. Xalqaro tajriba (Estoniya, Shveysariya, AQSH, Syerra-Leone) qiyosiy tahlili asosida fuqarolarning xohish-irodasini qayd etish uchun markazlashtirilmagan tarmoqlardan, kognitiv tahdidlarga qarshi kurashish uchun esa neyron tarmoqlardan foydalanishning o‘ziga xos jihatlari ko‘rib chiqiladi. Ilg‘or tajribani O‘zbekiston Respublikasi misolida o‘tish davridagi siyosiy tizimlarga moslashtirish zarurati asoslab beriladi. Saylovlarning matematik jihatdan isbotlanuvchan shaffofligini ta’minlashga va jamiyatni siyosiy safarbar etishga qaratilgan konsorsium blokcheyn tarmog‘ini suveren identifikatsiya infratuzilmasi (OneID) bilan integratsiyalashning konseptual modeli taklif etiladi.*

Kalit so‘zlar: *algoritmik ishonch, sun’iy intellekt, blokcheyn texnologiyasi, saylov jarayoni, siyosiy absenteizm, elektron ovoz berish, saylov forenzikasi, o‘tish davri demokratiyalari, O‘zbekiston Respublikasi.*

Kirish

Hozirgi siyosiy diskursda saylanadigan institutlar legitimligi muammosi misli ko‘rilmagan darajada keskinlashmoqda. Saylovchilarning sustligi (absenteizm) va jamiyatdagi qutblanishning kuchayishida namoyon bo‘layotgan global siyosiy ishonch inqirozi rivojlangan hamda tranzit davrdagi demokratik davlatlarning barqarorligini xavf ostiga qo‘ymoqda. Saylovlarni tashkil etishning byurokratik apparat va qog‘ozbozlikka tayanadigan an’anaviy mexanizmlari fuqarolar tomonidan tobora arxaik, shaffof bo‘lmagan hamda ma’muriy aralashuvlar uchun zaif tizim sifatida qabul

qilinmoqda. Bunday sharoitda davlat boshqaruvining raqamli transformatsiyasi shunchaki texnik vazifa bo‘lib qolmay, fundamental siyosatshunoslik sohasiga ko‘chmoqda. Ilg‘or texnologiyalar – markazlashmagan tarmoqlar (blokcheyn) va sun’iy intellekt (SI, neyrotarmoqlar) integratsiyasi saylov jarayoni arxitekturasini tubdan o‘zgartirishga qodir yangi – “algoritmik ishonch” paradigmasini shakllantirmoqda. Mazkur tezisning maqsadi – saylov tizimlarida blokcheyn va sun’iy intellektdan foydalanish bo‘yicha xalqaro tajribani tahlil qilish hamda ularning saylovlarni demokratlashtirish va shaffofligini oshirishdagi katalizatorlik salohiyatini baholashdan iborat.

“Algoritmik ishonch”ning nazariy-metodologik asoslari

Neoinstitutsionalizm nuqtayi nazaridan saylovlar jamiyat va davlat o‘rtasidagi murakkab tranzaksiyalar tizimidir [1]. Ushbu tizimning samaradorligi bevosita tranzaksiya xarajatlari darajasi hamda tomonlarning bir-biriga bo‘lgan ishonchiga bog‘liq. Klassik demokratik modelda ishonch institutsional xususiyatga ega: fuqarolar o‘z ovozlarini saylov komissiyalariga ularning xolisligiga ishonib topshiradi. Biroq vakillik inqirozi sharoitida bu mexanizm o‘z samarasini yo‘qotadi.

“Algoritmik ishonch” konsepsiyasi halollik kafolati funksiyasini inson omilidan (byurokratiyadan) matematik algoritmga o‘tkazishni ko‘zda tutadi. Blokcheyn ma’lumotlarning kriptografik o‘zgarmasligi va taqsimlangan holda saqlanishini ta’minlaydi, bu esa tarmoqning o‘ziga ziyon yetkazmasdan natijalarni qalbakilashtirishni deyarli imkonsiz qiladi [2]. O‘z navbatida, sun’iy intellekt real vaqt rejimida anomaliyalarni aniqlashga qodir bo‘lgan prediktiv tahlil va audit vositasi sifatida namoyon bo‘ladi. Bu texnologiyalarni birgalikda qo‘llash shunday arxitekturani yaratadiki, unda ishonch apriori talab etilmaydi — u saylov siklining har bir bosqichida matematik jihatdan isbotlanadi (End-to-End Verifiability tamoyili).

Saylov jarayonida blokcheyn texnologiyasini qo‘llash bo‘yicha xalqaro tajriba

Ovoz berish jarayoniga markazlashmagan tarmoqlarni joriy etish bo‘yicha jahon amaliyoti eksperimental munitsipal tashabbuslardan tortib, milliy miqyosda joriy qilishga urinishlargacha bo‘lgan keng ko‘lamli institutsional yondashuvlarni ko‘rsatmoqda.

Rivojlanayotgan bozorlarda blokcheynning siyosiy jarayonlarga integratsiyalashuvining eng yaqqol misollaridan biri sifatida 2018-yildagi Syerra-Leone tajribasini keltirish mumkin. Shveysariyaning “Agora” startapi xalqaro kuzatuvchilar bilan hamkorlikda prezident saylovlari vaqtida bir qator okruglarda ovozlarni parallel sanash uchun konsorsium blokcheyn tarmog‘ini joriy etdi. Qog‘oz byulletenlar raqamlashtirilib, taqsimlangan reyestrga kiritildi va uni validatsiya qilish huquqi mustaqil nodlarga (tugunlarga) berildi. Bu holat Taqsimlangan reyestr texnologiyasi (DLT) siyosiy zo‘ravonlik va qalbakilashtirish xavfi yuqori bo‘lgan mamlakatlarda shaffoflik kafolati bo‘la olishini, ziddiyatlarni yumshatib, muxolifatning rasmiy natijalarga ishonchini oshirishini ilk bor namoyon etdi [3].

Rivojlangan demokratik davlatlarda blokcheyn asosan masofadan turib ovoz berish muammosini hal qilish uchun sinovdan o‘tkazilmoqda. Shveysariyada (Sug kantoni) taqsimlangan reyestr texnologiyasi munitsipal referendumlarda muvaffaqiyatli qo‘llanildi. Fuqarolar o‘z shaxsini tasdiqlash va shifrlangan ovozini yuborish uchun “Ethereum” blokcheyniga bog‘langan suveren raqamli identifikatsiya tizimidan foydalandilar. Shveysariya tajribasi konsepsiyaning texnik jihatdan puxtaligini isbotladi, ammo ayni paytda davlatning texnologik suverenitetini ta’minlash uchun ommaviy kriptovalyuta tarmoqlariga bog‘liq bo‘lmagan maxsus, konsorsium blokcheynlarini yaratish zarurligini ham ko‘rsatib berdi.

2018-yilda AQSHda (G‘arbiy Virjiniya shtati) xorijda xizmat qilayotgan harbiylar uchun mobil blokcheyn-ovoz berish tizimi sinovdan o‘tkazildi. Blokcheyn arxitekturasi bilan birgalikda biometrik autentifikatsiyadan foydalanish tranzaksiya xarajatlarini (qog‘oz saylov byulletenlarini yuborishga ketadigan vaqt va uning murakkabligi) keskin kamaytirish hamda ushbu maqsadli guruhning saylovdagi ishtirokini oshirish imkonini berdi. Shunga qaramay, ilmiy doiralar ilova ishlab chiquvchilari darajasidagi markazlashtirish xavfini haqli ravishda qayd etib, bu kabi tizimlarda ochiq manbali koddan foydalanish muhimligini ta’kidladi [4].

Estoniya paradoksi alohida e’tiborga loyiq. i-Voting (elektron ovoz berish) sohasida jahon yetakchisi bo‘lishiga qaramay, Estoniya tizimi yuqori darajada ishonchli markazlashgan serverlar va X-Road milliy ma’lumotlar shinasiga tayanadi, lekin ovozlarni saqlash uchun blokcheyndan foydalanmaydi [5]. Estoniya modeli raqamli identifikatsiyaning samaradorligini isbotlaydi, biroq o‘tish davridagi siyosiy tizimlar sharoitida markazlashgan server ma’lumotlar bazasi ustidan markazlashmagan nazoratni ta’minlamagani uchun jamiyat tanqidiga nisbatan zaif bo‘lib qoladi.

Sun’iy intellekt – saylov auditi va demokratiya himoyasi vositasi sifatida

Agar blokcheyn iroda bildirishning o‘zgarmasligini ta’minlasa, sun’iy intellekt va neyron tarmoq texnologiyalari saylovlarga tayyorgarlik ko‘rish, ularni o‘tkazish va saylovdan keyingi audit jarayonlarini transformatsiya qilmoqda. Xalqaro tajriba sun’iy intellekt uchta asosiy yo‘nalishda demokratlashtirishning hal qiluvchi harakatlantiruvchi kuchiga aylanayotganini ko‘rsatmoqda.

Birinchidan, bu *saylov forenzikasi (election forensics)* — ovoz berish natijalaridagi statistik nomutanosibliklarni aniqlash uchun mashinaviy ta’lim algoritmlarini qo‘llashdir. Michigan universiteti va dunyoning boshqa yetakchi markazlari tadqiqotchilari saylovchilarning ishtiroki va ovozlar taqsimotini Benford qonuni hamda boshqa statistik qoliplarga muvofiqligi nuqtayi nazaridan tahlil qiluvchi neyron tarmoq modellarini ishlab chiqdilar [6]. Katta hajmdagi tarixiy ma’lumotlar (Rossiya va Venesueladagi saylovlardan tortib, Meksikadagi mahalliy kampaniyalargacha) asosida o‘rgatilgan neyron tarmoqlar saylov byulletenlari “tashlab yuborilgan” yoki bayonnomalar qayta yozilgan uchastkalarni yuqori ehtimollik bilan ko‘rsata oladi. Bunday algoritmlarning mustaqil jamoatchilik nazorati darajasida joriy etilishi an’anaviy soxtalashtirish usullarini oson aniqlanadigan qilib qo‘yadi va natijada, ularni siyosiy jihatdan maqsadsizga aylantiradi.

Ikkinchidan, sun’iy intellekt *saylovchilar ro‘yxatlarini tozalash va tasdiqlash (verifikatsiya qilish)* uchun o‘ta muhim ahamiyatga ega. Lotin Amerikasi va Afrika mamlakatlarida reyestrlarda “o‘lik jonlar”ning mavjudligi jiddiy muammodir. Katta hajmdagi ma’lumotlarni (Big Data) tahlil qilish algoritmlari FHDY, soliq idoralari, migratsiya xizmatlari va ijtimoiy tarmoqlardagi axborotlarni qiyoslash orqali takroriy va eskirgan yozuvlarni avtomatik ravishda aniqlashga qodir. Bu esa asosiy saylov resursining legitimligini oshiradi.

Uchinchidan, neyron tarmoqlar *kognitiv tahdidlarga* — dezinformatsiya va dipfeyklarga (deepfakes) qarshi kurashishning asosiy vositasi bo‘lib xizmat qiladi. AQSH va Yevropa Ittifoqi mamlakatlaridagi saylovlar arafasida texnologiya gigantlari va mustaqil NNTlar ijtimoiy tarmoqlarni monitoring qilish uchun sun’iy intellekt tizimlarini joriy etdi. Bu algoritmlar real vaqt rejimida xabarlarning semantikasini tahlil qiladi, muvofiqlashtirilgan bot-hujumlarni aniqlaydi va sintezlangan mediakontentni belgilab, saylovchining kognitiv suverenitetini himoyalaydi hamda unga ongli siyosiy tanlov qilish imkonini beradi [7].

Xalqaro tajribaning Yangi O‘zbekiston institutsional muhitiga proyeksiyasi

Ilg‘or xalqaro tajribaning tahlili jadal modernizatsiyani amalga oshirayotgan tranzit siyosiy tizimlar uchun bevosita amaliy ahamiyat kasb etadi. “Yangi O‘zbekiston” taraqqiyot konsepsiyasi davlat boshqaruvini keng ko‘lamli raqamlashtirish bilan chambarchas bog‘liq. Shu nuqtai nazardan, sun’iy intellekt va markazlashmagan tizimlarni qo‘llash bo‘yicha xalqaro tajribani integratsiyalash siyosiy absenteizmni yengib o‘tish hamda saylanadigan organlarning legitimligini mustahkamlash uchun noyob istiqbollar ochadi.

Yagona identifikatsiya tizimi (OneID) faol rivojlanayotgani bilan ajralib turadigan milliy raqamli infratuzilmaning o‘ziga xosligi gibrid saylov platformalarini joriy etish uchun ideal shart-sharoitlarni yaratadi. Bunda raqamli suverenitetni ta’minlash hal qiluvchi ahamiyatga ega. Yagona davlat integratorlari tomonidan ma’lumotlarni o‘zgarmas tarzda saqlashning milliy tizimlari va tokenizatsiya platformalarini yaratish tajribasi suveren konsorsium blokcheyn tarmoqlarini ishlab chiqish uchun ishonchli me’moriy va kadrlar poydevorini shakllantiradi.

O‘zbekiston Respublikasida saylovlarni demokratlashtirish ssenariysi tasdiqlovchi blokcheyn tugunlarini (nodlarni) Markaziy saylov komissiyasi, rasmiy siyosiy partiyalar va fuqarolik jamiyati o‘rtasida taqsimlashga asoslanishi mumkin. Bunday arxitekturada fuqaro OneID davlat shlyuzi orqali avtorizatsiyadan o‘tadi, shundan so‘ng uning ovozini taqsimlangan reyestrda qayd etuvchi anonim smart-kontrakt generatsiya qilinadi. Shu bilan birga, neyrotarmoq algoritmlari tranzaksiyalarda anomal saylov faolligi (masalan, bitta IP-manzildan ommaviy ovoz berish) mavjudligini tekshirish uchun uzluksiz audit o‘tkazishi mumkin. Bunday sintetik yondashuv Estoniya modelining asosiy kamchiligi — ma’lumotlar bazasining markazlashgan zaifligini bartaraf etadi hamda yosh, texnologiyalarga moyil saylovchiga o‘z ovozi to‘g‘ri hisobga olinganiga matematik jihatdan ishonch hosil qilish imkonini beradi.

Xulosa

Saylov tizimlari evolyutsiyasi ijtimoiy ishonch paradigmalari almashinuvi bilan uzviy bog‘liqdir. Raqamli texnologiyalar ta’sirida siyosiy makonning transformatsiyalashuvi blokcheyn va sun’iy intellekt endilikda faqat iqtisodiy yoki AT vositalari emasligini isbotlamoqda. Bugun ular fundamental siyosatshunoslik mexanizmlariga aylangan. Syerra-Leone, Shveysariya, AQSH va Estoniyaning xalqaro tajribasi markazlashmagan tarmoqlar (ma’lumotlar o‘zgarmasligini ta’minlovchi) hamda neyrotarmoqlar (audit va shaffoflikni kafolatlovchi) simbiozi an’anaviy elektoral xatarlarni samarali bartaraf etishga qodir ekanini yaqqol ko‘rsatmoqda. Siyosiy modernizatsiya bosqichidan o‘tayotgan davlatlar uchun bu texnologiyalarni o‘zlarining yuqori texnologiyali infratuzilmaviy yechimlari asosida moslashtirish absenteizmni yengish, saylovlar shaffofligini ta’minlash hamda hokimiyat va jamiyat o‘rtasida mustahkam, algoritmik jihatdan tasdiqlangan demokratik konsensusni barpo etishning eng istiqbolli yo‘lidir.

Foydalanilgan adabiyotlar ro’yxati

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GREATNESS AND ORDINARINESS IN JOHN BANVILLE'S KEPLER: THE BIOGRAPHICAL PARADOX AS AN EPISTEMOLOGICAL DEVICE

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Abstract. *This paper examines the tension between scientific greatness and domestic ordinariness in John Banville's novel Kepler (1981), the second part of his Revolutions Trilogy. Existing scholarship has largely read this tension as a device of characterisation, that is, as a means of humanising a canonical figure of the Scientific Revolution. The present study argues instead that the paradox performs an epistemological function: the impossibility of separating the great astronomer from the impoverished, harassed and ordinary man structurally repeats the novel's central claim that scientific knowledge is never absolute, but provisional, mediated and humanly conditioned. Working with hermeneutic-interpretive, comparative-typological and narratological methods, and drawing on Thomas Kuhn's account of paradigm change, Bas van Fraassen's constructive empiricism and Linda Hutcheon's concept of historiographic metafiction, the analysis identifies three textual strategies through which the paradox is realised: ironic deflation of domestic life, the social framing of the hero as "nobody", and the separation of personal antipathy from scientific judgement. The findings suggest that in Banville's poetics biographical ordinariness is not a counterweight to intellectual greatness but its epistemological condition.*

Keywords: *John Banville, Kepler, epistemology, historiographic metafiction, biographical novel, paradigm change, constructive empiricism, irony, Revolutions Trilogy.*

Introduction

John Banville's Revolutions Trilogy — *Doctor Copernicus* (1976), *Kepler* (1981) and *The Newton Letter* (1982) — occupies a distinctive position in contemporary Irish and European fiction: it takes as its material not private lives but the history of scientific thought, and it treats that history as a problem of knowing rather than as a chronicle of discovery. *Kepler*, which brought Banville a Welsh Arts Council award and confirmed his reputation as an intellectual novelist, reconstructs the life of the German astronomer Johannes Kepler (1571–1630) largely on the basis of his surviving correspondence, and thereby maintains a delicate equilibrium between documented fact and imaginative reconstruction.

Critical attention to the novel has developed along several lines. Lanters (1992) reads the science novels as an interrogation of the limits of knowledge; Imhof (1997) analyses Banville's poetics of consciousness; McMinn (1999) situates the trilogy within the writer's wider concern with "supreme fictions"; and Hutcheon's (1988) category of historiographic metafiction has provided the dominant frame for reading the trilogy's treatment of history. Within this body of work, however, the persistent counterpoint between Kepler's intellectual stature and the poverty, litigation, illness and

family disorder of his daily existence has generally been described as characterisation — a humanising strategy that resists hagiography.

This paper proposes a different reading. It argues that the greatness–ordinariness paradox in *Kepler* is not primarily a device of portraiture but an epistemological figure. The novel's claim about knowledge — that the harmony Kepler seeks is never given whole, that every model is provisional, that truth is the daughter of time rather than of certainty — is reproduced at the level of the protagonist himself. Just as no final system can be reached, so no purely great man can be isolated from the ordinary one. The research question is accordingly formulated as follows: through which textual strategies does Banville convert biographical ordinariness into an epistemological statement?

Methods

The study is based on a close reading of the 1983 Godine edition of *Kepler*, supported by historical sources on Kepler's biography (Caspar, 1993) and by Kepler's own cosmological writings in translation (Kepler, 1981). Three complementary methods are applied. The hermeneutic-interpretive method is used to reconstruct the epistemological content encoded in narrative form. The comparative-typological method is used to set the fictional Kepler against the historical record, so that Banville's selections, omissions and intensifications become visible as authorial choices. The narratological method is used to describe the handling of focalisation, irony and the embedded epistolary material.

The theoretical framework combines three positions. Kuhn's (1962) account of scientific development as a sequence of normal science, anomaly, crisis and revolution supplies the model of knowledge as discontinuous rather than cumulative. Van Fraassen's (1980) constructive empiricism supplies the criterion of empirical adequacy: a theory need not be true in order to be acceptable, it needs only to save the observable phenomena. Hutcheon's (1988) historiographic metafiction supplies the generic frame within which a novel may represent a documented historical figure while openly acknowledging its own constructedness. Taken together, these three positions describe knowledge as provisional, mediated and socially situated — precisely the attributes that, this paper contends, Banville transfers from the epistemology of the novel to the body of its protagonist.

Results and Discussion

1. Ironic deflation of the domestic. The first strategy is tonal. At the moments of Kepler's most intense intellectual pursuit, Banville introduces the demands of ordinary life not as realistic detail but as personified abstractions — Paternity, Responsibility, and a comic coinage that fuses domesticity with profanity — and stages them as jeering clowns who ring their bells around the

hunting astronomer. The register here is important. The novel does not present family life as tragic interference; it presents it as farce. This is more than characterisation: irony creates a structural gap between the sublime object of the search (the eternal laws governing the harmony of the world) and the grotesque conditions of the searcher. The reader is thus prevented from experiencing scientific discovery as pure ascent. Knowledge, in Banville's presentation, is never produced in ideal conditions; it is produced by a man who is simultaneously being shouted at.

2. The hero seen as "nobody". The second strategy is a shift of focalisation. In the sequences dealing with Kepler's marriage to Barbara Müller, Banville declines to idealise the union and represents it as an alliance shaped in part by economic necessity. More significantly, he allows the surrounding society to appraise the future author of the planetary laws in its own terms: a poor prospect, a man without means or expectation, the son of a wandering soldier. The great astronomer is thus rendered, from within the novel's social world, as a man of no importance. The epistemological point is precise. Greatness is not a property visible in the object; it is a retrospective attribution, granted by later observers who already know the outcome. In this the novel performs on its protagonist exactly the operation that constructive empiricism performs on scientific theory: what is available to observation is the phenomenon, not the underlying truth of the thing.

3. Separation of personal antipathy from scientific judgement. The third strategy concerns Kepler's relation to Galileo. Banville allows his protagonist to admit an unmistakable personal aversion — *"I confess Galileo is difficult to love"* — while simultaneously insisting on the importance of Galileo's work and on the obligation to respect it. This is the point at which the paradox becomes productive rather than merely deflating. Kepler's ordinariness (envy, irritation, wounded pride) is not cancelled by his intellectual integrity; the two coexist, and the second is achieved through the first rather than in spite of it. Greatness here is defined not as the absence of pettiness but as the discipline of judging against one's own inclination.

4. The structural parallel. These three strategies converge on a single formal principle. The harmony that Kepler pursues in the heavens is precisely what is unavailable to him at home; the order he can demonstrate mathematically is the order he cannot impose on his own circumstances. Read through Kuhn (1962), the biographical plot repeats the structure of scientific change: the anomaly that will not fit the model is not only the orbit of Mars but the disorder of a life that refuses to conform to the shape of a great man's biography. Banville's Kepler does not resolve either. He produces, in both domains, a workable provisional arrangement rather than a final truth. The paradox therefore does not stand outside the novel's epistemology as decoration; it is that epistemology, restated at the level of the person.

This reading has a further implication for genre. If, following Hutcheon (1988), historiographic metafiction is defined by its simultaneous claim to historical reference and its acknowledgement of its own fictionality, then Banville's treatment of ordinariness is one of the mechanisms by which that double status is enforced. The documentary material — the letters, the poverty, the litigation surrounding his mother, the deaths of children — anchors the novel in the record; the ironic and lyrical handling of that material makes visible the interpretive act. The historical Kepler is thus both invoked and withheld.

Conclusion

The analysis supports three conclusions. First, the tension between greatness and ordinariness in Banville's *Kepler* is realised through identifiable textual strategies — ironic personification of domestic demand, social focalisation of the hero as a man of no consequence, and the deliberate coexistence of personal antipathy with scientific fairness — rather than through direct commentary. Second, these strategies are epistemological in function: they reproduce, at the level of biography, the novel's governing claim that knowledge is provisional, mediated and never wholly separable from the conditions of the knower. Third, and consequently, ordinariness in Banville's poetics is not the opposite of intellectual greatness but its condition of possibility: the astronomer reaches the laws of planetary motion not despite being an ordinary, harassed and impoverished man, but as one.

Further research might extend this approach to the remaining parts of the trilogy, where the same structural principle appears in altered form — in *Doctor Copernicus* as the gap between the thing itself and every available model of it, and in *The Newton Letter* as the narrator's inability to complete a book about a man he cannot reach.

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THE DEVELOPMENT PRINCIPLES OF AMERICAN PROSE AT THE INTERSECTION OF POSTMODERNISM AND NEOREALISM

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Abstract. *The relationship between postmodernism and neorealism in the late 20th century is used in this thesis to analyze the development principles of current American prose. Neorealism brings attention back to historical fact, social experience, and the psychological complexity of daily life, whereas postmodern literature is frequently linked to fragmentation, metafiction, intertextuality, and the rejection of objective truth. According to the study, these two literary paradigms serve as complementing aesthetic techniques that allow authors to depict the complexity of contemporary American society rather than as antagonistic movements. The article examines the key stylistic and thematic elements that developed at the nexus of these traditions. Particular focus is placed on how history, identity, communal memory, trauma, consumer culture, and the connection between personal experience and societal reality are portrayed.*

Keywords: *postmodernism, neorealism, American prose, fragmentation, metafiction, intertextuality, identity, communal memory, trauma, consumer culture, societal reality.*

Introduction. A constructive conflict between postmodernist aesthetics and a renewed dedication to realist depiction characterizes the development of American prose in the late 20th and early 21st centuries. Contemporary American literature exhibits a complicated synthesis in which postmodern formal experimentation coexists with and is frequently steered toward neorealist concerns, as opposed to a straight movement from one dominating paradigm to another. A hybrid poetics that redefines narrative authority, ethical participation, and the portrayal of everyday life is produced by this intersection.

Disillusionment with Enlightenment logic and lofty tales of progress led to the emergence of postmodernism in American literature following World War II. The postmodern tendency to undermine meaning through narrative fragmentation,

metafictional self-reflection, and sarcastic detachment is best illustrated by writers like Thomas Pynchon and Don DeLillo. Technological, linguistic, and ideological systems filter reality in works such as Gravity's Rainbow and White Noise, making any claim to objective representation dubious. Postmodern literature is characterized by its epistemic skepticism. The text emphasizes its own artificiality and turns narrative into a location of play rather than authority. Consequently, the reader is positioned as an interpreter navigating ambiguity and discontinuity rather than as a passive recipient of meaning. But this fundamental indeterminacy also results in what many critics refer to as an ethical impasse: literature's ability to meaningfully connect with social and moral realities is compromised by the loss of reliable reference points.

American prose from the late 20th century onward exhibits a move toward neorealism in response to this seeming weariness of postmodern irony. A concentration on everyday experience, emotional realism, and social specificity is reintroduced by authors like Raymond Carver, Richard Ford, and Jhumpa Lahiri. This movement is a recalibration of narrative objectives rather than a naïve return to nineteenth-century realism.

Literature review. The evolution of American writing in the late 20th century has been thoroughly examined within the postmodernist theoretical framework. One of the most influential definitions of postmodernism was given by Jean-François Lyotard in The Postmodern Condition (1984), where he defined it as a "incredulity toward metanarratives," highlighting the multiplicity of perspectives and the collapse of universal truths. [55]In a similar vein, Fredric Jameson (1991) argued that literary output reflects the ideological and economic changes of post-industrial society, seeing postmodernism as the cultural logic of late capitalism. The basis for comprehending the formal developments of modern American fiction was established by these theories.[56]

[55] Lyotard, J.-F. (1984). *The Postmodern Condition: A Report on Knowledge*. University of Minnesota Press.

[56] Jameson, F. (1991). *Postmodernism, or, The Cultural Logic of Late Capitalism*. Duke University Press.

Using irony, self-reflection, and intertextuality, postmodern novels simultaneously rebuild and challenge historical fact, as demonstrated by Linda Hutcheon's (1988) introduction of the notion of historiographic metafiction. [57]By highlighting postmodern fiction's ontological problems, multiple realities, and narrative indeterminacy, Brian McHale (1987) further set it apart from modernist literature. [58] Together, these academics made postmodernism the dominant paradigm in literary criticism, especially when it came to the analysis of late 20th-century American fiction.

Simultaneously, critics have questioned whether postmodernism provides a sufficient explanation for the development of modern American prose. According to recent research, many American authors combine postmodern experimentation with a renewed dedication to portraying historical experience, social reality, and ethical duty. According to Wang Cong (2022), neorealism is a new kind of realism that has emerged in the postmodern era. [59]According to this viewpoint, neorealism restores focus on mimesis, social interaction, and the connection between personal consciousness and historical reality while maintaining the language and structural innovations of postmodernism.

Additionally, studies of current American literature show that postmodernism has changed rather than vanished. Academics contend that although the theoretical frameworks created in the 1970s and 1980s are still relevant, they need to be updated to take into account the evolving issues of literary criticism in the twenty-first century. According to recent research, contemporary American literature still uses intertextuality, metafiction, and fragmented narration while addressing issues of trauma, memory, identity, race, and political history.

[57] Hutcheon, L. (1988). *A Poetics of Postmodernism: History, Theory, Fiction*. Routledge.

[58] McHale, B. (1987). *Postmodernist Fiction*. Routledge.

[59] Cong, W. (2022). Neorealism in the Postmodern Context: The Reconstruction of Social Reality in Contemporary Fiction. *International Journal of Language and Linguistics*, 10(6), 337–343.

This convergence of literary traditions is further demonstrated by studies devoted to specific American authors. While Don DeLillo's novels have been examined in relation to consumer culture, media saturation, technology, and postmodern ambiguity, Toni Morrison's work has been widely interpreted via the themes of historical memory, cultural trauma, and African American identity. These authors show a great dedication to portraying historical events and the psychological effects of societal change, even though they use postmodernist experimental narrative techniques. As a result, their writings question the rigid division between realism and postmodernism.

Despite the considerable body of scholarship on postmodern American fiction and realism, relatively few studies examine the interaction of **postmodernism and neorealism as complementary aesthetic systems**. Existing research often discusses these movements independently, overlooking the ways in which contemporary American prose synthesizes narrative experimentation with realistic representation. This gap is particularly evident in comparative studies that explore the shared artistic principles underlying the fiction of writers such as Toni Morrison and Don DeLillo.

Main part. A "post-postmodern" sensibility, where formal innovation is used to fulfill ethical and affective purposes, emerges from the convergence of postmodernism and neorealism. David Foster Wallace, whose writings both exploit and critique postmodern irony, is a pivotal player in this shift. The ambition to transcend ironic detachment without giving up critical self-awareness is embodied in Wallace's concept of "new sincerity."

This synthesis shows itself as controlled experimentation at the level of narrative structure. Although fragmentation still exists, psychological or thematic coherence frequently takes precedence over it. For instance, multi-perspectival narration ceases to be an end in and of itself and instead serves as a tool for illustrating the complexity of social reality. In a similar vein, metafictional devices are refocused on issues of communication, empathy, and subjectivity. The reconfiguration of realism in the context of hyperreality is one of the major advances at this juncture. The lines between the real and the artificial are blurred in Don DeLillo's novels as media saturation and

consumer culture pervade daily life. However, modern prose frequently aims to reestablish a feeling of living experience inside it, in contrast to older postmodern texts that take pleasure in this instability.

As a result, the role of the reader is changed. The reader is encouraged to interact emotionally with people and circumstances while yet being conscious of the narrative's manufactured nature, as opposed to deciphering an eternally self-referential book. The unique potency of modern American literature is defined by this dual engagement—critical and emotional.

The easiest way to understand the evolution of American writing at the close of the 20th century is as a dialectical interaction between postmodernism and neorealism, two major aesthetic ideologies. Instead of a straightforward synthesis, this contact results in a hybrid literary construction that selectively integrates and transforms stylistic techniques, thematic orientations, and narrative methods. Postmodernism, which arose in the cultural aftermath of World War II, is based on a critique of big narratives and epistemic skepticism. Neorealism, on the other hand, critically acknowledges postmodern insights into representation while reiterating the significance of social reality, ethical engagement, and sensory authenticity. Three main axes can be used to conceptualize this intersection:

-The epistemological axis (relativism vs. truth)

-Aesthetic axis: (cohesion versus disintegration)

-The ethical axis (sincerity vs. irony)

The following table describes the fundamental traits of postmodernism and neorealism in order to provide light on their relationship:

Category	**Postmodernism**	**Neorealism**	**Hybrid intersection**
The concept of reality	Constructed, unstable	Observable, experiential	Mediated but lived
Narrative structure	Fragmented, non-	Linear, coherent	Controlled

	linear		fragmentation
Language	Self-referential, playful	Transparent, restrained	Functional but reflexive
Dominant mode	Irony, parody	Sincerity, empathy	“new sincerity”
Characterization	Decentered subject	Socially grounded individual	Contextualized subjectivity
Reader role	Interpreter of ambiguity	Emotional participant	Dual engagement
Ethical dimension	Relativism	Moral inquiry	Ethical re-engagement

An increased focus on social and cultural circumstances is another way that postmodernism and neorealism connect. The storyline of Jhumpa Lahiri's writings centers on diaspora and migration as well as the blending of cultures, negotiating one's identity and conflict between generations. Modern prose emphasizes identity fluidity and multiplicity, in contrast to traditional realism, which frequently presumes a fixed social foundation.

This hybrid prose's stylistic elements can be summed up as follows:

Stylistic feature	Function
Minimalist language	Enhances clarity and emotional impact
Fragmented structure	Reflects complexity of experience
Intertextual references	Maintains postmodern awareness
Symbolic detail	Anchors narrative in reality

Conclusion. The analysis shows that neither postmodernism nor neorealism can adequately account for the development of late twentieth-century American prose. Rather, a fruitful blending of these two literary approaches may be seen in modern American fiction. Neorealism reintroduces historical consciousness, ethical responsibility, and the realistic portrayal of human and social experience, while postmodernism offers novel storytelling tools like fragmentation, metafiction, and

intertextuality. Through both experimental and realistic techniques of narrative, their relationship has allowed American writers to address the cultural, political, and psychological issues of modern society. As a result, the meeting point of postmodernism and neorealism marks an important phase in the evolution of American writing and offers a useful theoretical framework for additional research on contemporary writers, especially Don DeLillo and Toni Morrison.

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BADIIY ASAR KONFLIKTINING NAZARIY ASOSLARI

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Annotatsiya. *Adabiy asarning tafakkuriy va badiiy qiymati, avvalo, undagi konflikt (ziddiyat) orqali namoyon bo‘ladi. Zero, konflikt – badiiy voqelikning asosiy harakatlantiruvchi kuchi, syujetning rivojlanishi, qahramonlar xarakteri va g‘oyaviy-estetik mundarijasini yuzaga chiqaruvchi omil hisoblanadi. Maqolada badiiy asar konfliktining nazariy asoslari, badiiy asarda konfliktni o‘rgangan olimlar haqida fikr yuritilgan.*

Kalit so‘zlar: *badiiy asar, asar konflikti, ziddiyat, g‘oya, adabiyot va san’at, realistik tasvir, Aristotel, Abdulla Qodiriy*

Abstract. *The intellectual and artistic value of a literary work is primarily manifested through its conflict. Indeed, conflict serves as the main driving force of artistic reality, a factor that develops the plot and reveals the characters' traits as well as the work's ideological and aesthetic content. This article discusses the theoretical foundations of conflict in a literary work and examines the scholars who have studied conflict in literature.*

Keywords: *literary work, conflict in literature, contradiction, idea, literature and art, realistic depiction, Aristotle, Abdulla Qodiriy.*

Аннотация. Мыслительная и художественная ценность литературного произведения проявляется прежде всего через его конфликт. Ведь конфликт является основной движущей силой художественной реальности, фактором, развивающим сюжет и раскрывающим характер персонажей, а также идейно-эстетическое содержание произведения. В статье рассматриваются теоретические основы конфликта в художественном произведении и анализируются труды учёных, исследовавших проблему конфликта в литературе.

Ключевые слова: художественное произведение, конфликт произведения, противоречие, идея, литература и искусство, реалистическое изображение, Аристотель, Абдулла Кадыри

KIRISH

Adabiy asarning tafakkuriy va badiiy qiymati, avvalo, undagi konflikt (ziddiyat) orqali namoyon bo‘ladi. Zero, konflikt – badiiy voqelikning asosiy harakatlantiruvchi kuchi, syujetning rivojlanishi, qahramonlar xarakteri va g‘oyaviy-estetik mundarijasini yuzaga chiqaruvchi omil hisoblanadi.

Badiiy konflikt adabiyot va san’atning eng qadimiy kategoriyalaridan biri bo‘lib, u insoniyat tafakkurining rivojlanishi bilan uzviy bog‘liq holda shakllanib kelgan. Uning genezisi antik davr mifologiyasi va folkloridagi yaxshilik bilan yomonlik, hayot bilan o‘lim, inson bilan tabiat o‘rtasidagi ziddiyatlarga borib taqaladi. Davrlar osha badiiy konflikt tushunchasi soddaligidan murakkab, ko‘p qatlamli shaklga o‘tib, u endi nafaqat tashqi kurash, balki qahramonning ichki ruhiy kechinmalarini ham qamrab oladi. Zamonaviy adabiyotshunoslikda esa badiiy konflikt endi shaxs va jamiyat, an’ana va yangilik, ong va ongsizlik kabi ko‘p qirrali muammolarni yoritishning asosiy vositasiga aylanmoqda.

Konfliktning eng qadimgi shakli “dono va podshoh”, “kambag‘al va zolim hukmdor” kabi ertak, latifalarda uchraydi. O‘zbek folklorida Afandi (Nasriddin) latifalarida namoyon bo‘ladi. Bunda qahramon hokimiyatga qarshi so‘z va aql qurolidan foydalanadi. Sharq adabiyotida esa ertak emas, balki shoirning haqiqiy taqdirida namoyon bo‘ladi. Shoirning hukmdor bilan ziddiyati, diniy-mafkuraviy sabablarga tufayli shoirlarning ta’qib qilinishi, shoir haqiqat timsoli, hukmdor esa kuch timsoli kabi qarama-qarshiliklar, ziddiyatlar adabiy an’anaga aylanadi.

O‘zbek adabiyotidagi konflikt tarixiga nazar tashlasak, uning xalq og‘zaki ijodi va mifologik qarashlar zamirida paydo bo‘lib, takomillashganini ko‘ramiz. Mumtoz adabiyotda ham konfliktning ibratli namunalarni uchratamiz. Masalan, Navoiy “Xamsa”sining o‘lmas asarlaridan biri bo‘lgan “Farhod va Shirin” dostonida ezgulik

va yovuzlik o‘rtasidagi ziddiyatga asoslangan konflikt bo‘rttib turganligini anglashimiz mumkin. Farhodning Axriman dev, Ajdarho, Temirtan va nihoyat Xusrav bilan bo‘lgan kurashi to‘lig‘icha ana shu konflikt asosiga qurilgan. Shuningdek, bunda buyuk daho tasavvufiy dunyoqarashidan kelib chiqqan holda insonning o‘zi bilan o‘zi, ya’ni nafsi bilan ziddiyatga kirishuvi hamda kurashining badiiy talqinini yaratgan. Farhodning komillik sari intilishidagi barcha to‘siqlar, eng avvalo, nafsdir. U o‘z nafsini yenga olgandagina komil inson bo‘lishi mumkin. Farhod ana shu to‘siqlarni, ya’ni o‘z nafsi qutqularini katta jasorat bilan yengib o‘tadi va komillik darajasiga ko‘tariladi.

Arastuning fikricha, konflikt insoniyat tabiatining ajralmas qismi va jamiyatdagi tengsizlik yoki adolatsizlik mahsulidir. U konfliktlarni hal etishda murosaga kelishni, xususan, “oltin o‘rta” qoidasiga amal qilishni va aqlning ehtiroslardan ustun bo‘lishini eng asosiy yechim deb bilgan. “Poetika” asarida konflikt haqida shunday deydi: “Adabiyot va san’atda (xususan, fojiada) konflikt asarning harakatlantiruvchi kuchi hisoblanadi”[60]. U ziddiyatni qahramonning ichki kechinmalari, taqdir va jamiyat bilan to‘qnashuvi orqali insonlarga ta’sir ko‘rsatish va ularni ruhiy poklanishga (karsis) yetaklovchi vosita deb bilgan.

Konfliktning nazariy asoslari insoniyat tarixi kabi minglab asrlar qa’riga borib taqaladi. Xalq og‘zaki ijodining eng qadimgi namunalaridan tortib, dastlabki yozma asarlargacha konfliktning turli ko‘rinishlarini uchratish mumkin. Turli mavzudagi eng qadimgi mif, afsona, asotir, rivoyatlar, dostonlar, bizgacha yetib kelgan barcha she’riy asarlardagi voqea-hodisalar ham konflikt asosiga qurilganligi adabiy asarning bu unsuri juda muhim ekanligidan dalolat beradi. Bugungi kunda yaratilayotgan barcha janrlardagi asarlarning eng muhim xususiyatlaridan biri konflikt talqinidir.

Badiiy konflikt adabiyotshunoslikda syujetning “harakatlantiruvchi dvigateli” bo‘lib, badiiy asarda obrazlar, ijtimoiy-axloqiy qadriyatlar, g‘oyaviy pozitsyalar, psixik holatlar hamda muhit o‘rtasidagi ziddiyatning badiiy shaklda namoyon bo‘lishini anglatadi[61].

[60] Аристотель. Поэтика. Риторика. — Санкт-Петербург: Азбукаклассика, 2010. — 347 с.
[61] THE FUNCTIONS OF SOCIAL CONFLICT/ Founded by KARL MANNHEIM. – New York, 1956.

Biror badiiy asarni, konfliktsiz tasavvur etish mumkin emas. Zero, hayotning o‘zi turli-tuman qarama-qarshiliklar va ziddiyatlardan iborat bo‘lib, inson (badiiy asarda qahramon) ular qurshovida yashaydi, ularni yengib borish orqali o‘zligini, hayot mazmunini anglaydi, shaxs sifatida kamol topadi, dunyoqarashini shakllantiradi. Demak, badiiy asarda nima tasvirga olinishidan qat’iy nazar, u o‘z tabiatiga ko‘ra birinchi navbatda inson va jamiyat haqida fikr yuritadi, uni turli qiyofalarda aks ettiradi, shuning uchun ham unda konflikt bo‘lishi tabiiy holdir. Ya’ni “...badiiy asar voqelikni badiiy aks ettirgani va uning markazida inson obrazi turgani uchun ham insonning real hayotida mavjud konfliktlarning bari unda badiiy aksini topadi”[62]. Konfliktni to‘g‘ri qura bilish, uning asl ildizi va mohiyatini teran anglay olish orqali adib asarda tasvirlanayotgan voqealarda ishonchlilikni, badiiy to‘qimaning hayot haqiqatiga mosligini ta’minlashga erishadi hamda kitobxon ko‘z o‘ngida hayot manzaralari va qahramonlar ichki olamining realistik badiiy manzaralarini gavdalantira oladi.

XULOSA

Konflikt badiiy asarning syujet qurilishida ham o‘ziga xos ahamiyatga ega bo‘ladi. Adabiyotshunoslikda ta’kidlanishicha, konsentrik syujet qurilishidagi asarlarda konflikt voqealarning tez va shiddatli kechishini ta’minlaydi. Chunki bunday syujet asosiga qurilgan asarlarda nisbatan qisqa vaqt ichida kechgan voqea-hodisalar tasviri shuni taqozo etadi.

Abdulla Qodiriy ta’kidlaganidek [63], haqiqiy ijodkor asar yaratishdan oldin turmushni har taraflama o‘rganishi, uning har sohalaridan xabardor bo‘lishi, asar voqealari kechadigan joyning ko‘rinishi, kishilar va ularning xarakteriga xos asosiy belgilarni aniqlab olishi, asarga kiritiladigan har xil badiiy detallar (kichkina, arzimas bo‘lsa ham)ga e’tibor qaratishi to‘laqonli xarakter yaratishning muhim omillaridandir. Demak, asarlardagi konflikt va xarakterlar ham, eng avvalo, ijodkor badiiy tafakkurining mahsulidir. Har qanday ijodkor hayotiy voqelikni badiiy idrok etadi, o‘z nuqtayi nazaridan baholaydi, xulosa chiqaradi va umumlashtirgan holda badiiy matnga ko‘chiradi. Badiiy

[62] Қуронов Д. Адабиётшуносликка кириш. – Тошкент, 2004. – Б.87.
[63] Қодирий А. Диёри бакр. – Тошкент: Янги аср авлоди, 2007. – Б.391.

matnga ko‘chirish jarayonida badiiy asarning va xarakter yaratishning eng zarur xususiyatlaridan biri – badiiy to‘qima vujudga keladi.

FOYDALANILGAN ADABIYOTLAR

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ZAMONAVIY O‘ZBEK HIKOYACHILIGIDA BADIIY XRONOTOP SHAKLLARI TAHLILI. (Sobir O‘nar hikoyalari misolida)

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Annotatsiya. *Mazkur kichik ilmiy tadqiqot ishimizda hikoya janridagi badiiy xronotopning tuzilishi, shakllari hamda qiyosiy tahlili shuningdek mikroxronotopning semantik va struktur tabiati haqida soz boradi. Hikoya janri tadrijiy taraqqiyotida xronotop va mikroxronotopning tutgan o‘rni va ahamiyati yozuvchi Sobir O‘narning bir qancha hikoyalari asosida tahlil ostiga olinadi. Hikoya janrida vaqt va makon o‘rtasidagi o‘zaro munosabat tadqiq etiladi. “Tarvuz”, “Qora chol”, “Farishta”, “Intizor” hikoyalari tahlilida badiiy xronotopning syujet qurilishi, qahramonlar rivoji va mavzuviy muammolarni shakllantirishdagi o‘rni aniqlanadi. Maqola Mixail Baxtinning xronotop nazariyasiga tayangan holda, xronotop va mikroxronotop tushunchalari orasidagi farqni va ular orqali vaqt hamda makon elementlarini ma’no ifodalash uchun qanday qo‘llanishini solishtiradi. Tadqiqot natijalari shuni ko‘rsatadiki, xronotop nafaqat so‘z yordamida ifoda etish vositasi, balki hikoya janrining ijtimoiy, madaniy va tarixiy kontekstlarini anglash uchun ham muhim vosita hisoblanadi.*

Kalit so‘zlar: *hikoya, janr, badiiy xronotop, mikroxronotop, M.M.Baxtin, adabiyot, vaqt, makon, nazariya, ijodkor, uslub.*

Abstract. *This article discusses the structure, comparative analysis of the chronotope in the narrative genre, and the semantic and structural nature of the microchronotope. The role and significance of the chronotope and microchronotope in the gradual development of the narrative genre are analyzed using several stories by the famous Uzbek short story writer Sobir Onar. The relationship between time and space in the narrative genre is studied. Based on the analysis of the stories "Watermelon", "Black Old Man", "Angel", "Waiting", the role of the chronotope in the construction of the plot, the development of characters and the formation of thematic problems is determined. Based on Mikhail Bakhtin's chronotope theory, the article compares the difference between the concepts of chronotope and microchronotope and how they use the elements of time and*

space to express meaning. The results of the study show that chronotope is not only a means of expression through words, but also an important tool for understanding the social, cultural and historical contexts of the narrative genre.

Keywords: *narrative, genre, artistic, chronotope, microchronotope, M,M.Bakhtin, literature, time, space, theory, style, analysis, time.*

Аннотация. *В статье рассматриваются структура, сравнительный анализ хронотопа в повествовательном жанре, семантическая и структурная природа микрохронотопа. Роль и значение хронотопа и микрохронотопа в постепенном развитии повествовательного жанра анализируются на примере нескольких рассказов известного узбекского писателя-новеллиста Собира Онара. Изучается соотношение времени и пространства в повествовательном жанре. На основе анализа рассказов «Арбуз», «Черный старик», «Ангел», «Ожидание» определяется роль хронотопа в построении сюжета, развитии персонажей и формировании тематических проблем. В статье на основе теории хронотопа Михаила Бахтина сравнивается различие понятий хронотопа и микрохронотопа и то, как они используют элементы времени и пространства для выражения смысла. Результаты исследования показывают, что хронотоп является не только средством выражения посредством слов, но и важным инструментом для понимания социальных, культурных и исторических контекстов повествовательного жанра.*

Ключевые слова: *повествование, жанр, хронотоп, микрохронотоп, Бахтин, литература, время, пространство, теория, стиль, анализ.*

Kirish. Adabiyotshunoslik ilmida badiiy matnni tahlil qilishning muhim vositalaridan biri bu — badiiy xronotop tushunchasidir. Mashhur rus adabiyotshunosi Mixail Baxtin tomonidan ilgari surilgan bu nazariya adabiy asarlarda makon va vaqt uyg‘unligi orqali voqelikni badiiy idrok qilishga xizmat qiladi. Xronotop yordamida yozuvchi obrazlar hayoti, voqealarning ijtimoiy, falsafiy mazmuni va estetik ifodasini chuqurlashtiradi. Ayniqsa hikoya janrida bu tushuncha muhimlik kasb etadi. O‘zbek hikoyachiligi, xususan Sobir O‘nar ijodi misolida xronotop va mikroxronotop masalasini o‘rganish dolzarb ilmiy ahamiyat kasb etadi. Mixail Baxtin tomonidan taqdim etilgan xronotop tushunchasi adabiyotda vaqt va makonning o‘zaro ta’sirini tahlil qilish uchun asosiy konsepsiya hisoblanadi. Baxtinning nazariyasida badiiy xronotop – bu vaqt va makon qanday tasvirlanganligi va bu elementlar qahramonlar,

syujet va mavzular rivojiga qanday ta’sir ko‘rsatishini ifodalaydi.[64] Biz mazkur kichik tadqiqotimizda hikoya janridagi badiiy xronotop va uning shakllaridan biri mikroxronotop tushunchasini tahlilga tortdik.

Muhokama va natijalar. Badiiy xronotop — asarda makon va vaqtning uyg‘unligidir. Hikoya kabi ixcham janrda bu elementlar qisqa hajmda bo‘lsa-da, kuchli poetik va g‘oyaviy yukni olib boradi. Hikoyadagi xronotop voqealarning qachon va qayerda bo‘layotganligini belgilaydi, muayyan tarixiy davr haqida umumiy tasavvur beradi va qahramonlarning ruhiyati ko‘pincha u yashayotgan makon va vaqtga bog‘liqligini ko‘rsatadi. Masalan, Abdulla Qodiriy, Odil Yoqubov, Erkin A’zam, Hamid Ismoil, Sobir O‘nar kabi yozuvchilarning hikoyalarida xronotop hikoya poetikasining markazida turadi. Xronotop tuzilishiga ko‘ra mikroxronotop va makroxronotop kabi turlarga bo‘linadi. Biz kichik tadqiqot ishimizda mikroxronotopning struktural tuzilishi, hikoyachilikdagi ahamiyati hamda Sobir O‘nar hikoyalaridagi mikroxronotopga oid bo‘lgan o‘rinlarni tahlil markaziga oldik. Mikroxronotop o‘zi nima? Mikroxronotop – bu xronotopning lokal shakli bo‘lib, muayyan sahna, holat, dialog, hissiy kechinmalar bilan bog‘liq bo‘lgan vaqt-makon birliklarini anglatadi. Aynan mikroxronotop orqali hikoyadagi kuchli emotsional kuch, obrazning o‘ziga xos ruhi ochiladi. Zamonaviy hikoyachilikda, ayniqsa, qisqa hajmli prozada bu birliklar nihoyatda muhim ahamiyat kasb etadi. Chunki badiiy siymoni chuqur ochish uchun muallifda imkoniyat cheklangan bo‘ladi. Shunday sharoitda mikroxronotop vositasi syujetni tiqilinch, ammo chuqur bayon qilishga xizmat qiladi. Mikroxronotop hikoya matnidagi joy va vaqtning kichik shakldagi, ammo mazmunan yirik ifodasidir. Maqolada muallif hikoyalaridagi xonadon, yo‘l, tepalik, qabriston kabi lokal makonlar orqali obrazlar ruhiy holati va zamon ruhi bilan bog‘lanishi ko‘rsatib beriladi. Masalan: Sobir O‘narning “Tarvuz” hikoyasida dala – umumiy makon, bola tarvuz ko‘targan sahna esa – mikroxronotop bo‘lib, orzular va ma’naviy ifloslanish kontrasti yoritiladi. Adib hikoyalarida xronotop janr mazmunini ravshan tarzda yoritib berishi bilan ahamiyatga molikdir. Ya’ni xronotop hikoya janrining ijtimoiy, tarixiy,

[64] U. Jo’raqulov ,,Mixail Baxtin kashfiyotlari”, ,, Jahon adabiyoti” jurnali 2014-yil 11-12-son

falsafiy mazmunini ko‘rsatishda vosita bo‘lib xizmat qiladi. Makon va vaqt tasvirlari orqali muallif o‘z fikrini noverbal tarzda anglatadi, syujet chuqurlashadi, obrazlar o‘zaro bog‘lanadi. Shuningdek, ijodkor hikoyalaridagi zamon va makonning o‘zaro uyg‘unligi davrning axloqiy muammolari, qadriyatlarning yemirilishi, insonning ichki kurashi, jamiyat bilan to‘qnashuvi kabi masalalarni tahlil qilishda yordam beradi. Obyekt sifatida hikoyalari tanlab olingan yozuvchimizning bir qancha hikoyalarini quyida makon va zamon xususiyatlarini tahlilga tortamiz. Navbatdagi hikoya adib ijodida alohida ahamiyat kasb etgan, davr ziddiyatlari va inson ruhiyatidagi qarama-qarshiliklar mohirona tasvirlangan “Qora chol” hikoyasidir. Hikoyaga nomi berilgan “Qora chol - bu hayotdan ajralgan, odamlar tashlab ketgan sahro. Ushbu hikoya o‘zbek adabiyotidagi muhim realistik asarlardan biri bo‘lib, unda inson va tabiat, inson va jamiyat o‘rtasidagi murakkab munosabatlar hayotiy voqealar orqali tasvirlanadi.

Hikoyada Qora cholning o‘zi- markaziy xronotop bo‘lib, makon qora, hayotga yaroqsiz sahro, inson uchun dushman bo‘lgan muhit. Vaqt esa sovet davridagi qishloqlardagi hayot, XX asrning o‘rtalari, beqaror davr fonida beriladi. Ya’ni sahro yakkalanish, azob, qashshoqlik hamda umidsizlik ramzidir. Biroq ayni vaqtda bu joy insonni kurashishga, sabrga majbur qiladi. Hikoyaning bosh qahramoni bu yerda hayot kechirishga majbur. Uning bu joyga ko‘nikishi ruhiy- transformatsiyadir. Cholning yotoqxonasi mikroxronotop bo‘lib, bu yerda makon oddiy, tor xona-cholning olami. Vaqti esa doimiy, sust kechayotgan vaqt, go‘yo vaqt to‘xtab qolgan kabi. Mikroxronotopdan kelib chiqayotgan mazmun esa yotoqxona ichki dunyo aks etgan joy, cholning tanho hayoti, hayotiy sabr-toqati shu joyda mujassam. Uyning torligi cholning ichki dunyosidagi iztirob va cheklangan orzularining ramzi sifatida tasvirlangan. Hikoyadagi mikroxronotoplardan yana biri tabiat bilan to‘qnashuv mikroxronotopi. Masalan: qor bo‘ronlari, issiqda yongan zamin, yovvoyi shamollar. Bu yerda makon tashqi tabiat bo‘lib, inson nazoratidan chiqib ketgan kuch tarzida tasvirlanadi. Fasllar almashinuvu orqali voqelikning rivojlanishi vaqt oqimida amalga oshadi. Inson va tabiat o‘rtasidagi kurash tasvirlangan mikroxronotoplar, insonning qati’yati va irodasini sinovdan o‘tkazadi. “ Qora chol” hikoyasida suhbat va esdalik

mikroxronotopi ham asar mohiyatining ochiishida alohida ahamiyat kasb etadi. Ushbu xronotopdagi tor makonlar - chol va boshqa qahramonlar o‘rtasidagi suhbat sahnalar, vaqt esa o‘tmish va hozirgi zamon oralig‘ida harakatlanadigan vaqt. Hikoya davomida ko‘pincha esdaliklar orqali vaqt orqaga suriladi, bu esa o‘tmish va hozirgi hayot orasidagi tafovutni ko‘rsatadi. Hikoyada tepalik mikroxronotopi obraz kechinmalarini tasvirlashda, nihoyatda, chuqur ma’naviy ahamiyatga ega. Hikoyada chol yashaydigan tepalik faqat geografik joy emas, balki cholning ichki tanholigi, jamiyatdan chekinishi va o‘tmish bilan yashash tarzini anglatadi. Bu tepalik — ichki ruhiy holat xronotopi. “Tepalikda yolg‘iz qoldi u. Quyosh botayotgan sari, to‘nining yelkasiga tushgan soyalar ham uzunlashib borardi”[65]. Bu tasvirda vaqt (quyosh botishi), makon (tepada yolg‘izlik) va ruhiy holat (tashlandilik, o‘tmish bilan boqish) mujassam. Bu mikroxronotop orqali muallif chol obrazini ramziy darajaga olib chiqadi. Tahlilga tortilgan hikoyadagi mikroxronotoplar orqali: insonning tabiiy va ijtimoiy muhit bilan kurashi, vaqt va makon o‘zaro uyg‘unligidagi hayot falsafasi, chol qiyofasida- chidam, iroda tanho hayotga moslashuv kabi g‘oyalar o‘z ifodasini topgan. Har bir mikroxronotop qahramonning ruhiy holatini ochishga xizmat qiladi va hikoyaning umumiy falsafasini ochishga xizmat qiladi. Navbatdagi tahlilga tortilgan hikoyamiz sevimli adibimizning “Farishta” hikoyasidir. Hikoyada mikroxronotoplardan samarali foydalanilgan. Masalan: Xona ichidagi mikroxronotop tasviri orqali ichki dunyo akssadosiga ishora qilinadi. Hikoya boshida ayolning yolg‘iz o‘tirgan holati, xona ichidagi sokinlik va tashqi jimlik, - bu mikroxronotop orqali ayolning ruhiy holati ochib beriladi. Ushbu sahnada vaqt go‘yoki to‘xtab qolgandek tasvirlanadi - bu ichki iztirob, umidsizlik va kutish holatining ramziy ifodasidir. “.... oynadan tushayotgan xira nur tagida ayol titraydi...” [66]. Bu mikroxronotop ayolningichki dunyosidagi bezovtalikni, ko‘ngil iztirobini vaqt va makon birligida mujassamlashtiradi. Vaqtning kechganlik hissi - esdalik mikroxronotopi bu ayolning o‘tmishni eslashlari, retrospektiv mikroxoronotopni yuzaga keltiradi. O‘tmishdagi voqealar hozirgi

[65] O’nar S Qora chol hikoya Yoshlik J 2006-yil

[66] O’nar S Farishta hikoya–Toshkent .G’afur G’ulom N 2016-y

zamonda, hozirgi makonda aks etadi. “Yillar oldin u ham kulardi...bolasi bilan o‘ynardi”[67]. Bunday mikroxoronotop orqali muallif vaqtning subyektiv kechishini ko‘rsatadi, ichki monologlar orqali makon bir xil qolsa-da vaqt har xil darajada seziladi. Eshik oldi - chegara mikroxronotopi. Farishta obrazining eshikdan kirishi va chiqishi bilan bog‘liq sahnalar chegara xronotopi sifatida ko‘riladi. Eshik- tashqi va ichki makon, umid va umidsizlik, real va noreal olam orasidagi chegara sifatida xizmat qiladi. Farishtaning paydo bo‘lishi dramatik to‘qnashuv markazi bo‘lib, mikroxronotop vaqtni va makonni o‘zgartiradi. Hikoyada ko‘chma makon metaforasi- ijtimoiy mikroxronotop hikoyaning ayrim sahnalarida tashqi ko’cha makoni tasvirlanadi, bu esa makro ijtimoiy xronotopning mikro sahnalarda qanday aks etishini ko‘rsatadi. Ko‘chaning sovuq, begona, befarq tasviri, ayolning ichki holati bilan o‘zaro uyg‘unlashadi. Farishta hikoyasida mikroxronotoplar obrazlar ruhiy holatini, voqealarning dramatik dinamikasini chuqur ifodalaydi. Ichki makon (xona), tashqi makon (ko‘cha), eshik (chegara) va xotira makoni (o‘tmish) – bularning har biri muayyan vaqt-makon birligi sifatida hikoyaning asosiy g‘oyasini ochib beradi. Sobir O‘nar mikroxronotoplar orqali hayotiylik, ichki dramatizm va soddalikni badiiy vositalar orqali ifodalagan. Mashhur hikoyanavist yozuvchiimizning navbatdagi hikoyasi “Intizor” deb nomlanadi. Unda mikroxronotop ishtirok etgan o‘rinlar ham talaygina. Bu hikoyadagi vaqt va makon birligi, ularning personajlar hamda asar syujeti bilan o‘zaro aloqasi, hikoyaning go‘yaviy-falsafiy qatlamini chuqur anglash uchun juda muhim vosita hisoblanadi. Quyida ushbu hikoyaning mikroxronotop ya’ni kichik vaqt makon birliklari, tahlilini misollar yordamida ko‘rib chiqamiz. Sog‘inch mikroxronotopi (uyg‘otgan vaqtga intilish. Bu yerda makon qishloqdagi eski hovli, onaning uyi. Vaqt esa esdaliklar shaklida ifodalangan. Masalan: asarda bosh qahramon shahardan qishloqqa keladi. Onasi va bolaligi haqidagi xotiralar uni ichki kechinmalar girdobiga tortadi. Bu yerda sog‘inch mikroxronotopi orqali, inson va uning ildizlari (ona, bolalik, yurt) o‘rtasidagi ruhiy aloqa ko‘rsatiladi. Ushbu mikroxronotop syujetni emotsional jihatdan boyitadi va obrazlarning ichki holatini ochadi. Kutish xronotopi

[67] Yuqoridagi manba.

(ona – eshik oldida) Hovlining eshigi, yo‘lak, deraza oldi hikoyada makon mikroxronotoplari vazifasini bajarsa, kutish orqali cho’zilgan psixologik holat vaqt mikroxronotopi mazmunida keladi. Ona har kuni eshik oldiga chiqib, yo‘ldan biror kishining kelishini kutadi. Har eshitilgan qadamga umid bilan quloq tutadi.[68] Tahlilda shu narsa ayon bo‘ladiki, bu mikroxronotopda vaqt nafaqat fizik, balki psixologik cho‘zilgan holatda beriladi. Makon tor — eshik, yo‘lak — lekin u butun hayotni o‘zida jamlagan. Bu o‘rinlar onaning umid, sabr, yolg‘izlik ramziga aylanadi. Ushbu hikoyalardan tashqari yozuvchining “Minnat”, “Alag‘dalik” kabi hikoyalarida ham mikroxronotop asar mazmunini yoritishda tirgak vazifasini bajaradi. “Minnat” hikoyasida oddiy qishloq xonadoni — katta ijtimoiy va ma’naviy muammolar markaziga aylangan. Uy — mehr, murosa va insof timsoli sifatida tasvirlanadi. Qahramonlar o‘rtasidagi ziddiyat aynan shu xonadonda yuz beradi. “Dahlizning u chetida otasi jim o‘tirardi, bu chetida esa o‘g‘li bosh egib turgan edi...”[69]. Bu yerda xonadon ichidagi joylashuv (dahlizning ikki tomoni) orqali avlodlararo ziddiyat ifodalangan. Bu mikroxronotop orqali oilaviy dramatizm chuqur ochib beriladi. “Alag‘dalik” hikoyasida qabriston mikroxronotopi. Hikoya syujeti marhum inson taqdirini eslash, o‘tmishni anglash orqali yo‘g‘riladi. Qabriston — ramziy makon. U faqat o‘lim emas, balki tiriklarning munosabatini, ularning hayotiy qarashlarini ifodalaydi. “Qabriston jim. Lekin bu jimlik go‘yoki qichqirayotganday edi...”[70]. Bu yerda vaqtning muzlagan holati, harakatning har biri muallif tafakkurida biror ijtimoiy yoki ruhiy holatning ko‘zgusiga aylanadi. Shu bois, mikroxronotopni chuqur tahlil qilish orqali nafaqat obrazlar olamiga, balki yozuvchining dunyoni ko‘rish burchagiga ham yetaklash mumkin. Sobir O‘narning hikoyachilik uslubini zamonaviylik, ixchamlik va semantik boylik xususiyatlari bilan o‘rganish mikroxronotop asosida yanada samarali bo‘ladi.

Foydalanilgan adabiyotlar

[68] O’nar Sobir Intizor hikoya Toshkent.
[69] O’nar Sobir “Minnat” hikoya Toshkent 2005-y
[70] O’nar Sobir “Alag’dalik” hikoya Toshkent 2005-y

1. U. Jo‘raqulov „Mixail Baxtin kashfiyotlari”, „ Jahon adabiyoti” jurnali 2014-yil 11- 12-son.

2. O‘nar Sobir “Qora chol” hikoya Toshkent 2005-yil

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Annotatsiya*. Ushbu maqolada pariyetal-temporal aloqalar shikastlanishi nafaqat afaziyaga, balki agnoziya va apraksiya buzilishlariga ham olib kelishi, bu aloqalar shikastlanishining ta’siri ba’zi insonlarda afaziya belgilari, boshqalarida esa agnoziya yoki apraksiya belgilari ko‘proq namoyon bo‘lishi oqibatida nutq ishlab chiqarishga javob beradigan miya strukturalari murakkab harakat aktlarini rejalashtirish va bajarishda ham muhim vazifa bajarishi izohlangan.*

Kalit so‘zlar: *nutqiy agnoziya, praksis maydon, apraksiya, oromotor apraksiya, auditor agnoziya*

Abstract. *This article explains that damage to parietal-temporal connections leads not only to aphasia, but also to agnosia and apraxia disorders, and that the effects of damage to these connections are such that some people show more signs of aphasia and others show more signs of agnosia or apraxia, and that the brain structures responsible for speech production also play an important role in planning and executing complex motor acts.*

Key words: *speech agnosia, praxis field, apraxia, oromotor apraxia, auditory agnosia*

Agnoziya – sezgi organlari orqali qabul qilingan ma’lumotlarni anglash va identifikatsiyalash qobiliyatining buzilishi. Garchi faoliyatining boshida Zigmund Freyd xulq-atvor nevrologiyasi bo‘yicha tadqiqotlar olib borgan va hatto sezgi tanib olish buzilishlari bo'lgan bemorlar uchun agnoziya atamasini ham kiritgan bo‘lsa-da, keyingi ishlarida u inson xatti-harakatlarini tushuntirish uchun psixodinamik nazariyadan foydalangan1. Agnoziya miyaning assotsiativ qismlarining shikastlanishi natijasida kelib chiqib, sezgi organlarining faoliyati saqlangan bo‘lishiga qaramay, ular orqali qabul qilingan ma’lumotlarni to‘g‘ri talqin qilish imkoniyati yo‘qoladi. Agnoziyaning turli shakllari mavjud bo‘lib, ular asosan shikastlangan sezgi organi va miya sohasi bilan bog‘liq.

Apraksiya – harakat qilish qobiliyati saqlangan holda, harakat ketma-ketligini rejalashtirish va bajarish qobiliyatining buzilishi. Apraksiya miyaning assosiativ

qismlarining shikastlanishi natijasida kelib chiqib, muskullar kuchsizligi yoki koordinatsiya buzilishi bilan bog‘liq emas. Bunda insonlar murakkab harakatlarni bajarishda qiynaladi, masalan, kiyinish, ovqatlanish, yozish va boshqa kundalik faoliyatni amalga oshirish qiyin bo'ladi. Apraksiya elementar motor yoki sezgi nuqsonlari va buyruqlarga e’tibor bermaslik, obyektni aniqlash nuqsonlari yoki og‘zaki tushunishning yomonligi kabi umumiy kognitiv buzilishlar bo‘lmagan holda o‘rganilgan malakali harakatlarning buzilishi sifatida belgilanadi2.

Broka afaziyasi miya chap yarim sharining frontal qismidagi Broka markazi shikastlanganda kuzatiladigan nutq buzilishi bo‘lib, unda nutqning motor komponenti – so‘z va jumlalarni talaffuz qilish qobiliyati izdan chiqadi. Broka afaziyasi bilan og‘rigan insonlar ko‘pincha agnoziya va apraksiya buzilishlari bilan ham kurashadi, chunki frontal qism shikastlanishi murakkab harakat aktlarini rejalashtirish va bajarishga ham ta‘sir ko‘rsatadi.

Broka afaziyasi bilan og‘rigan insonlarning 85% ida motor apraksiya belgilari kuzatiladi. Bu shundan dalolatki, nutq ishlab chiqarishga javob beradigan miya strukturalari murakkab harakat aktlarini rejalashtirish va bajarishda ham muhim rol o‘ynaydi. Motor apraksiya insonning kundalik faoliyatini sezilarli darajada cheklashi mumkin, chunki u oddiy harakatlarni ham (masalan, tish yuvish, ovqatlanish) bajarishda qiyinchiliklarga olib keladi. Motor apraksiya ko‘pincha insonning o‘ng tarafida (gemiapraksiya) namoyon bo‘lib, bu chap yarim shar shikastlanishi bilan bog‘liqdir. Broka afaziyasida apraksiya buzilishi, ayniqsa, idora qilish, harakatlarni ketma-ketlikda bajarish, harakatlar programmasini tuzish va ularni avtomatlashtirishda namoyon bo‘ladi. Inson harakatlarni sinab ko‘rish-xatolik usulida bajarishga harakat qiladi, lekin ko‘pincha muvaffaqiyatsizlikka uchraydi.

Afaziya alomatlaridagi o‘zgarishlarga ushbu ikki xil jarohat qanday ta’sir qilishini ko‘rsatish maqsadga muvofiq3. Nutq faoliyatini o‘rganishda oddiy til jarayonlarini o‘rganishdan tashqariga chiqishi kerak, nutq patologiyasini o‘rganishda esa afaziya chegaralaridan tashqariga chiqishi kerak4.Broka afaziyasi bilan og‘rigan

insonlarda oromotor apraksiya alohida ahamiyatga ega. Oromotor apraksiya – og‘iz, til va yuz muskullarining ixtiyoriy harakatlarini bajarish qobiliyatining buzilishi. Bu buzilish nutq tovushlarini to‘g‘ri artikulatsiya qilishga to‘sqinlik qiladi, natijada inson nutqi buziladi, so‘zlarni talaffuz qilish qiyinlashadi. Oromotor apraksiyasi bor insonlar til chiqarish, lablarni cho‘chchaytirish, hushtak chalish kabi harakatlarni bajarishda qiyinchiliklarga duch keladi. Bu buzilish Broka afaziyasida nutqni tiklash jarayonini murakkablashtiradi va maxsus logopedik terapiya talab qiladi.

Chap yarim sharning frontal qismi shikastlanishi Broka afaziyasi va unga bog‘liq agnoziya va apraksiya buzilishlarining asosiy sababidir. Bunga ko‘pincha o‘rta miya arteriyasining shikastlanishi, insult, bosh miya jarohatlariga olib keladi. Frontal qismda miya po‘stlog'ining harakatlarni dasturlash va rejalashtirish bilan bog‘liq sohalari joylashgan. Ushbu sohaning shikastlanishi nafaqat nutq, balki murakkab harakatlarni rejalashtirish va bajarish qobiliyatini ham izdan chiqaradi.

Vernicke afaziyasi – chap yarim sharning temporal qismidagi Vernicke markazi shikastlanganda kuzatiladigan sensor afaziya turi bo‘lib, unda nutqni tushunish qobiliyati buziladi. Vernicke afaziyasi bilan og‘rigan insonlar ravon gapirishi mumkin, lekin nutqlari ko‘pincha ma’nosiz, parafaziyalar (so‘zlarni almashtirish) va neologizmlar (yangi so‘zlar yaratish) bilan to‘la bo‘ladi. Vernicke afaziyasida agnoziya, ayniqsa, auditor agnoziya, alohida o‘rin tutadi, chunki Vernicke markazi eshitilgan ma’lumotlarni qayta ishlash va talqin qilishda muhim ahamiyat kasb etadi.

Auditor agnoziya – eshitish qobiliyati saqlangan holda eshitilgan tovushlarni tanish va talqin qilish qobiliyatining buzilishi. Vernicke afaziyasida insonlar so‘zlarni eshitadi, lekin ularning ma’nosini tushuna olmaydi. Bu narsa nafaqat nutqqa, balki maishiy tovushlar (masalan, telefon qo‘ng‘irog‘i, eshik taqillashi) va tabiiy tovushlarni (masalan, hayvon ovozlari, tabiat hodisalari tovushlari) tanib olishga ham ta’sir qiladi. Eshitish agnoziyalari ko‘pincha yuqori temporal mintaqaning ikki tomonlama yoki bir tomonlama chap shikastlanishi bilan bog‘liq bo‘lsa-da, ba’zida o‘ng temporal sohaning bir tomonlama shikastlanishi bilan bog‘liq holatlar tasvirlangan5. Vernicke afaziyasidagi apraksiya buzilishlari nutqni tushunish bilan bog‘liq bo‘lishi mumkin.

Masalan, inson og‘zaki ko‘rsatmalarga binoan harakatlarni bajarishda qiynaladi, chunki ko‘rsatmalarni to‘g‘ri tushunmaydi. Lekin qiziqarlisi shundaki, ba‘zi insonlarda ko‘rsatmalarni tushunmasdan turib ham, visual namunaga qarab harakatlarni to‘g‘ri bajarish qobiliyati saqlanib qoladi.

Anomik afaziyaning asosiy belgisi – nomlash qobiliyati buzilishi, ya’ni insonlar predmetlar, hodisalar va odamlar nomlarini aytishda qiynaladi. Insonlar ko‘pincha nomini ayta olmagan predmetni ta’riflab beradi yoki uning vazifasini tushuntiradi. Masalan, inson "qalam" so‘zini ayta olmay, "yozish uchun ishlatiladigan narsa" deb ta’riflab beradi. Nomlash qobiliyati buzilishi temporal-pariyetal qism shikastlanishi bilan bog‘liq bo‘lib, shu sohada predmetlar va tushunchalar nomlari saqlanadi. Anomik afaziyada nomlash qobiliyati buzilishi agnoziya bilan bog‘liq bo'lishi mumkin. Insonlar predmetlarni tanib olishda qiynalmasada, ularning nomlarini eslay olmaydi. Bu holat temporal-pariyetal sohada so‘z-ma’no aloqalarining buzilishi bilan bog‘liq. Konduktiv afaziyada nomlash qobiliyati buzilishi kam kuzatiladi, lekin takrorlash qobiliyati sezilarli darajada buziladi. Insonlar, ayniqsa, uzun va murakkab so‘z va jumlalarni takrorlashda qiynaladi. Pariyetal-temporal aloqalar nutq, idrok va harakat aktlarini rejalashtirish jarayonlarida muhim vazifa bajaradi. Bu aloqalar fasikulus arkuatus orqali amalga oshiriladi, u miyaning chap yarim sharida motor nutq markazi (Broka markazi) va sensor nutq markazi (Vernicke markazi) o‘rtasida aloqani ta’minlaydi. Fasikulus arkuatusning shikastlanishi konduktiv afaziyaga olib keladi.

Pariyetal-temporal aloqalar shikastlanishi nafaqat afaziyaga, balki agnoziya va apraksiya buzilishlariga ham olib keladi. Bu sohaning shikastlanishi predmetlarni tanib olish, ularning nomlarini eslab qolish va murakkab harakatlarni bajarish qobiliyatlariga ta’sir qiladi. Pariyetal-temporal aloqalar shikastlanishining ta’siri inson amalda qanday buzilishlarni namoyon qilishiga qarab farqlanadi. Ba’zi insonlarda afaziya belgilari, boshqalarida esa agnoziya yoki apraksiya belgilari ko‘proq namoyon bo‘ladi.

Agnoziya va apraksiya buzilishlarini aniqlashda neyropsixologik testlar muhim o‘rin tutadi. Bu testlar insonning turli kognitiv funksiyalari – diqqat, xotira, nutq, idrok, fikrlash va harakat funksiyalarini baholashga imkon beradi. O‘zbekistonda

qo‘llaniladigan neyropsixologik testlar ko‘pincha xalqaro standart testlarning o‘zbek tiliga va madaniyatiga adaptatsiya qilingan versiyalaridir.

Agnoziyani diagnostika qilish uchun vizual agnoziya testlari (predmetlar va yuzlarni tanib olish testlari), auditor agnoziya testlari (tovushlarni tanib olish testlari) va taktil agnoziya testlari (ushlab ko‘rib tanib olish testlari) qo‘llaniladi. Apraksiyani aniqlash uchun esa ideomotor apraksiya testlari (ko‘rsatmalarga binoan harakatlarni bajarish testlari), ideatsion apraksiya testlari (harakatlar ketma-ketligini bajarish testlari) va konstruktiv apraksiya testlari (geometrik shakllarni chizish, kublar bilan ishlash testlari) qo‘llaniladi.

O‘zbekiston sharoitida diagnostika jarayonida milliy va madaniy xususiyatlar, til va etnografik omillar hisobga olinadi. Masalan, neyropsixologik testlar o‘zbek tiliga va madaniyatiga adaptatsiya qilinadi, diagnostika jarayonida insonlarning ta’lim darajasi, yoshi va madaniy muhiti hisobga olinadi. Bu yondoshuv diagnostika jarayonida xatolarga yo‘l qo‘ymaslik va insonga to‘g‘ri tashxis qo‘yish uchun muhim ahamiyatga ega. Afaziya, agnoziya va apraksiya buzilishlarini davolash kompleks yondashuvni talab qiladi.

Afaziyani davolashda logopedik terapiya asosiy o‘rin tutadi. Logopedik terapiya nutqning buzilgan komponentlarini – tovushlarni talaffuz qilish, so‘z boyligini oshirish, grammatik tuzilmalarni tushunish va qo‘llash kabi komponentlarni tiklashga qaratilgan. Logopedik terapiya bilan bir qatorda kognitiv terapiya ham qo‘llaniladi. Kognitiv terapiya diqqat, xotira, fikrlash va boshqa kognitiv funksiyalarni tiklashga yordam beradi.

Agnoziyani davolashda sensor stimulatsiya va tanib olish mashqlari qo‘llaniladi. Masalan, vizual agnoziyada predmetlarni tanib olish mashqlari, auditor agnoziyada tovushlarni tanib olish mashqlari bajariladi. Apraksiyani davolashda esa harakat terapiyasi, harakatlarni dasturlash va bajarish mashqlari, kundalik hayot ko‘nikmalarini tiklash mashqlari qo‘llaniladi.

Nutq terapiyasi (logopediya) – afaziyani davolashda qo‘llaniladigan asosiy terapevtik usul. Nutq terapiyasi nutqning buzilgan komponentlarini – tovushlarni

talaffuz qilish, so‘z boyligini oshirish, grammatik tuzilmalarni tushunish va qo‘llash kabi komponentlarni tiklashga qaratilgan. O‘zbekistonda logopedik terapiya dasturlari o‘zbek tilining fonetik, leksik va grammatik xususiyatlarini hisobga olgan holda ishlab chiqilgan. Broka afaziyasida ko‘proq nutqni ishlab chiqarish (artikulatsiya, grammatika) ustida ishlanadi, Vernicke afaziyasida esa nutqni tushunish ustida ko‘proq ishlanadi.

Afaziya, agnoziya va apraksiya buzilishlarining reabilitatsiyasi uzoq muddatli jarayon bo‘lib, bir necha bosqichlarni o‘z ichiga oladi.

Xulosa

Afaziya, agnoziya va apraksiya kabi neyropsixologik buzilishlar insonning kundalik hayot sifati, ijtimoiy faoliyati va mustaqil harakat qilish qobiliyatiga jiddiy salbiy ta’sir ko‘rsatadi. Bunday buzilishlarga chalingan insonlarni samarali davolash uchun kompleks, individual yondashuv muhim ahamiyatga ega. Individual ishlash jarayonida logopedik mashg‘ulotlar, psixologik yordam, ergoterapiya, fizioterapiya va ijtimoiy moslashuv bo‘yicha treninglar qo‘llanilishi kerak. Har bir insonning holati, yoshi, kasallik darajasi va psixologik holati inobatga olinib, individual ishlash dasturi shaxsiylashtirilishi zarur. Tizimli va motivatsion yondashuv orqali insonlarning funksional imkoniyatlarini tiklash, mustaqil hayotga qaytishlariga yordam berish mumkin. Shu bilan birga, oila a’zolari va parvarishlovchi shaxslarning bilimli bo‘lishi va faol ishtiroki individual ishlash samaradorligini yanada oshiradi.

Bu tavsiyalarni amalga oshirish insonlarning hayot sifatini yaxshilashga, ularning funksional mustaqilligini oshirishga va jamiyatga integratsiyasini ta’minlashga yordam beradi. Shuningdek, nutqiy agnoziyada insonning individual xususiyatlari, til va madaniy kontekstni hisobga olish muhim ahamiyatga ega.

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HAYOTGA MOSLASHISH YOKI ALOHIDA YONDASHUV BILAN IJTIMOIY HAYOTGA MOSLASHISH

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Annotatsiya: *Ushbu maqolada autizm tushunchasi, uning klinik belgilari va rivojlanish tarixi yoritiladi. Autizmga chalingan bolalar atrof-muhitni o‘ziga xos tarzda qabul qiladi, tashqi ta’sirlarga sezgir bo‘ladi va ijtimoiy muloqotda qiyinchiliklarga duch keladi. Maqolada autizm spektrining ilk klinik tavsiflari, shuningdek, bu holatning shveytsariyalik psixiatr Eygen Bleyler, avstriyalik pediatr Gans Asperger va amerikalik bolalar psixiatr Leo Kanner tomonidan o‘rganilishi batafsil bayon etiladi.Ushbu maqola autizm haqida umumiy tushuncha berish bilan birga, uning tashxislanishi va zamonaviy yondashuvlar asosida tuzatish usullarini ham yoritadi.*

Kalit so'zlar: *autizm , shizofreniya, psixik buzilish, kognitiv funksiyalar, kompleks, muloqot, simptomlar, yuqori funktsional, statik xususiyatlar, dinamik xususiyatlar, emotsional*

Abstract:*This article explores the concept of autism, its clinical symptoms, and its historical development. Children with autism perceive the surrounding world in a unique way, have heightened sensitivity to external stimuli, and face difficulties in social interaction. The article provides a detailed overview of the first clinical descriptions of the autism spectrum and examines the contributions of Swiss psychiatrist Eugen Bleuler, Austrian pediatrician Hans Asperger, and American child psychiatrist Leo Kanner in studying this condition.In addition to providing a general understanding of autism, this article also discusses its diagnosis and modern correction methods based on contemporary approaches.*

Keywords: *autism, schizophrenia, mental disorder, cognitive functions, complex, communication, symptoms, high-functioning, static characteristics, dynamic characteristics, emotional*

KIRISH.

Autizm- bu rivojlanishning kompleks buzilishi bo‘lib, ijtimoiy o‘zaro munosabatlar, tilni o‘zlashtirish va emotsional, kognitiv, harakatli va sensor qobiliyatlar hamda bu qobiliyatlarning rivojlanishida orqada qolishning butun bir qator muammolarini o‘z ichiga oladi. Bu bilan bir qatorda ko‘pincha xulqning o‘ziga xos shakllari: bir nuqtada aylanish, o‘yinchoqlarni bir qatorga tizish, so‘zlarni maqsadsiz va ma’nosiz takrorlash. Bunday simptomlar munosabatga kirish, muloqot qilish va fikrlash qobiliyati bilan bog‘liq juda asosiy muammolarning oqibati hisoblanadi. Autizmi bor yoki autistik sohasida buzilishlari bor bolada til, fikrlash va ijtimoiy ko‘nikmalar, undagi buzilishlar shu spektorning qaysi qismiga tegishli ekaniga bog‘liq.

ASOSIY QISM

Autizmning kelib chiqish sabablari shu kungacha aniqlanmagan. Ta’kidlab o‘tilganidek, ba’zi tadqiqodlar natijasiga ko‘ra 166 kishiga 1 ta autistik sohasida buzilishi bo‘lgan shaxs to‘g‘ri kelmoqda. Ko‘pgina tadqiqotlar shuni ko‘rsatadiki so‘ngi o‘n yillik ko‘rsatkichlar tahliliga ko‘ra autistik sohasida buzilishi bo‘lganlar soni ko‘paygan. Ba’zi tadqiqotlar buning sababini diagnostikaning rivojlanib borayotgani bilan bog‘liqdesa, ko‘pchilik buni autizm va autistik sohasida buzilishi bo‘lganlar soni ortgani sababli deb hisoblaydi. Autizmning sabablari Autizm va autistik sohasidagi buzilishlarning sabablari, aniqlanmagan. Ko‘pgina tadqiqotlar esa genetik faktorlarning rolini tasdiqlaydi (masalan, bunday buzilish bir tuxumli egizaklarda har xil tuxumli egizaklarga nisbatan ko‘proq uchraydi). Bundan, genetik omillar (yoki biologik omillar) autizm va autistik sohasidagi buzilishlar bilan bog‘liq simptomlar majmuini keltirib chiqaradi degan xulosaga kelish mumkin. Bundan tashqari, immun tizim bilan bog‘liq bo‘lgan faktorlar, moddalar almashinuvi va atrof muhitning holatini ham inobatga olish kerak. Shunga qaramay shu kungacha aytizmni keltirib chiqaruvchi yagona sabab aniqlanmadi. Shuning uchun biz autizmning sabablarini ko‘pgina omillarning mutanosibligi deb hisoblaymiz. Genetik yoki perinatal omillar, masalan, bolaning jismoniy zo‘riqish natijasidagi stressga, infeksion kasalliklarga yoki zaharli moddalar ta’siriga moyillikka olib kelishi mumkin. Sabablarni anglashga bunday yangicha yondashuv genetik omillar ta’sirini tan oladi, lekin kasallikning rivojlanish yo‘llarini ko‘p bosqichli jarayon sifatida, o‘zaro bog‘liq muammolarning asta-sekin to‘planib borishi sifatida, ularning og‘irlik darajasini inobatga oladi. Muammolarning keng doirasi Muloqot (kontakt), aloqaning rivojlanishi (jest, so‘z, belgilar bilan), tafakkurning rivojlanishi - autizm va autistik spektorining buzilishida muammoli ekani bilan xarakterlanadi. Rivojlanishning bunday kompleks muammolari turlicha va turli holatlarda namoyon bo‘lishi mumkin. Bir xil tashxisli har bir bolada ham bunday muammolar bir xil darajada namoyon bo‘lavermaydi. Masalan Asperger sindromiga ega bolalar ko‘pincha katta lug‘at boyligiga ega bo‘lib, o‘qishni erta boshlaganlari bilan, so‘zni tushunib o‘rnida, emotsional to‘g‘ri qo‘llay olishda qiynaladilar. Ular so‘zni shunchaki takrorlashlari, yoki uni to‘g‘ridan-to‘g‘ri lug‘aviy ma’noda tushunishlari mumkin. Bundan tashqari, ularga odamlar bilan emotsiya va imo-ishora bilan birga boruvchi muloqot jarayoniga kirishish qiyin kechadi. Muammoning bunday ko‘rinishi motorika sohasida muammosi bo‘lgan bolalarda uchraydi. Nutqiy motorikasida buzilishi bo‘lgan bolalarda: so‘zlarning talaffuzida til va og‘iz muskullari harakati qiyin kechadi. Nutqida va umumiy motorikasida jiddiy muammolari bo‘lgan ba’zi bolalarda kognitiv funktsiyalarda nuqsonlar va ijtimoiy ko‘nikmalar bo‘lmaganday ko‘rinishi mumkin, aslida esa motorikadagi nuqsonlar mavjud qobiliyatlar va ko‘nikmalarni ro‘yobga chiqarishga imkon bermaydi.

Autizm – bu ruhiy buzilish bo‘lib, u bolalar psixiatriyasi sohasi hisoblanadi. Xalqaro tasniflarda ham autistik spektr buzilishlari bolalar yoshidagi ruhiy buzilishlar qatoriga kiritilgan. Bu ma’lumotni bilish juda muhim. Agar mutaxassislar yoki ota-onalar bolaning xulq-atvorida autistik belgilarni payqasa, ular qayerga murojaat qilish kerakligini aniq bilishlari lozim. Autistik buzilishlar, odatda, bolaning ilk uch yilida paydo bo‘ladi, lekin bu holatni bir yoshdan katta bo‘lgan bolada tashxislash mumkin. Agar bu haqiqiy autistik buzilish bo‘lsa, uch yoshga yetganida bu tashxis tasdiqlanishi kerak. Shuningdek, autizm faqat bolalar yoshida uchraydigan buzilish degan qarash noto‘g‘ri. Bu fikr xalqaro tasniflarda “bolalar autizmi” deb nomlanishi bilan bog‘liq. Ilgari autizm faqat shizofreniya bilan bog‘liq deb hisoblangan va bolalar 18 yoshga yetganidan so‘ng ularga “shizofreniya” tashxisi qo‘yilgan. Lekin bu xato ekanligi keyingi tadqiqotlar bilan isbotlangan.

Hozirgi kunda ma’lumki, autizm va shizofreniya – bir-biriga bog‘liq bo‘lmagan, alohida ruhiy buzilishlardir. Autistik belgilar inson butun umri davomida saqlanishi mumkin. Yana bir keng tarqalgan noto‘g‘ri tushuncha – autizm bolaning tarbiyasiga bog‘liq degan fikr. Ilgari “sovuq onalar” nazariyasi mavjud bo‘lib, unga ko‘ra, ona bolasiga yetarlicha mehr ko‘rsatmasa, bolada autizm rivojlanadi deb o‘ylangan. Lekin bu ilmiy jihatdan isbotlanmagan. Autizm bolaning tarbiyasi, yashash joyi yoki millatiga bog‘liq emas. Hozirgi kunda olimlar autizmning kelib chiqishi genetik mutatsiyalar bilan bog‘liqligini aniqlagan. Bir necha genlar bu jarayonda ishtirok etadi va natijada bosh miya neyronlarining rivojlanishi buziladi. Ya’ni bola autistik buzilish bilan tug‘iladi. Bu holat, asosan, dunyoni idrok qilish, bilish jarayonlari va ijtimoiy xulq-atvorida namoyon bo‘ladi. So‘nggi yillarda autistik spektr buzilishiga chalingan bolalar soni ortib borayotgani kuzatilmoqda. Bu faqat tashxislash yaxshilangani bilan izohlanmaydi. Masalan, AQShdagi Kasalliklarni nazorat qilish va oldini olish markazi ma’lumotlariga ko‘ra, har 84 boladan bittasi autizm spektri buzilishiga chalingan. Shuningdek, o‘g‘il bolalarda autizm qiz bolalarga nisbatan 4-5 barobar ko‘proq uchraydi. 20 yil oldin autizm 500 boladan bittasida uchragan bo‘lsa, hozir bu ko‘rsatkich ancha yuqori. Olimlar bu holatni “autizm pandemiyasi” deb ham atamoqda.Bu raqamlar autizm haqida to‘g‘ri tushunchaga ega bo‘lish va uni erta aniqlash qanchalar muhim ekanini ko‘rsatadi.

Autizmni davolashning iloji bormi? Farzandida autizm tashxisi qo‘yilgan ota-onalar ko‘pincha shunday savol berishadi: bu kasallikni butunlay davolash mumkinmi? Hozircha autizmni to‘liq davolashning aniq usuli yo‘q, ammo turli korreksiya metodlari yordamida bolaning hayot sifati sezilarli darajada yaxshilanishi va uning atrof-muhitga moslashuvchanligi oshirilishi mumkin. Bunda nafaqat shifokor, balki o‘qituvchilar va ota-onalar ham faol ishtirok etishi, uzoq muddatli va tizimli yondashuv asosida ishlashi kerak. Bunday harakatlar orqali muhim natijalarga erishish mumkin.

Davolash usullari. Autizmli bolalar bilan ishlashda quyidagi usullar qo‘llaniladi: Dori vositalari bilan davolash – simptomlarni yengillashtirish uchun ishlatiladi. Musiqaterapiya – bolada

hissiy bog‘lanish va kommunikatsiya ko‘nikmalarini rivojlantirishga yordam beradi. Delfinoterapiya – delfinlar bilan muloqot qilish orqali bolaning ijtimoiylashuvini yaxshilash usuli. Floortime terapiya – bolaning rivojlanish bosqichlariga mos keladigan o‘yin va muloqot usullari orqali autizm belgilarini yumshatish. Art-terapiya – rasm chizish va boshqa san’at shakllari orqali his-tuyg‘ularni ifodalashga yordam beradi. Mikropolyarizatsiya, Tomatis terapiyasi, refleksoterapiya – neyropsixologik yondashuvlar.ABA terapiya (Applied Behavior Analysis) – xulq-atvorni boshqarish va yaxshilash uchun qo‘llaniladigan keng tarqalgan metod. Autizm atamasining kelib chiqishi "Autizm" atamasi ilk bor shveytsariyalik psixiatr Eygen Bleyler tomonidan qo‘llanilgan. U bu atamani shizofreniya bilan og‘rigan bemorlarning tashqi dunyodan o‘zini chetga olish xususiyatini tavsiflash uchun ishlatgan. Bola psixiatriyasida "autizm" tushunchasi ikkita mashhur shifokor – Gans Asperger va Leo Kanner nomlari bilan bog‘liq. Gans Asperger – 1938 yilda autizm belgilari haqida birinchi bo‘lib yozgan avstriyalik pediatr. Keyinchalik yuqori funksional autizm (Asperger sindromi) aynan uning nomi bilan atalgan.Leo Kanner – 1943 yilda AQShda "Affective Contact Disorders" (Aloqadorlik buzilishlari) nomli ishida autizm simptomlarini aniq bayon qilgan bolalar psixiatridir. Kanner va Asperger tasvirlagan bolalar autizm spektr buzilishining asosiy mezonlarini belgilab bergan. Ularning tadqiqotlari natijasida autizm alohida psixiatriya bo‘limi sifatida tan olingan. Bugungi kunda autizmni to‘liq davolash imkoni bo‘lmasa-da, turli terapiya usullari orqali autizmli bolalarning rivojlanishini qo‘llab-quvvatlash va ularning hayotini yaxshilash mumkin.

Xulosa

Autizm spektr buzilishi (ASB) – bu neyro-rivojlanish xususiyati bo‘lib, uni to‘liq davolashning imkoni yo‘q, ammo turli terapevtik va pedagogik yondashuvlar orqali bolalarning hayot sifatini yaxshilash mumkin. Tadqiqotlar shuni ko‘rsatadiki, autizmga chalingan bolalarda harakat va proprioseptiv buzilishlar keng tarqalgan bo‘lib, bu ularning motorik rivojlanishiga ham ta’sir qiladi. Zamonaviy korreksiya usullari, jumladan, ABA terapiya, musiqaterapiya, delfinoterapiya va san’at terapiyasi, autistik bolalarning ijtimoiy va kommunikativ ko‘nikmalarini rivojlantirishda muhim rol o‘ynaydi. Shu bilan birga, mayda va umumiy motorikani rivojlantirishga qaratilgan mashg‘ulotlar ham ularning jismoniy faolligini oshirish va kundalik hayotga moslashishiga yordam beradi. Shunday qilib, autizm kasallik emas, balki shaxsning o‘ziga xos rivojlanish turi bo‘lib, to‘g‘ri yondashuv va qo‘llab-quvvatlash orqali autistik bolalar jamiyatga muvaffaqiyatli moslasha oladilar. Kelajakda bu sohadagi tadqiqotlarni davom ettirish, yangi reabilitatsiya usullarini ishlab chiqish va amaliyotga joriy etish autizmli shaxslarning yanada yaxshiroq hayot kechirishiga xizmat qiladi.

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IKROM OTAMUROD SHE'RIYATIDA IJTIMOIY DARD TASVIRLARI

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Annotatsiya: *Ikrom Otamurod bugungi o'zbek poeziyasini yangi ohanglar va yangi mavzular, o'lmas g'oyalar bilan boyitib kelayotgan ijodkorlar sirasiga kiradi. Shu ma'noda, shoir Ikrom Otamurod ijodini tizimli ravishda o'rganish zarurati mavjud. Maqolada shoir Ikrom Otamurodiga xos yetakchi g'oyalar xususida so'z boradi.*

Kalit so'zlar: *she'riyat, shoir, lirika, Sharq falsafasi, davr nafasi, ijod, ruhiyat, janr, doston.*

Аннотация: *Икрам отамурод входит в число творцов, обогащающих современную узбекскую поэзию новыми тонами и новыми темами, бессмертными идеями. В этом смысле возникает необходимость систематического изучения творчества поэта Икрама отамурада. В статье рассматриваются ведущие идеи, присущие поэту Икраму отамуроду.*

Ключевые слова: *поэзия, поэт, лирика, Восточная философия, дух времени, творчество, духовность, дух, жанр, поэма.*

Annotation: *Ikram otamurod is one of the creators enriching modern Uzbek poetry with new tones and new themes, immortal ideas. In this sense, there is a need for a systematic study of the work of the poet Ikram Otamurad. The article examines the leading ideas inherent in the poet Ikram otamurod's.*

Key words: *poetry, poet, lyric, Eastern philosophy, spirit of the time, creativity, psychology, genre, poem.*

Haqiqiy adabiy asar bag'ridagi hayot chinakam hayotning o'zidek murakkab bo'ladi. Shu ma'noda, atoqli shoir Ikrom Otamurod she'riyatida ijtimoiy ustuvor ko'rinish olgan ijtimoiy dard tasviri undagi an'anaviy obrazlarga muhim vazufa yuklashi bilan alohida mohiyat kasb etadi. "*Ijtimoiy dard – deb yozadi adabiyotshunos D. Quronov – ijodkorning shaxsiy dardiga aylanmasa, ijodkor o'sha dardni chinakamiga qalbidan kechirmasa, ..."yalang'och ijtimoiylashuv" yuzaga keladi. Sho'ro davri adabiyotining eng katta fojiasi ham shu edi. Totalitar tuzum barchaning birdek o'ylashini taqozo etgandiki, bu narsa jamiyatda shaxs maqomining susayishi, jumladan, ijodkor shaxsining yemirilishiga olib keldi. Natijada ko'plab asarlarda ijtimoiy dard ijodkorning qalb qozonida obdon qaynamasdan, faqat rasmiy mafkuraning badiiylashtirilgan ifodasi bo'lmish shiorbozlikka to'la she'rlar, hayotni rasmiy mafkura ko'zi bilan ko'ruvchi, tasvirlovchi va baholovchi (garchi "sotsialistik*

realizm" namunasi sanalsa-da, realizmdan tamomila yiroq) epik asarlar yaratildi." [1;30.] Ikrom Otamurod she'riyatida ustuvor ko'rinish olgan *ijtimoiy dard, u*ning "Sopol siniqlari" nomli dostonida yaqqol bo'rtib turadi. Doston mazmunida musta'bid tuzum oqibatlari, millatparvar, sofdil Vatan farzandlarining qatag'on qilinishi, vatanidan, xalqidan judo qilingan, Sibir muzliklarida, qamoqxonalarida ayanchli azob-uqubatlar ichra yolg'izlik girdobiga mahkum bo'lgan millat qahramonlari timsoli gavdalanadi. Unda Xayolot dunyosiga g'arq bo'lgan lirik qahramon osoyishta va chekka joy – yolg'izlikdan qo'nim topadi. *"Ikki tavaqasi o'ksik va siniq Xotira eshigiga umid ila"* boqarkan, o'zini yolg'iz olamda yolg'iz sezadi. Asardagi Holat ramzining adabiy-estetik va ijodiy-ruhiy omillarini anglash imkonini beruvchi misralar ham fikrimizni tasdiqlaydi:

Yolg'iz olamda yolg'izman,
Ruhim ostonasida turar
yolg'izlik.
Ko'rishar – Umid ila Xotira eshigin
ikki tavaqasi.
O'ksik va siniq ikki tavaqasi. [2;74].

Ta'kidlash lozimki, dostonda davr ruhiyatini tavsirlash shoir ijodiga mos belgilardan biri sifatida bo'y ko'rsatadi. Inson va qismat, shaxs va uning taqdir bitigi o'rtasidagi munosabatni estetik bayon etish, adabiyotning dolzarb muammolaridan biri, deb bilgan ijodkor bu masalaning asardagi o'rniga pritsipial muammo deb qaraydi. Bilamizki, sobiq sovet tuzimi ruhi aks ettirilgan aksar asarlarda odam tiynatiga alohida e'tibor qaratilmas, insonga shaxs sifatida baho berilmas, balki ularning qilayotgan ishlariga ko'proq diqqat qaratilardi. Masalan, umid va ishonch tuyg'ulari paymol qilinadigan jamiyat manzarasi... Kishining umidlari amalga oshmasa, ko'ngli o'ksiydi. O'ksigan ko'ngil esa xotiraga beriladi. Ammo xotira uni xursand qilolmaydi. Chunki *Xotira – ko'hna hasrat, qadriyatlar sho'r boylagan, zorlar poylar ostida g'ichirlagan, to'rg'aylar ko'zidan jola siriqqan, qilichlar damidan nola to'kilgan, orzularni shamollar quritgan, oftob vola so'lini simirgan* bir tarzda lirik

qahramonning yolg‘izlik iztirobi sababiyatini ochiqlaydi. Shundan shoirning ko‘ngli naqadar katta bir iztirobga esh bo‘lib azoblanadi:

Sopol siniqlari – ruhim ildizi.
Xotira: tuproqning suyaklari,
oyning gullolasi,
qo‘zigul qadog‘idan tomizg‘i – shudring,
sho‘r boylagan qadr,
poylar ostida g‘ichirlagan zor,
to‘rg‘aylar ko‘zidan siriqqan jola,
qilichlar damidan to‘kilgan nola,
shamollar quritgan orzu,
oftob so‘lin simirgan vola. [5;90].

Ikrom Otamurod she’riyati bilan tanishish jarayonida shoir yolg‘izlik obrazining badiiy va ijtimoiy salmoqqa ega yana bir qator ma’nolarini ochishni maqsad qilganini ko‘ramiz. Xususan, shoir o‘zini qiynagan dard manzarasini ham yolg‘izlik suratida ko‘radi. Jumladan, “Sen” nomli she’rida ruhiyatning aqlga bo‘ysunmaydigan evrilishlari – tovlanishlari-yu qayroqi badiiy tafakkurini shunday tasvirlaydi:

Sen – yolg‘izlik kabi jimjit.
Sen – yolg‘izlik kabi go‘zal...
Sen – yolg‘izlik kabi g‘amgin..
Sen – yolg‘izlik kabi yolg‘iz...
Sen – yolg‘izlik kabi.
Sen – yolg‘izlik...
Sen – ... [6;24].

Ikrom Otamurod yolg‘izlik falsafasi talqinida dono xalqimiz yaratgan maqol va matallardan, iboralardan juda oqilona va san’atkorlik bilan foydalanadiki, natijada shoir tilga olgan maqollar qayta boshdan she’riy umrini o‘tay boshlaydi. Masalan, “*Kambag‘alning yolg‘iz qo‘zisiga qashqir tegar.”* [7;99] kabi misralar “Yolg‘iz otning

changi chiqmas, changi chiqsa ham dong‘i chiqmas” tarzidagi xalq maqoliga mazmunan yaqinligini ko‘rish mumkin. Ta’kidlash joizki, ayni o‘rinlarda shoir folklorizmlarning analitik turidan, uning oddiy hamda murakkab ko‘rinishlaridan juda o‘rinli foydalangan.

Ikrom Otamurod she’riyatidagi ijtimoiy g’oyalarni ifodalovchi yetakchi motivlardan yona biri sukutdir. Shoir bu obrazning ijtimoiy mohiyatini yoritishda uning botiniy belgi va jozib ko‘rinishlariga alohida e’tibor qaratadi:

... Sukutga qarab,
sukutni yutib,
sukutda qotib,
hammasini o‘stirar
g‘animat on...

...Darig‘o!..
...Darig‘o!!.
...Darig‘o!!! *[5;151]*

Aytish joizki, Ikrom Otamurod she’riyatida sukut oddiy tushuncha emas, balki u qalbda ne yuz bersa shuni so‘zlaydigan, tozalab beradigan Vaqtning aslini, tillasini ajratib olishga madad beruvchi Mahak toshi singari muhim ahamiyatga ega obraz. Shu boisdan, shoir sukut qa’ridagi o‘z ijtimoy qarashlarini faqatgina ikromona uslubda mahorat bilan badiiy so‘zning qudrati ila yorqin tarzda ifodalaydi. Shoir sukut ta’rifida shunday yozadi:

Men sevgan so‘z – mangu sukutga ketib,
yoningda jimgina uz-o-oq tikilish... [2;36]

Shoir to‘plamlaridan birini “Sukut sadosi” deb nomlagan. Kitob haqida “*Bir og‘riq kanglumda qad rostlar*” nomli so‘zboshi yozgan M. Mirzo o‘quvchi diqqatini quyidagilarga qaratadi*: “Kitobga bejiz “Sukut sadosi” deb nom berilmagan. Bu ikki so‘zda Ikrom Otamurodning ichki olami, tabiati mujassam. Bu sukutni his qilmoq, tinglash, anglash kabi ruhning katta ehtiyoji mavjud. Bu sukut o‘sha hadsiz olamning,*

bepoyon kangul diyorining ramzidir. Unga yetishmoq yo‘lida biz uchun qalb tarjimon va shu qalbgina bizga borlig‘ini namoyon etayotgan sohir ko‘ngil uchun chin tilmoch bo‘la oladi, xolos. Bu sukut mohiyatida intilish va kutish, parvoz va munavvar manzil, gul va ifor orasi, nur zarralari mohiyatidagi muqaddas yorug‘lik bor. U hamisha oydinlikka, munavvar ruh olamiga poklik olamiga yog‘du berayotgan ulug‘ musaffolikka, imon ziloliga intiladi” [6;7]. Shoirning mazkur to‘plamdan joy olgan shu nomdagi she’ri sukut obrazining ramziy ma’nosini muayyanlashtirish barobarida shoir she’rlarining g‘oyaviy mundarijasini an’anaviy sukut obrazi tevaragiga jamlaydi:

...Sukut –
rizolik alomati emas,
inkor tarzi ham emasdir,
Sukut –
Rumiy dilidagi qush:
“Ichindagi ichindadur”. [6;62]

Bir qarashda, sukutning ma’nosi bir-birini inkor etayotgandek ko‘rinadi, (*...Sukut – rizolik alomati emas, inkor tarzi ham emasdir,*) lekin ayni holatda uning tub mazmuni umumiylik kasb etadi. Sukut obrazining poetik ma’no ko‘lamini yanada aniqroq belgilab, umumlashtirish uchun she’rning navbatdagi bandlariga e’tibor qaratamiz:

Ruhning maydonida armonlar ahgar,
ruhning yo‘llarida sargardon bardosh.
Sukut –
ruhda ko‘klagan javhar,
sukut –
ruhdan tomchilagan yosh. [6;62]

“Biror badiiy asarning tasvir nozikligini, badiiyati o‘ziga xosligini, obrazlar sistemasini to‘g‘ri tushinmoq, tili jozibasini his etmoq uchun shu asar yaratilgan davr badiiy tafakkuriga xos xususiyatlarni bilish kerak. Chunki chinakam badiiy hodisa o‘zi

aks ettirgan davrdan ham andaza oladi.” [7;4]. Asarda shonr hadsiz, chegarasiz olam sahnida shoir o‘ziga ma’naviy-ruhiy ehtiyoj sezadi va uni sukunat bag‘ridan topishga urinadi. Biroq ruhiyat maydonida armonlar ahgar, ya’ni lahcha cho‘g‘, sargardon bardosh... Shundan shoir ruhiy poklanishga, ma’nan yuksalishga qodir bezavol ma’naviy qudrat – sukutga *ruhda ko‘klagan javhar, ruhdan tomchilagan yosh*, deya ta’riflar beradi:

Ta’malar to‘qiydi shirin xushomad,
shovqinlar sabrni kemirar channon.
Sukut –
ta’malarga yon bermagan mard,
sukut –
shovqinlarga sanchilgan sinon. [6;62]

Nihoyatda ta’sirchan bu holatni o‘z o‘quvchisiga izohlar ekan, shoir davrning ildamlab borayotgan ziddiyatli ruhi – *ta’malar ortidagi shirin xushomad*lardan iztirob chekadi, *sabrni kemiruvchi shovqinlar*dan *channon* beziydi. Shunda najot – Sukut – *ta’malarga yon bermagan mard, shovqinlarga sanchilgan sinon,* ya’ni, nayza bo‘lib bo‘y ko‘rsatadi.

Sukut –
o‘zingga o‘zing duch kelmoq gali,
bir qurbdirki –
o‘zingni tinglash. [6;63]

kabi misralarda shoirning sukut obraziga yuklagan poetik ma’nosi yanada mukammallashib, teranlashib, tadrijiylikning o‘ziga xos yuksak darajasiga yetganligini his etamiz: inson faqat sukunatdagina – o‘zi bilan o‘zi yolg‘iz qoladi. Faqat o‘zi yolg‘iz qolgandagina o‘zini tinglaydi, to‘g‘risini aytadi, hatto eng yolg‘onchi odam ham haqiqat va Haqqa yuzlashadi. Zero, insonning o‘zi bilan o‘zining suhbati o‘y-xayolidan o‘tgan gaplaridir. Sukut obrazining poetik ma’no qatlamlari shu bilangina chegaralanib qolmaydi. Chunki shoirning butun she’riyatiga tegishli an’anaviy poetik

so‘zlar guruhida bu obraz nihoyatda faol qo‘llaniladi. Shu boisdan ham shoir ijodida bu obraz serqatlam mazmun va ijtimoiy salmoqqa ega. Ko‘p hollarda misralar mazmuni aynan shu obrazga tayanadi. Ayni jihatlar shoir ijodining badiiy jihatdan yuksak saviyaga ega ekanligidan dalolatdir.

Xulosa qilib aytganda, zamonaviy o‘zbek dostonchiligining yirik vakili Ikrom Otamurod she’riyatida ijtimoiy mavzuning yetakchi o‘ringa chiqishi undagi an’anaviy obrazlarga ijtimoiy mazmun yuklanishi bilan alohida mohiyat kasb etadi. Shoir asarlaridagi har bir so‘z zamirida uning falsafiy qarashlari o‘ziga xos tarzda namoyon bo‘ladi. Insonning daxlsizligi va taqdiri uchun kuyunchaklik tuyg‘ulari aks etgan misralarida ijtimoiy dard talqinlari bo‘rtib turadi.

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6. Otamurod Ikrom. Sukut sadosi. – T.: Adabiyot, 2021.
7. Yo‘ldosh Qozoqboy. Tahlil mashaqqatlari // O‘zbekiston adabiyoti va san’ati, 1993. 20 avgust.

GLOBALLASHUV SHAROITIDA JAMIYATDA ETNIK BARQARORLIKNI TA'MINLASHNING IJTIMOIY-PSIXOLOGIK JIHATLARI

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Annotatsiya. *Ushbu maqolada globallashuv sharoitida jamiyatda etnik barqarorlikni ta'minlashning ijtimoiy-psixologik jihatlari tahlil qilingan. Tadqiqotning asosi sifatida G.U. Soldatovaning "Etnik o'zlik turlari" metodikasi tanlab olingan bo'lib, unda 100 nafar o'rta yoshli respondentlar o'rtasida o'tkazilgan so'rovnoma natijalari bayon etiladi. Maqolada respondentlarning milliy madaniyat, etnik manfaatlar ustunligi, millatlararo nikohlar va etnik izolyatsiyaga bo'lgan munosabatlari orqali jamiyatdagi etnik barqarorlik darajasi o'rganilgan. Tahlillar natijasida etnik o'zlikning ijobiy shakllari bilan bir qatorda, etnosentrizm va etnik egoizmga moyillik holatlari siyosiy kommunikatsiyalar prizmasida ko'rib chiqiladi. Muallif jamiyatda millatlararo ziddiyatlarning oldini olishda shaxsning etnik identifikatsiyasi barqaror bo'lishi muhimligini asoslab beradi. Tadqiqot xulosalari O'zbekistonda millatlararo totuvlikni mustahkamlash va davlatning barqaror rivojlanishini ta'minlashda ijtimoiy-psixologik va siyosiy muloqot mexanizmlarini takomillashtirishga xizmat qiladi. Maqola etnik barqarorlikni saqlashda fuqarolarning dunyoqarashini o'rganish va ularni ijobiy yo'naltirish masalalariga qiziqqan mutaxassislar uchun mo'ljallangan.*

Kalit so'zlar: *etnik barqarorlik, etnik o'zlik, G.U. Soldatova metodikasi, etnosentrizm, millatlararo ziddiyatlar, siyosiy kommunikatsiya, ijtimoiy-psixologik jihatlar, tolerantlik.*

Abstract. *This article analyzes the socio-psychological aspects of ensuring ethnic stability within society in the context of globalization. The research is based on G.U. Soldatova's "Types of Ethnic Identity" methodology and presents the results of a survey conducted among 100 middle-aged respondents. The study examines the level of ethnic stability in society by assessing respondents' attitudes toward national culture, the dominance of ethnic interests, interethnic marriages, and ethnic isolation. Based on the analysis, positive forms of ethnic identity, as well as tendencies toward ethnocentrism and ethnic egoism, are evaluated through the prism of political communication. The author substantiates the significance of stable ethnic identification of an individual in preventing interethnic conflicts within society. The findings of the research contribute to the improvement of socio-psychological and political dialogue mechanisms aimed at strengthening interethnic harmony and ensuring the sustainable development of the state in Uzbekistan. The article is intended for*

specialists interested in studying citizens' worldviews and fostering positive orientations to maintain ethnic stability.

Keywords: *ethnic stability, ethnic identity, G.U. Soldatova's methodology, ethnocentrism, interethnic conflicts, political communication, socio-psychological aspects, tolerance.*

Kirish. Zamonaviy dunyoda etnik barqarorlik har qanday davlatning milliy xavfsizligi va ijtimoiy taraqqiyotini belgilovchi eng muhim omillardan biri hisoblanadi. O‘zbekiston kabi ko‘p millatli davlatlarda etnik o‘zlikni anglash jarayonlari va millatlararo munosabatlarning psixologik holati doimiy ilmiy tahlilni talab etadi. Etnik barqarorlik nafaqat ziddiyatlarning yo‘qligi, balki jamiyat a’zolarining o‘z milliy mansubligidan faxrlanishi bilan birga boshqa millat vakillariga nisbatan yuksak darajadagi bag‘rikengligini ham anglatadi.

Moskva davlat universiteti professori G.U. Soldatovaning etnik o‘zlik nazariyasiga ko‘ra, shaxsning o‘z millati haqidagi tasavvurlari ijobiy (norma)dan destruktiv (egoizm, fanatizm) shakllargacha o‘zgarishi mumkin. [71] Etnik ziddiyatlarning oldini olishda aynan mana shu ijtimoiy-psixologik chegaralarni aniqlash va ularga siyosiy kommunikatsiya vositalari orqali ta’sir ko‘rsatish dolzarb ahamiyat kasb etmoqda. Jamiyatning ijtimoiy-iqtisodiy va siyosiy hayotida faol ishtirok etuvchi o‘rta yoshli qatlamning etnik qarashlari barqarorlikni saqlashda fundamental asos bo‘lib xizmat qiladi.

G. U. Soldatovaning “Etnik o‘zlik turalari” metodikasi bo‘yicha 100 nafar o‘rta yoshli aholi vakillari orasida o‘tkazilgan so‘rovnoma natijalari asosida etnik o‘zlikning holatini tahlil qilish va jamiyatda barqaror muhitni saqlab qolishning ijtimoiy-psixologik mexanizmlarini yoritib berishni maqsad etib belgiladik.

O‘zbekistonning polietnik jamiyatida milliy madaniyatga sadoqat va o‘zga millatlar huquqlariga hurmat o‘rtasidagi muvozanatni o‘rganish, kelajakda yuzaga kelishi mumkin bo‘lgan etnik ziddiyatlarning oldini olishda strategik ahamiyatga

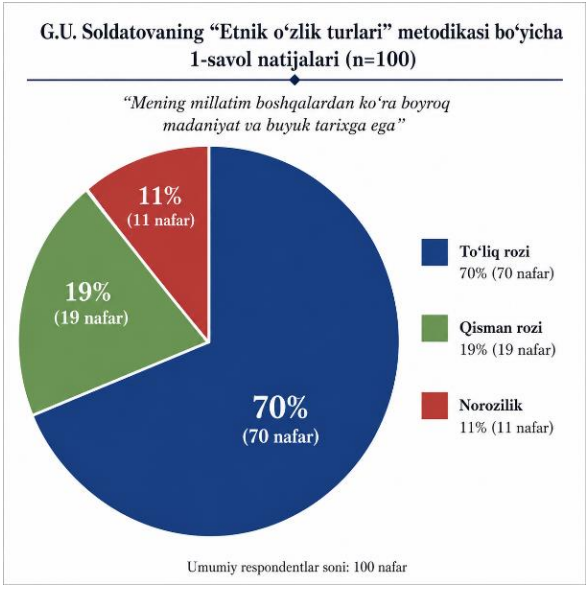
[71] Солдатова Г. У. Психология межэтнической напряженности. – Москва.: Смысл, 1998. – с. 389.

egadir[72]. So‘rovnomada ishtirok etganlarning yoshi 27-35 yoshni tashkil qilib, ularning barchasi jamiyatda o‘z o‘rnini topgan, ish joyiga ega, oliy ma’lumotli va ijtimoiy barqaror hayot tarziga ega respondentlar hisoblanadi. G.U. Soldatova metodikasi bo‘yicha ularga berilgan savollarga javoblar: “To‘liq roziman”, “Qisman roziman”, “Noroziman” ko‘rinishida bo‘lishi kerak edi. “Etnik o‘zlik turlari” metodikasi bo‘yicha o‘tkazilgan so‘rovnomada ilgari surilgan birinchi fikr: “Mening millatim boshqalardan ko‘ra boyroq madaniyat va buyuk tarixga ega” (Diagramma №1), shaklida bo‘lib, respondentlarning o‘z etnik guruhi haqidagi tasavvurlari va milliy g‘urur darajasini aniqlashga xizmat qiladi.

Olingan natijalarga ko‘ra, respondentlarning mutlaq ko‘pchiligi − 70 foizi ushbu fikrga "to‘liq rozi" ekanligini bildirgan. 19 foiz respondent esa "qisman rozi". Faqatgina 11 foiz holatda "norozilik" kayfiyati kuzatilgan. 27-35 yoshli, oliy ma’lumotli va ijtimoiy barqaror respondentlar orasida milliy madaniyat va tarixga bo‘lgan bunday yuksak sadoqatni quyidagicha baholash mumkin: Avvalo jamiyatning aksariyatida ijobiy etnik-o‘zlik shakllangan. 70% natija jamiyatning faol qatlamida o‘z milliy o‘zligiga nisbatan barqaror ijobiy munosabat shakllanganini ko‘rsatadi. Psixologik nuqtai nazardan, o‘z millati tarixidan faxrlanish shaxsning ichki psixologik barqarorligini va ijtimoiy moslashuvchanligini ta’minlovchi manba hisoblanadi[73]. Ikkinchidan, siyosiy kommunikatsiyaning samaradorligi yaqqol ko‘zga tashlanadi.

Diagramma №1

[72] Mirziyoyev Sh.M. Yangi O‘zbekiston taraqqiyot strategiyasi. - Toshkent: O‘zbekiston, 2022. - 416 b.
[73] Стефаненко Т. Г. Этнопсихология: Учебник для вузов. – Москва.: Аспект Пресс, 2009. - с. 368.

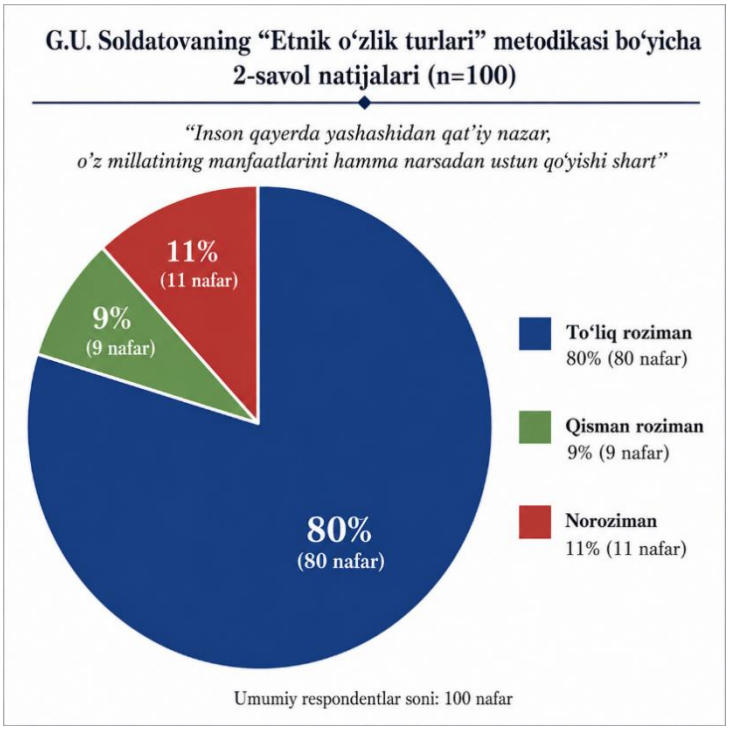


Ushbu ko‘rsatkich O‘zbekistonda mustaqillik yillarida yuritilgan milliy o‘zlikni anglash, buyuk ajdodlar merosini targ‘ib qilishga qaratilgan davlat siyosiy kommunikatsiyalarining samarasi sifatida talqin qilinadi. Respondentlarning oliy ma’lumotli ekanligi ularning tarixiy bilimga tayangan holda xulosa chiqarayotganidan dalolat beradi. Uchinchidan, O‘zbekiston polietnik muhitida etnik barqarorlik omili mavjud. Milliy madaniyatning "boyroq" va tarixning "buyukroq" deb hisoblanishi, agar u boshqa millatlarni kamsitish bilan kechmasa, jamiyatda "ijtimoiy immunitet" vazifasini o‘taydi. Bu barqarorlik tashqi mafkuraviy xurujlarga qarshi ma’naviy qalqon bo‘lib xizmat qiladi.

Respondentlarning bir qismi (11%) ushbu fikrga qo‘shilmasligi ularning universal (kosmopolitik) qadriyatlarga moyilligi yoki etnik farqlardan ko‘ra fuqarolik tamoyillarini ustun qo‘yishi bilan izohlanishi mumkin. Bu esa polietnik jamiyatda fikrlar rang-barangligi va demokratik qarashlar mavjudligini ko‘rsatadi.

So‘rovnomaning “Inson qayerda yashashidan qat’iy nazar, o‘z millatining manfaatlarini hamma narsadan ustun qo‘yishi shart” (Diagramma №2), deb ifodalangan ikkinchi fikrida respondentlarning etnik sadoqat darajasini va "millat manfaati" tushunchasini boshqa ijtimoiy qadriyatlardan qanchalik yuqori qo‘yishini o‘lchaydi.

Diagramma № 2



Respondentlarning 80% ushbu fikrga to‘liq qo‘shilishi jamiyatning ijtimoiy barqaror qatlamida milliy manfaatlar eng oliy qadriyat sifatida qabul qilinishini ko‘rsatadi. Bu ko‘rsatkich "ijtimoiy safarbarlik" darajasi yuqori ekanligidan dalolat beradi. Ya’ni, millat uchun muhim vaziyatlarda bu qatlam birlasha olish salohiyatiga ega. Soldatova metodikasiga ko‘ra, "millat manfaatini hamma narsadan (shu jumladan qonun, umuminsoniy huquqlar yoki shaxsiy manfaatlardan) ustun qo‘yish"ga moyillik - etnik egoizm elementlarini namoyon qiladi. 80% natijaning chiqishi respondentlarning dunyoqarashida etnosentrik qarashlar ustuvorligini ko‘rsatadi. Bu, bir tomondan, milliy birlikni mustahkamlasa, ikkinchi tomondan, polietnik jamiyatda boshqa etnik guruhlar bilan munosabatlarda "manfaatlar to‘qnashuvi" xavfini (potentsial ziddiyatni) oshirishi mumkin.

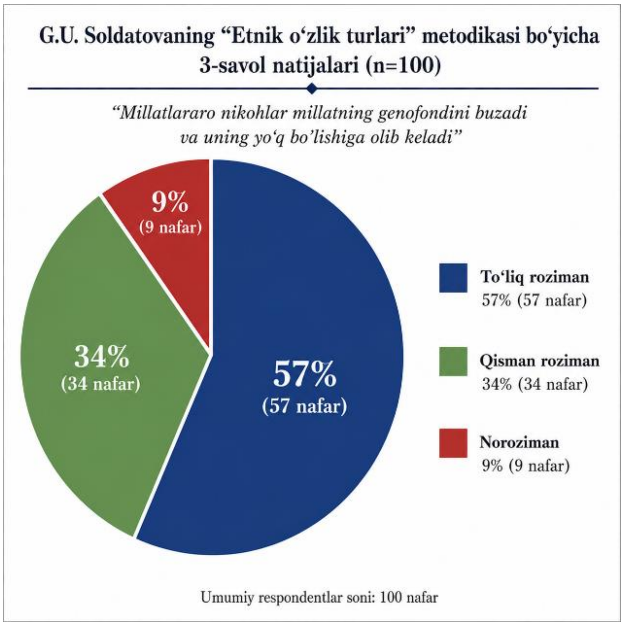
Respondentlarning barchasi oliy ma’lumotli va jamiyatda o‘z o‘rnini topgan shaxslar ekanligi hisobga olinsa, bunday yuqori ko‘rsatkich davlat tomonidan yuritilayotgan vatanparvarlik va milliy g‘oya targ‘ibotining "millat manfaati" tushunchasi bilan chambarchas bog‘langanligini ko‘rsatadi. Biroq, siyosiy kommunikatsiyada "milliy manfaat" tushunchasi "fuqarolik manfaati" (davlat manfaati) bilan qanchalik uyg‘unlashgani muhim masaladir. 9% respondentning "noroziman" deb javob berishi e’tiborga molik. Bu kichik guruh milliy manfaatlardan ko‘ra umuminsoniy qadriyatlar, huquq ustuvorligi yoki globalizatsiya tamoyillariga ko‘proq moyillik bildiradi. Etnik barqarorlikni ta’minlashda aynan mana shu

"muvozanat" (milliy sadoqat va umuminsoniy bag‘rikenglik) siyosiy kommunikatsiyaning asosiy maqsadi bo‘lishi kerak[74].

Tadqiqot natijalari shuni ko‘rsatadiki, 27-35 yoshli qatlamda milliy g‘urur darajasi juda yuqori. Biroq, etnik barqarorlikni ta’minlashda siyosiy kommunikatsiyalar ushbu "yuksak milliy g‘urur"ni "etnik ustunlik" (superiority) hissiga aylanib ketishidan himoya qilishi kerak. Ya’ni, "bizning tariximiz buyuk" g‘oyasi "boshqalarniki biznikidan past" degan tushunchaga o‘tmasligi uchun bag‘rikenglik (tolerantlik) xabarlari bilan muvozanatlashtirilishi lozim.

So‘rovnomada - “Millatlararo nikohlar millatning genofondini buzadi va uning yo‘q bo‘lishiga olib keladi”, (Diagramma №3) degan fikr respondentlarning etnik guruhni saqlab qolishdagi biologik va ijtimoiy qarashlarini aks ettiradi.

Diagramma №3



Respondentlarning javoblarini ijtimoiy-siyosiy tahlili shuni ko‘rsatadiki, etnik yopiqlikka moyillik (Isolationism) darajasi ularda baland. Jami 91% respondent (57% to‘liq va 34% qisman) millatlararo nikohlarni salbiy deb baholashi jamiyatda "etnik masofa" (social distance) darajasi yuqori ekanligini ko‘rsatadi. Bu ko‘rsatkich respondentlarning o‘z etnik o‘zligini saqlashni nafaqat madaniy, balki biologik "himoya mexanizmi" (defense mechanism) sifatida ko‘rishini bildiradi. Ishtirokchilar “genofond” tushunchasiga sub’ektiv yondoshadi, ularning oliy ma’lumotli ekanligi ularda "genofond" tushunchasiga ilmiy emas, balki ko‘proq an’anaviy-konservativ yondashuv ustunligini ko‘rsatadi.

[74] Лебедева Н. М. Введение в этническую и кросс-культурную психологию. - Москва.: Ключ-С, 1999. - с. 149.

Psixologik jihatdan bu - globallashuv jarayonida milliy o‘zlikni yo‘qotib qo‘yish qo‘rquvi (assimilyatsiya xavfi) bilan bog‘liq bo‘lishi mumkin.

Siyosiy kommunikatsiya nuqtai nazaridan, millatlararo nikohlarga nisbatan bunday konservativ munosabat polietnik jamiyatda guruhlararo integratsiyani sekinlashtiruvchi omildir. Bu "biz" va "ular" degan tushunchalarning mustahkamlanishiga olib keladi, bu esa kelajakda mikro-darajadagi (oilaviy, maishiy) etnik ziddiyatlar uchun zamin yaratishi mumkin, ya’ni ular ziddiyatlarning latent manbayi hisoblanadi. Respondentlarning 27-35 yoshda ekanligi (eng faol tug‘ilish va oila qurish yoshi) ularning bu qarashlari jamiyatning kelajakdagi demografik va etnik qiyofasini shakllantirishini ko‘rsatadi. Bu yerda ijtimoiy barqarorlik "yopiqlik" evaziga ta’minlanayotganini ko‘rishimiz mumkin.

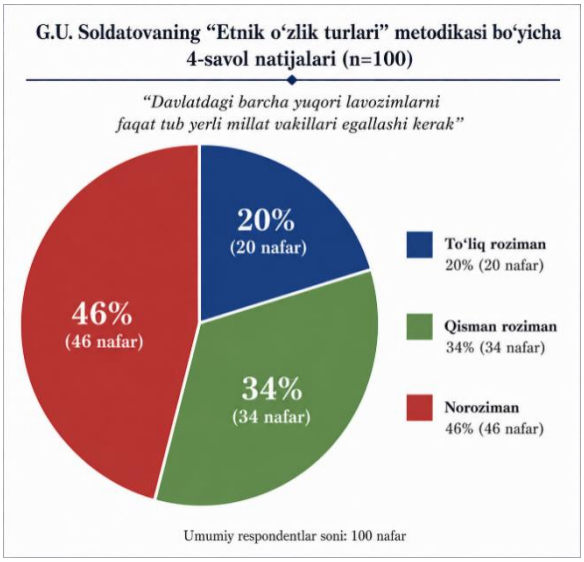
So‘rovnomada - “Davlatdagi barcha yuqori lavozimlarni faqat tub yerli millat vakillari egallashi kerak”, (Diagramma №4) degan fikr, jamiyatning siyosiy ongi va davlat boshqaruvida etnik iyerarxiyaga bo‘lgan munosabatini aniqlaydi. Bu savol bevosita fuqarolik jamiyati va meritokratiya (professionalizmga asoslangan boshqaruv) tamoyillariga daxldordir. Olingan natijalarga ko‘ra, oldingi uchta savolda (madaniyat, manfaat, nikoh) "roziman" javoblari mutlaq ustunlik qilgan bo‘lsa, aynan davlat boshqaruvi va lavozimlar masalasida respondentlarning deyarli yarmi (46%) bag‘rikenglik pozitsiyasini egallagan. Respondentlarning 46 foizi ushbu fikrga norozilik bildirganligi juda muhim ko‘rsatkichdir. Bu shuni anglatadiki, respondentlar oliy ma’lumotli va ijtimoiy barqaror qatlam sifatida davlat boshqaruvida etnik mansublikdan ko‘ra professional layoqat va qonun ustuvorligini muhimroq deb hisoblaydi. Bu holat jamiyatda etnik ziddiyatlarni oldini olishda eng kuchli "barqarorlik omili" bo‘lib xizmat qiladi.

O‘zbekiston Konstitutsiyasi va davlat siyosatida barcha fuqarolarning millatidan qat’i nazar teng huquqliligi tamoyili ushbu respondentlar ongida chuqur o‘rin olganini ko‘rish mumkin [75] . "O‘zbekiston - umumiy uyimiz" g‘oyasi kabi siyosiy

[75] O‘zbekiston Respublikasi Konstitutsiyasi. - Toshkent: O‘zbekiston, 2023.

kommunikatsiya xabarlari respondentlarning siyosiy qarashlariga ijobiy ta’sir ko‘rsatgan.

(Diagramma №4)



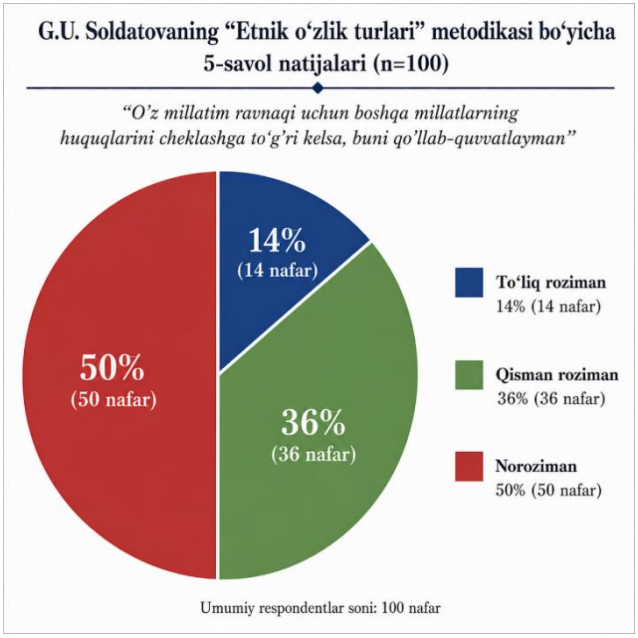
Shunday bo‘lsa-da, jami 54% (20% to‘liq va 34% qisman) respondentlarning ushbu fikrga moyillik bildirishi "etnik egoizm"ning ma’lum darajada saqlanib qolayotganini ko‘rsatadi. Bu ko‘rsatkich iqtisodiy yoki ijtimoiy inqirozlar davrida "etnik safarbarlik" va boshqa millat vakillarini siyosiy qarorlar qabul qilishdan chetlatish kayfiyatiga aylanib ketishi mumkin. 27-35 yoshli mutaxassislarning deyarli yarmi norozilik bildirishi, ular zamonaviy dunyoda davlatning raqobatbardoshligi etnik yopiqlikda emas, balki inklyuzivlikda (hamma uchun teng imkoniyat) ekanligini anglab yetayotganidan dalolat beradi.

So‘rovnomaning beshinchi bo‘lib - “O‘z millatim ravnaqi uchun boshqa millatlarning huquqlarini cheklashga to‘g’ri kelsa, buni qo‘llab-quvvatlayman” (Diagramma №5) , degan fikr ilgari surildi. Bu fikr respondentlarning nafaqat etnik qarashlarini, balki ularning huquqiy ongi va demokratik qadriyatlarga sadoqatini o‘lchaydi. Bu fikr etnik ziddiyatlarning yuzaga kelish ehtimolini to‘g‘ridan-to‘g‘ri ko‘rsatuvchi indikatordir.

Respondentlarning 50 foizi boshqa millatlarning huquqlarini cheklashga qat’iy qarshilik bildirgan. Bu juda ijobiy ko‘rsatkich bo‘lib, 27-35 yoshli, oliy ma’lumotli mutaxassislar o‘z millati manfaatini boshqalarning huquqlarini buzish evaziga emas, balki umumiy rivojlanish orqali ko‘rishini anglatadi. Bu - etnik barqarorlikning fundamentidir. E’tiborli jihati shundaki, 2-savolda 80% respondent "millat manfaatini ustun qo‘yaman" degan bo‘lsa, ushbu (5-savol) savolda "huquqlarni cheklayman"

deganlar soni 14 foizga tushib ketgan. Bu shuni anglatadiki, respondentlar orasida "sog‘lom vatanparvarlik" (millatini sevish) kuchli, ammo "etnik shovinizm" (boshqalarni kamsitish) darajasi past.

Diagramma №5



Bu fikrga nisbatan "Qisman roziman" guruhining (36%) xatariga alohida e’tibor berish kerak. Ushbu qatlam o‘zgaruvchan (labil) hisoblanadi. Ularning fikri ijtimoiy-siyosiy vaziyatga qarab o‘zgarishi mumkin. Siyosiy kommunikatsiya aynan mana shu 36 foiz qatlam bilan ishlashi, ularga millatlararo tenglikning afzalliklarini tushuntirishi lozim.

Etnik ziddiyatlarning potentsial o‘chog‘i (14%) hisoblanadi. "To‘liq roziman" deb javob bergan 14% respondent - etnik fanatizmga moyil qatlamdir. Siyosiy kommunikatsiyalar va ijtimoiy-psixologik profilaktika tadbirlari aynan mana shu kichik guruhning radikallashuvini oldini olishga yo‘naltirilishi kerak[76].

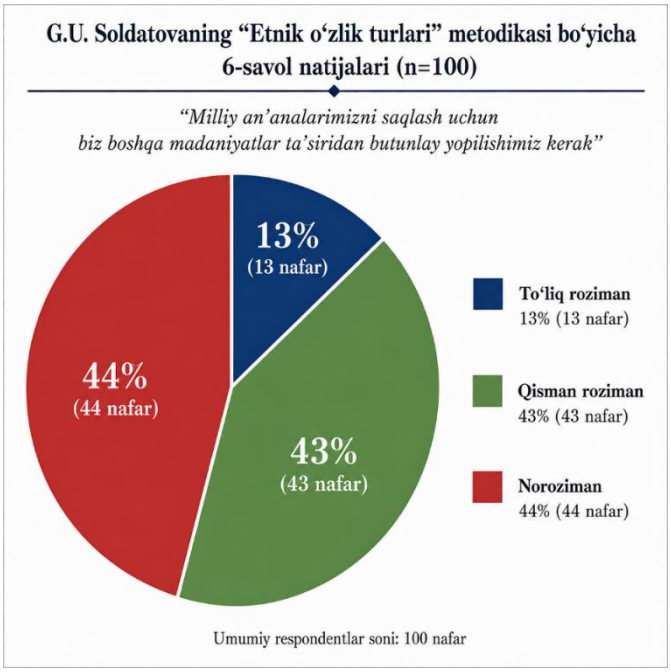
Jamiyatning globallashuv jarayonlariga bo‘lgan munosabati, "Etnik izolyatsiya" (yopiqlik) va "Madaniy integratsiya" (ochiqlik) o‘rtasidagi muvozanatni aniqlashga xizmat qiladigan oltinchi fikr - “Milliy an’analarimizni saqlash uchun biz boshqa madaniyatlar ta’siridan butunlay yopilishimiz kerak” (Diagramma №6), deb ilgari surildi. Respondentlarning zamonaviy dunyo va globallashuv sharoitida milliy o‘zlikni saqlash strategiyasini qanday tasavvur qilishini belgilaydi.

Respondentlarning 44 foizi madaniy yopiqlikka qarshi ekanligi ijobiy ko‘rsatkichdir. Bu - oliy ma’lumotli, 27-35 yoshli qatlamning dunyo bilan muloqot qilish, zamonaviy madaniyat yutuqlarini qabul qilish milliy an’analarga bevosita xavf

[76] Alimov B.B. Siyosiy kommunikatsiya va ijtimoiy barqarorlik mexanizmlari. - Toshkent: Akademiya, 2020.

tug‘dirmasligini anglab yetayotganidan dalolat beradi. Bu qatlam "milliy barqarorlik"ni yopiqlikda emas, balki raqobatbardoshlikda deb ko‘radi. "Qisman roziman" degan respondentlarning salmog‘i (43%) jamiyatda madaniy "immunitet"ni saqlash borasida kuchli xavotir mavjudligini ko‘rsatadi. Ular madaniy aloqalarni butunlay inkor qilmasa-da, "begona" madaniyatlar ta’siridan cho‘chiydi. Bu qatlam uchun milliy o‘zlikni saqlash - tashqi ta’sirlardan himoyalanish (defense) bilan tenglashtiriladi.

Diagramma №6



Butunlay yopilish tarafdori bo‘lgan kichik guruh etnik barqarorlikni faqat "izolyatsiya" orqali saqlash mumkin deb hisoblaydi. Bu ko‘rsatkichning pastligi (13%) jamiyatda radikal konservatizm kuchli emasligini ko‘rsatadi. Davlat tomonidan yuritilayotgan "ochiq O‘zbekiston" g‘oyasi va tashqi dunyo bilan integratsiya siyosati respondentlarning 44% ida o‘z aksini topgan. Biroq, 43% respondentning ikkilanishi siyosiy kommunikatsiyalarda "milliy an’analarni zamonaviylik bilan uyg‘unlashtirish" xabarlarini yanada ko‘paytirish zarurligini bildiradi.

Bizning fikrimizcha, respondentlarimizning katta qismi etnik o‘zlikni saqlab qolishda yopiqlik pozitsiyasida tursa ham, qonunlarga rioya qilish kayfiyati ustuvor tolerant insonlar hisoblanadi. Bu model O‘zbekistonda millatlararo barqarorlikning o‘ziga xos ijtimoiy-psixologik fundamentini tashkil etadi. Bu modelni yanada mustahkamlash va potensial ziddiyatlarning oldini olish uchun siyosiy kommunikatsiya strategiyasini quyidagi yo‘nalishlarda takomillashtirishni taklif qilamiz.

Avvalo, respondentlarning 80-90 foizi milliy manfaat va an’analarga sadoqatli ekanligini hisobga olib, siyosiy kommunikatsiya xabarlarini "Etnik o‘zlik"dan "Fuqarolik o‘zligi" sari yo‘naltirish lozim. Ikkinchidan, siyosiy kommunikatsiyada "Biz o‘zbekmiz", "Biz rusmiz" kabi etnik ajratuvchi xabarlardan ko‘ra, "Biz - O‘zbekiston xalqimiz" degan integratsiyalashgan g‘oyani kuchaytirish lozim. Bunda milliy sadoqat davlatga bo‘lgan sadoqat bilan tenglashtirilishi kerak. Uchinchidan, respondentlarning 91 foizi millatlararo nikohlarni "genofondga zarar" deb hisoblashi - jamiyatda biologik konservatizm kuchli ekanini ko‘rsatadi. Siyosiy va ijtimoiy kommunikatsiyalarda "genofond" tushunchasini biologik yopiqlikdan "ijtimoiy va intellektual boylik" tushunchasiga o‘zgartirib boorish lozim. Millatlararo hamjihatlik genofondni buzuvchi emas, balki jamiyatning madaniy va genetik moslashuvchanligini oshiruvchi omil sifatida talqin qilinishi kerak.

Tadqiqotingizda respondentlarning 46-50 foizi siyosiy huquqlar va lavozimlar borasida bag‘rikeng ekanligi aniqlandi. Bu jamiyatning eng sog‘lom qismidir. Davlat boshqaruvida meritokratiya (shaxsiy qobiliyat va professionalizm ustunligi) tamoyilini siyosiy kommunikatsiyaning asosiy poydevoriga aylantirilishi zarur. Yuqori lavozimlarga tayinlovlarda etnik mansublik emas, balki kompetensiya asosiy o‘rinda ekanligini ko‘rsatuvchi "muvaffaqiyat hikoyalari" (success stories) orqali turli millat vakillari obrazini yaratish ham foydali hisoblanadi.

Respondentlarning 27-35 yoshda ekanligi ularning asosiy axborotni ijtimoiy tarmoqlardan olishini anglatadi. Siyosiy kommunikatsiyaning raqamli segmentida etnik egoizmni qo‘zg‘atuvchi "fake news" va stereotiplarga qarshi "kontr-nativlar" yaratish. Ijtimoiy tarmoqlarda millatlararo do‘stlikni targ‘ib qiluvchi ijtimoiy roliklar emas, balki hayotiy, real va zamonaviy (masalan, turli millat vakillari birga ishlayotgan startaplar, sport jamoalari) kontentlarni ko‘paytirish ham muhim ahamiyatga ega.

Respondentlarning 43 foizi madaniy yopiqlik tarafdori. Bu ularda madaniy yutilish (assimilyatsiya) qo‘rquvi borligini ko‘rsatadi. Siyosiy kommunikatsiya strategiyasida "begona madaniyatlardan yopilish" emas, balki "milliy madaniy immunitetni

shakllantirish" g‘oyasini ilgari surish ham zarur. Ya’ni, boshqa madaniyatlar bilan muloqot qilish milliy an’analarni yo‘qotish emas, balki ularni dunyoga tanitish va boyitish imkoniyati ekanligini tushuntirish lozim.

Respondentlarning 14 foizida aniqlangan etnik fanatizm kichik ko‘rinsa-da, inqirozli vaziyatlarda (iqtisodiy pasayish, ijtimoiy adolatsizlik) tez o‘sishi mumkin. Davlat darajasida siyosiy-psixologik monitoring markazlarini tashkil etish, ushbu markazlar jamiyatdagi etnik kayfiyatni muntazam ravishda o‘rganib borishi va olingan natijalar asosida siyosiy rahbarlar uchun kommunikativ tavsiyalar (qaysi hududda qanday xabarlar berish kerakligi bo‘yicha) ishlab chiqishi zarur.

Xulosa

Tadqiqot natijalari shuni ko‘rsatadiki, O‘zbekistonning polietnik muhitida 27-35 yoshli, oliy ma’lumotli va ijtimoiy barqaror qatlam o‘rtasida etnik barqarorlikning o‘ziga xos ijtimoiy-psixologik modeli shakllangan. Olingan ma’lumotlar respondentlarda milliy g‘urur (70%) va etnik manfaatlar ustuvorligi (80%) juda yuqori bo‘lsa-da, bu tuyg‘u boshqa millat vakillarining siyosiy va huquqiy erkinliklarini cheklashga (14-20%) xizmat qilmasligini isbotladi. Ushbu paradoksal holatni “madaniy-biologik yopiqlik, lekin siyosiy-huquqiy bag‘rikenglik” modeli sifatida tavsiflash mumkin.

Siyosiy kommunikatsiyalar nuqtai nazaridan, respondentlarning oilaviy va an’anaviy masalalarda konservativligi jamiyatda latent (yashirin) etnik masofa mavjudligidan dalolat beradi. Shu bois, davlatning strategik kommunikatsiyalari endilikda “etnik o‘zlik” tushunchasini umummilliy “fuqarolik birdamligi” g‘oyasi bilan uyg‘unlashtirishi lozim. Tadqiqot xulosalari shuni ko‘rsatadiki, jamiyatda meritokratiya va ijtimoiy adolat tamoyillarining siyosiy muloqot orqali mustahkamlanishi etnosentrik qarashlarning radikallashuviga yo‘l qo‘ymaydigan asosiy himoya mexanizmidir.

Xulosa qilib aytganda, O‘zbekistonda etnik barqarorlikni ta’minlashda siyosiy kommunikatsiyalar shunchaki axborot uzatish vositasi emas, balki milliy sadoqatni

sog‘lom vatanparvarlikka transformatsiya qiluvchi ijtimoiy-psixologik regulyator vazifasini o‘tashi kerak. Kelajakdagi ziddiyatlarning oldini olish uchun milliy an’analarni saqlash g‘oyasini madaniy izolyatsiya (yopiqlik) bilan emas, balki ochiq jamiyat va professional integratsiya bilan bog‘lovchi yangi kommunikativ strategiyalarni amaliyotga joriy etish strategik ahamiyatga egadir.

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