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Adju universiteti tomonidan ta’sis etilgan “Advanced Journal of University Science and Creative Innovations” ilmiy jurnali Oliy attestatsiya komissiyasining 2026-yil 31-yanvardagi 01-08/375/41-sonli qarori asosida pedagogika va filologiya yo‘nalishlari bo‘yicha ilmiy maqolalarni chop etish uchun tavsiya etiladigan ilmiy nashrlar ro‘yxatiga kiritilgan.

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SO‘ZBOSHI

AJOU SCI xalqaro ilmiy jurnalining ushbu soni siz, hurmatli o‘quvchilar, olimlar va tadqiqotchilar e’tiboriga havola etilayotganidan mamnunmiz. Bugungi globallashuv va raqamli transformatsiya jarayonlarida ilm-fan va innovatsiyalar jamiyat taraqqiyotining ajralmas omiliga aylangan. Ayniqsa, ta’lim, texnologiya, axborot tizimlari, muhandislik, tabiiy fanlar va ijtimoiy yo‘nalishlarda olib borilayotgan ilmiy izlanishlar ushbu o‘zgarishlarning muhim poydevoridir.

AJOU SCI jurnali zamonaviy ilmiy tadqiqotlarni keng ommaga yetkazish, turli sohalarda olib borilayotgan ilg‘or ishlanmalarni targ‘ib qilish, yosh va tajribali olimlar o‘rtasida ilmiy muloqot maydonini shakllantirishni o‘z oldiga maqsad qilgan. Jurnal sahifalarida e’lon qilinayotgan maqolalar bugungi kunning dolzarb muammolarini ilmiy asosda yoritadi, ularning yechimiga doir taklif va tavsiyalar beradi.

Mazkur son orqali siz yangi g‘oyalar, izlanishlar va ilmiy qarashlar bilan tanishasiz, ularning amaliy ahamiyatini anglaysiz va o‘z faoliyatingizda qo‘llash imkoniyatiga ega bo‘lasiz, degan umiddamiz.

Barcha mualliflarga ilmiy izlanishlaridagi muvaffaqiyatlar, o‘quvchilarga esa samarali o‘rganish va ilhom tilaymiz.

Hurmat bilan,

Tahrir hay’ati nomidan

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G.A. Muratov

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* * *

05.00.00 - TEXNIKA FANLARI

* * *

05.00.00 – ТЕХНИЧЕСКИЕ НАУКИ

"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

AVTONOM MOBIL ROBOTLAR NAVIGATSIYASI VA BOSHQARUVI UCHUN SLAM ALGORITMLARINING QIYOSIY TAHLILI (ROS2 SIMULYATSIYASIDA)

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Annotatsiya. *Avtonom mobil robotlarning noma'lum muhitda mustaqil harakatlanishi robot navigatsiya tizimining asosiy muammolaridan biridir. Ushbu muammo robotning o'z joylashuvini aniqlashi va muhit xaritasini yaratish jarayonlari bilan chambarchas bog'liq. Simultaneous Localization and Mapping (SLAM) texnologiyasi ushbu ikki vazifani bir vaqtning o'zida bajarish imkonini beradi hamda zamonaviy robot navigatsiya tizimlarining muhim komponenti hisoblanadi. Mazkur maqolada avtonom mobil robotlar navigatsiyasi va boshqaruvi uchun qo'llaniladigan SLAM algoritmlarining qiyosiy tahlili keltiriladi. Tadqiqot doirasida filtr asosidagi, graf asosidagi, LiDAR asosidagi, vizual hamda sensor birlashuvi asosidagi SLAM algoritmlari o'rganilib, ularning robot navigatsiya tizimlari uchun samaradorligi baholanadi. Shuningdek, SLAM algoritmlarining ROS2 platformasida qo'llanish imkoniyatlari, Gazebo simulyatsiya muhiti va RViz vizualizatsiya vositalari bilan integratsiyasi ko'rib chiqiladi. Tadqiqot natijalari robot navigatsiya va boshqaruv algoritmlarini optimallashtirish uchun mos SLAM texnologiyalarini tanlashda muhim ilmiy asos bo'lib xizmat qiladi.*

Kalit so'zlar: *SLAM, mobil robotlar, robot navigatsiyasi, lokallashtirish, kartografiyalash, ROS2, Gazebo simulyatsiyasi, RViz vizualizatsiya, LiDAR SLAM, Visual SLAM.*

Abstract. *Autonomous navigation of mobile robots in unknown environments is one of the key challenges in robotic navigation systems. This problem is closely related to determining the robot's position and constructing a map of the environment. Simultaneous Localization and*

Mapping (SLAM) technology enables solving these two tasks simultaneously and is considered a fundamental component of modern robotic navigation systems. This paper presents a comparative analysis of SLAM algorithms used for autonomous mobile robot navigation and control. The study examines filter-based, graph-based, LiDAR-based, visual, and sensor fusion SLAM algorithms, and evaluates their effectiveness in robotic navigation systems. In addition, the implementation of SLAM algorithms on the ROS2 platform, as well as their integration with the Gazebo simulation environment and RViz visualization tools, are analyzed. The results of the study provide a scientific basis for selecting optimal SLAM technologies to improve navigation and control algorithms in mobile robotic systems.

Keywords: *SLAM, mobile robots, robot navigation, localization, mapping, ROS2, Gazebo simulation, RViz visualization, LiDAR SLAM, Visual SLAM.*

Аннотация. *Автономное перемещение мобильных роботов в неизвестной среде является одной из ключевых задач робототехнических навигационных систем. Данная проблема тесно связана с определением положения робота и построением карты окружающей среды. Технология Simultaneous Localization and Mapping (SLAM) позволяет одновременно решать обе задачи и является важнейшим компонентом современных систем роботной навигации. В данной работе представлен сравнительный анализ алгоритмов SLAM, применяемых для навигации и управления автономными мобильными роботами. В исследовании рассмотрены фильтрационные, графовые, LiDAR-основанные, визуальные, а также алгоритмы слияния сенсорных данных, и проведена оценка их эффективности в системах роботной навигации. Кроме того, проанализированы возможности применения алгоритмов SLAM на платформе ROS2, а также их интеграция со средой моделирования Gazebo и инструментом визуализации RViz. Результаты исследования служат научной основой для выбора оптимальных технологий SLAM с целью повышения эффективности алгоритмов навигации и управления мобильными роботами.*

Ключевые слова: *SLAM, мобильные роботы, роботная навигация, локализация, картографирование, ROS2, симуляция Gazebo, визуализация RViz, LiDAR SLAM, визуальный SLAM.*

1. Kirish. Robototexnika sohasida avtonom mobil robotlar muhim yo‘nalishlardan biri hisoblanadi. Bunday robotlar sanoat, logistika, aqlli omborlar, qutqaruv operatsiyalari va xizmat ko‘rsatish tizimlarida keng qo‘llanilmoqda [1], [2]. Ularning samarali ishlashi robotning atrof-muhitni sezishi, o‘z joylashuvini aniqlashi va xavfsiz harakatlanish yo‘lini tanlay olishiga bog‘liq.

Robot navigatsiyasidagi asosiy muammolardan biri noma’lum muhitda bir vaqtning o‘zida robot joylashuvini aniqlash va muhit xaritasini yaratishdir. Ushbu muammo robototexnika sohasida Simultaneous Localization and Mapping (SLAM) deb ataladi [3], [4]. SLAM algoritmlari robotga sensor ma’lumotlari asosida o‘z pozitsiyasini baholash va muhit xaritasini shakllantirish imkonini beradi [6].

Hozirgi kunda SLAM algoritmlarining turli turlari ishlab chiqilgan. Ular orasida filtr asosidagi, graf asosidagi, LiDAR asosidagi, vizual hamda sensor birlashuvi asosidagi algoritmlar mavjud [6], [7]. Har bir algoritm turli muhit sharoiti va sensor konfiguratsiyasida turlicha

samaradorlik ko‘rsatadi. Shu sababli robot navigatsiya tizimi uchun eng mos SLAM algoritmini tanlash muhim ilmiy masala hisoblanadi.

Robot navigatsiya tizimlarini ishlab chiqishda ROS va ayniqsa ROS2 platformasi keng qo‘llaniladi [8], [9]. ROS2 robot algoritmlarini modulli tarzda yaratish va sinovdan o‘tkazish imkonini beradi. Gazebo simulyatsiya muhiti robotning fizik harakatini modellashtirsa, RViz robot sensor ma’lumotlari va xaritasini vizual ko‘rsatadi. Bu vositalar algoritmlarni real robotda qo‘llashdan oldin simulyatsiyada tekshirish imkonini beradi.

Mazkur maqolaning asosiy maqsadi avtonom mobil robotlar navigatsiyasi va boshqaruvi uchun qo‘llaniladigan SLAM algoritmlarini qiyosiy tahlil qilishdan iborat. Tadqiqot davomida 25 dan ortiq SLAM algoritmlari o‘rganilib, ulardan eng samarali va moslashuvchan algoritmlar tanlab olindi. Ushbu natijalar keyingi bosqichlarda navigatsiya va boshqaruv algoritmlarini ishlab chiqish uchun ilmiy asos bo‘lib xizmat qiladi.

2. SLAM NAZARIYASI VA MATEMATIK MODELI

Simultaneous Localization and Mapping (SLAM) muammosi robototexnika sohasida mobil robotlarning noma’lum muhitda harakatlanishi jarayonida bir vaqtning o‘zida o‘z joylashuvini aniqlashi hamda muhit xaritasini yaratishi masalasini ifodalaydi. Ushbu muammo ehtimollik nazariyasi va statistik modellashtirish usullariga asoslangan bo‘lib, robotning sensor ma’lumotlari va boshqaruv signallaridan foydalanib muhitni rekonstruksiya qilish imkonini beradi.

SLAM muammosi odatda Bayes ehtimollik modeli orqali ifodalanadi.

SLAM EHTIMOLLIK MODELI

SLAM muammosi robotning joylashuvini va muhit xaritasini bir vaqtda aniqlashga qaratilgan. Bu jarayon ehtimollik modeli orqali ifodalanadi va quyidagi ko‘rinishda yoziladi: p(x_k,m┤|〖z〗_(1:k),u_(1:k))

(1). Bu yerda x_k - robotning k-vaqtdagi holati (pozitsiya va orientatsiya), m - muhit xaritasi, 〖z〗_(1:k) - sensor kuzatuvlari ketma-ketligi, u_(1:k) - robot boshqaruv signallari

Ushbu model yordamida robot sensor ma’lumotlariga asoslanib o‘z joylashuvini aniqlaydi va muhit xaritasini shakllantiradi. Shu sababli u SLAM algoritmlarining asosiy matematik modeli hisoblanadi [1]..

BAYES SLAM MODELI

SLAM muammosi ko‘pincha Bayes filtriga asoslanadi va rekursiv tenglama orqali ifodalanadi. Ushbu model quyidagi ko‘rinishda yoziladi:p(x_k,m┤|〖z〗_(1:k),u_(1:k))=η p(z_k┤|x_k,m)

∫▒〖p(x_k┤|〖x〗_(k-1),u_k) * p(x_(k-1),m┤|〖z〗_(1:k-1),u_(1:k-1))〗

〖dx〗_(k-1) (2) bu yerda p(x_k┤|〖x〗_(k-1),u_k) - robot harakat modeli, p(z_k┤|x_k,m) - sensor modeli, η - normalizatsiya koeffitsienti bildiradi. Ushbu model yordamida robot avvalgi holat va yangi sensor ma’lumotlariga asoslanib o‘z pozitsiyasini va muhit xaritasini yangilab boradi. Shu sababli Bayes modeli SLAM algoritmlarining asosiy matematik asosini tashkil etadi [36].

ROBOT HARAKAT MODELI (MOTION MODEL)

Robotning harakat modeli uning oldingi holati va boshqaruv signallari asosida keyingi holatini aniqlashga xizmat qiladi. Ushbu jarayon quyidagi umumiy tenglama orqali ifodalanadi:

x_k=f 〖(x)〗 _(k-1),u_k 〖,w〗 _k) (3). Bu yerda x_(k-1) robotning oldingi holati, u_k boshqaruv signali, w_k- harakat shovqini, ni bildiradi. Ushbu model robotning real muhitdagi harakati to‘liq aniq emasligini hisobga oladi

Mobil robotlar uchun amaliyotda eng ko‘p qo‘llaniladigan modellardan biri differensial harakat modelidir. Ushbu modelga ko‘ra robotning yangi holati uning tezligi va burchak tezligiga bog‘liq holda yangilanadi:

x_k= [■(x_(k-1)+ 〖v Δt cos〗 ⁡θ@y_(k-1)+ v Δt sin⁡θ@θ_(k-1)+ ω⁡〖 Δt 〗)] (4)

Bu yerda: v - robot tezligi, ω- burchak tezligi, Δt -vaqt oralig‘ini bildiradi. Ushbu model mobil robotlarning tekislikdagi harakatini sodda va samarali tarzda ifodalash imkonini beradi [36].

SENSOR MODELI

Robot sensorlari muhit haqida ma’lumot beradi. Sensor modeli esa robotning holati va muhit xaritasiga qarab sensor o‘lchovlarini ifodalaydi. Bu model quyidagi ko‘rinishda yoziladi: z_k=h 〖(x)〗 _k,m 〖,v〗 _k) (5)

bu yerda z_k - sensor o‘lchovi, h(·)- sensor funksiyasi, v_k- sensor shovqini ni bildiradi. Ushbu model yordamida robot sensorlardan olingan ma’lumotlar asosida muhit haqidagi axborotni qayta ishlaydi

Masalan, LiDAR sensori uchun masofa o‘lchovi obyekt va robot koordinatalari orasidagi masofaga bog‘liq bo‘ladi. Bu jarayon quyidagi tenglama bilan ifodalanadi:

z=√(〖(x_l-x_r)〗 ^(2)+ 〖(y_l-y_r)〗 ^(2)) (6) bu yerda (x_l,y_l) - muhitdagi obyekt koordinatalari, (x_r,y_r)- robot koordinatalari ni bildiradi. Ushbu model sensor ma’lumotlarini matematik ifodalash va SLAM algoritmlarida ulardan samarali foydalanish uchun muhim hisoblanadi[36].

ONLINE SLAM va FULL SLAM

SLAM muammosi odatda ikki xil ko‘rinishda qaraladi: Online SLAM va Full SLAM. Online SLAM holatida robot faqat joriy vaqt momentidagi holatini baholaydi. Bu quyidagi ko‘rinishda ifodalanadi:

p(x_k,m┤| 〖 z〗 _(1:k),u_(1:k)) (7)

Full SLAM esa robotning butun harakat trayektoriyasini hisobga oladi. Bu holda ehtimollik taqsimoti quyidagicha yoziladi::

p(x_(1:k),m┤| 〖 z〗 _(1:k),u_(1:k)) (8)

Online SLAM hisoblash jihatdan tezroq bo‘lib, real vaqt tizimlari uchun qulay hisoblanadi. Full SLAM esa ko‘proq hisoblash resurslarini talab qiladi, ammo natijalari odatda aniqroq bo‘ladi. Shu sababli amaliyotda vazifaga qarab ushbu ikki yondashuvdan biri tanlanadi[36].

SLAM MUAMMOSINING GRAFIK MODELI

SLAM muammosi graf ko‘rinishida ifodalanadi, bunda tugunlar robot pozitsiyalarini, qirralar esa sensor o‘lchovlarini bildiradi. Graf SLAMda optimal yechim quyidagi xarajat funksiyasini minimallashtirish orqali topiladi:

X^*=arg⁡〖min/X〗 ∑_(i,j)▒〖e_(i,j) (X)^(T) Ω_(i,j) e_(i,j) (X)〗 (9)

bu yerda e_(i,j)- o‘lchov xatoligi, Ω_(i,j)- kovariatsiya matriksasi[37].

SLAM MUAMMOSIDAGI ASOSIY NOANIQLIK MANBALARI

SLAM tizimida bir nechta noaniqlik manbalari mavjud. Ularga sensor shovqini, robot harakatidagi xatoliklar, muhit dinamikasi hamda ma’lumotlarni moslashtirish xatolari kiradi. Ushbu noaniqliklar robotning joylashuvi va xarita aniqligiga ta’sir qiladi.

Robot holatidagi noaniqlik odatda kovariatsiya matriksasi orqali ifodalanadi:

$$\sum = E[(x-\mu)(x-\mu)^T] \qquad (10)$$

Bu yeda μ - o‘rtacha qiymat, Σ esa kovariatsiya matriksasini bildiradi[36].

SLAM ALGORITMLARINING MATEMATIK MURAKKABLIGI

Turli SLAM algoritmlarining hisoblash murakkabligi quyidagicha:

- EKF-SLAM [1] - O(n^2)
- FastSLAM[4] - O(n log n)
- Graph-SLAM[3] - O(n^3)
- SEIF-SLAM[5] - O(n)

bu yerda n — xaritadagi landmarklar soni.

Ushbu bo‘limda SLAM muammosining matematik modeli, Bayes SLAM formulasi, robot harakat modeli, sensor modeli hamda graf optimizatsiya modeli ko‘rib chiqildi. Ushbu matematik asoslar SLAM algoritmlarining ishlash prinsiplarini tushunish uchun muhim hisoblanadi hamda keyingi bo‘limlarda turli SLAM algoritmlarini tahlil qilish uchun nazariy asos bo‘lib xizmat qiladi.

3.SLAM ALGORITMLARINING KLASSIFIKATSIYASI VA QIYOSIY TAHLILI

Zamonaviy robototexnika sohasida SLAM (Simultaneous Localization and Mapping) algoritmlari mobil robotlarning noma’lum muhitda harakatlanishini ta’minlovchi asosiy texnologiyalardan biri hisoblanadi. So‘nggi yillarda robot navigatsiyasi uchun turli matematik modellarga asoslangan SLAM algoritmlarining ko‘plab variantlari ishlab chiqildi. Ushbu algoritmlar robotning muhitni idrok etish usuli, ishlatiladigan sensorlar, hisoblash murakkabligi hamda real vaqt rejimida ishlash imkoniyatlari bilan bir-biridan farqlanadi.

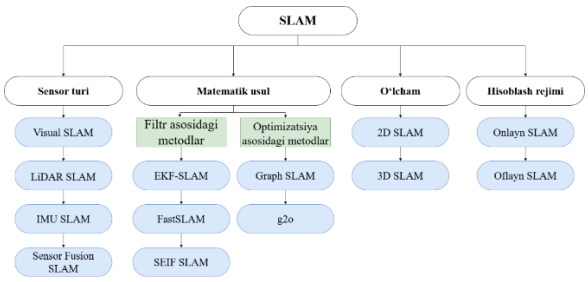
Robot navigatsiya tizimlari uchun optimal SLAM algoritmini tanlash maqsadida mavjud algoritmlarni tizimli ravishda tahlil qilish zarur. Chunki turli muhit sharoitlari, sensor konfiguratsiyalari hamda robot platformalariga qarab algoritmlarning samaradorligi sezilarli darajada farq qiladi. Shu sababli ushbu tadqiqotda 25–30 ta mashhur SLAM algoritmlari klassifikatsiya qilinib, ularning asosiy xususiyatlari qiyosiy tarzda o‘rganildi.

SLAM ALGORITMLARINING UMUMIY KLASSIFIKATSIYASI

SLAM algoritmlarini bir necha mezonlar asosida tasniflash mumkin. Eng ko‘p qo‘llaniladigan klassifikatsiya quyidagi besh asosiy guruhdan iborat:

- filter asosidagi SLAM algoritmlari
- graf optimizatsiyasiga asoslangan SLAM algoritmlari
- LiDAR asosidagi SLAM algoritmlari
- visual SLAM algoritmlari
- sensor fusion SLAM algoritmlari

Quyidagi rasmda SLAM algoritmlarining umumiy klassifikatsiyasini ko‘rsatadi (1-rasm)[31].



1-rasm. Zamonaviy SLAM algoritmlarining klassifikatsiya diagrammasi

FILTER ASOSIDAGI SLAM ALGORITMLARI

Filter-based SLAM algoritmlari Bayes filtrlariga asoslangan bo‘lib, robot pozitsiyasini ehtimollik modeli orqali baholaydi. Ushbu algoritmlar robotning harakat modeli va sensor kuzatuvlarini iterativ ravishda yangilash orqali lokallashtirishni amalga oshiradi.

Filter asosidagi SLAM algoritmlariga quyidagilar kiradi:

• EKF-SLAM[1]

• UKF-SLAM [2]

• FastSLAM [4]

• FastSLAM 2.0[31]

• SEIF-SLAM [5]

• Particle Filter SLAM[10]

Filter asosidagi algoritmlar kichik muhitlar uchun samarali bo‘lsa-da, katta muhitlarda hisoblash murakkabligi ortib boradi.

GRAPH ASOSIDAGI SLAM ALGORITMLARI

Graph-based SLAM algoritmlari robot trayektoriyasini graf struktura sifatida modellashtiradi[3]. Ushbu yondashuvda:

• graf tugunlari — robot pozitsiyalari

• graf qirralari — sensor o‘lchovlari

Graf optimizatsiyasi orqali robot trayektoriyasi aniqlashtiriladi.

Graph SLAM algoritmlariga quyidagilar kiradi:

• Graph-SLAM[3]

• Pose Graph SLAM[3]

• iSAM[7]

• iSAM2[8]

• g2o [9]

• TORO[33]

Graph-based algoritmlar katta muhitlar uchun yuqori aniqlik beradi.

LIDAR ASOSIDAGI SLAM ALGORITMLARI

LiDAR sensorlari muhitni yuqori aniqlik bilan skanerlash imkonini beradi. Shu sababli mobil robot navigatsiya tizimlarida LiDAR asosidagi SLAM algoritmlari keng qo‘llaniladi.

LiDAR asosidagi SLAM algoritmlariga quyidagilar kiradi:

• GMapping[32]

• Hector SLAM [11]

• Cartographer[12]

• LOAM[25]

• LeGO-LOAM[26]

• HDL Graph SLAM[28]

VISUAL SLAM ALGORITMLARI

Visual SLAM algoritmlari muhitni kameralar yordamida kuzatish orqali robot navigatsiyasini amalga oshiradi. Ushbu algoritmlar kompyuter ko‘rish usullariga asoslangan.

Visual SLAM algoritmlariga quyidagilar kiradi:

• MonoSLAM[15]

• PTAM[16]

• ORB-SLAM [17]

• ORB-SLAM2[18]

• ORB-SLAM3 [19]

• LSD-SLAM[20]

• DSO[21]

SENSOR FUSION SLAM ALGORITMLARI

Sensor fusion SLAM algoritmlari bir nechta sensor ma’lumotlarini birlashtirish orqali lokallashtirish aniqligini oshiradi.

Sensor fusion algoritmlariga quyidagilar kiradi:

• RTAB-Map[13]

• VINS-Mono[23]

• LIO-SAM[27]

• OKVIS [22]

• Kimera[24]

SLAM algoritmlarining qiyosiy jadvali

1-jadval. Zamonaviy SLAM algoritmlarining qiyosiy tahlili

№	Algoritm	Sensor	Aniqlik	Real vaqt	ROS2 qo‘llash
1	EKF-SLAM[1]	LiDAR	o‘rta	+	Cheklangan
2	UKF-SLAM[2]	LiDAR	o‘rta	+	Cheklangan
3	FastSLAM[4]	LiDAR	Yuqori	+	Qisman
4	FastSLAM2[31]	LiDAR	Yuqori	+	Qisman
5	SEIF-SLAM[5]	LiDAR	o‘rta	+	yo‘q
6	Particle SLAM	LiDAR	Yuqori	-	Qisman
7	Graph-SLAM[3]	LiDAR	juda yuqori	-	Mavjud

8	Pose Graph[3]	LiDAR	juda yuqori	+	Mavjud
9	iSAM[7]	LiDAR	Yuqori	+	Mavjud
10	iSAM2[8]	LiDAR	juda yuqori	+	Mavjud
11	g2o[9]	LiDAR	Yuqori	+	Mavjud
12	TORO[33]	LiDAR	o‘rta	+	Cheklangan
13	GMapping[32]	LiDAR	Yuqori	+	Mavjud
14	Hector SLAM[11]	LiDAR	Yuqori	+	Mavjud
15	Cartographer[12]	LiDAR	juda yuqori	+	Mavjud
16	LOAM[25]	LiDAR	juda yuqori	+	Mavjud
17	LeGO-LOAM[26]	LiDAR	juda yuqori	+	Mavjud
18	HDL-SLAM[28]	LiDAR	juda yuqori	+	Mavjud
19	MonoSLAM[15]	kamera	o‘rta	-	yo‘q
20	PTAM[16]	kamera	o‘rta	+	Qisman
21	ORB-SLAM[17]	kamera	Yuqori	+	Mavjud
22	ORB-SLAM2[18]	kamera	Yuqori	+	Mavjud
23	ORB-SLAM3[19]	kamera	juda yuqori	+	Mavjud
24	LSD-SLAM[20]	kamera	o‘rta	+	Qisman
25	DSO[21]	kamera	Yuqori	+	Qisman
26	RTAB-Map[13]	RGB-D	Yuqori	+	Mavjud
27	VINS-Mono[23]	kamera+IMU	Yuqori	+	Mavjud
28	LIO-SAM[27]	LiDAR+IMU	juda yuqori	+	Mavjud
29	OKVIS[22]	kamera+IMU	Yuqori	+	Mavjud
30	Kimera[24]	kamera+IMU	juda yuqori	+	Mavjud

OPTIMAL SLAM ALGORITMLARINI TANLASH

Yuqoridagi tahlil asosida robot navigatsiya tizimlari uchun quyidagi algoritmlar eng samarali deb topildi(1-jadval):

Cartographer[12]

RTAB-Map[13]

ORB-SLAM3[19]

LIO-SAM[27]

LeGO-LOAM[26]

Hector SLAM[11]

GMapping[32]

Mazkur algoritmlar yuqori aniqlik, real vaqt ishlash imkoniyati hamda ROS2 platformasi bilan integratsiya imkoniyatlari bilan ajralib turadi. Ushbu bo‘limda zamonaviy SLAM algoritmlarining kengaytirilgan klassifikatsiyasi hamda 30 ta algoritmning qiyosiy tahlili amalga oshirildi. Tahlil natijalari asosida robot navigatsiya tizimlari uchun eng samarali SLAM algoritmlari aniqlab olindi.

Mazkur maqola doirasida ushbu algoritmlar faqat nazariy jihatdan tahlil qilindi. Keyingi ilmiy tadqiqotlarda ushbu algoritmlar asosida mobil robot navigatsiya va boshqaruv algoritmlari ishlab chiqilishi rejalashtirilgan.

4.TADQIQOT METODOLOGIYASI VA ROS2 ASOSIDAGI SIMULYATSIYA MUHITI

Zamonaviy robototexnika tadqiqotlarida algoritmlarni real robotlarda sinovdan o‘tkazishdan oldin simulyatsiya muhitida tekshirish keng qo‘llaniladi. Simulyatsiya muhitlari robot tizimlarining ishlashini xavfsiz va nazorat qilinadigan sharoitda tahlil qilish imkonini beradi. Shu sababli mobil robot navigatsiya tizimlarini tadqiq qilishda Robot Operating System (ROS) platformasi asosidagi simulyatsiya muhitlari keng qo‘llaniladi[30].

Mazkur tadqiqotda SLAM algoritmlarini kelajakdagi navigatsiya va boshqaruv algoritmlari bilan integratsiya qilish imkoniyatlarini baholash uchun ROS2 platformasi asosidagi simulyatsiya muhiti tanlandi. ROS2 robot dasturiy ta’minotini modulli arxitektura asosida ishlab chiqish imkonini beradi hamda turli sensorlar va robot komponentlarini yagona tizimga integratsiyalash imkonini yaratadi.

ROS2 platformasi quyidagi asosiy komponentlardan iborat:

robot dasturiy modullari (nodes)

mavzular (topics) orqali ma’lumot almashinuvi

xizmatlar (services) orqali tizim boshqaruvi

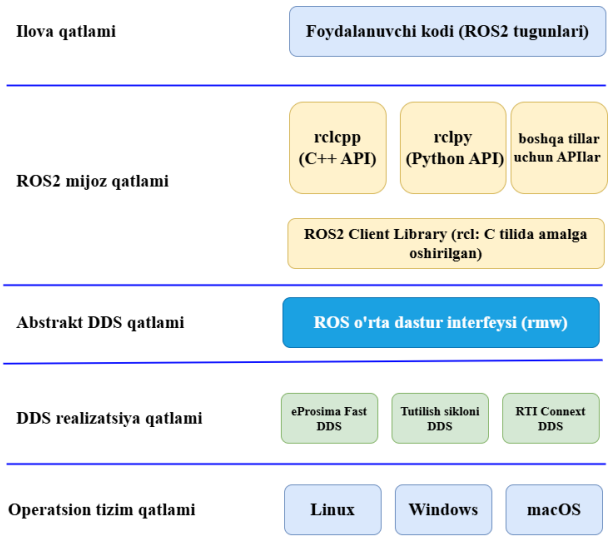
harakat rejalashtirish modullari

Ushbu arxitektura robot tizimlarining modulli va kengaytiriladigan bo‘lishini ta’minlashi o‘rganildi.

ROS2 ARXITEKTURASI

ROS2 platformasining arxitekturasi robot tizimlari o‘rtasida taqsimlangan hisoblash modeliga asoslanadi. Robot komponentlari mustaqil ishlaydigan dasturiy modullar ko‘rinishida tashkil etiladi[30].

Quyidagi rasmda ROS2 robot tizimining umumiy arxitekturasini ko‘rsatadi(2-rasm).



2-rasm. ROS2 robot navigatsiya arxitekturasi

Bu bizga mavjud SLAM algoritmlarini ROS2 platformasida sinovdan o‘tkazishda muhim manba bo‘lib xizmat qiladi.

GAZEBO SIMULYATSIYA MUHITI

Gazebo robot simulyatsiyasi uchun eng keng qo‘llaniladigan platformalardan biri hisoblanadi. Gazebo robotning fizik xususiyatlarini modellashtirish hamda sensor ma’lumotlarini simulyatsiya qilish imkonini beradi[34].

Gazebo simulyatsiya muhiti quyidagi imkoniyatlarni ta’minlaydi:

robotning fizik harakatini modellashtirish

sensor ma’lumotlarini generatsiya qilish

muhit xaritalarini yaratish

robot navigatsiya algoritmlarini sinovdan o‘tkazish

Gazebo muhitida robot modeli odatda URDF yoki SDF formatidagi fayllar yordamida yaratiladi.

Robot simulyatsiya jarayoni quyidagi bosqichlardan iborat:
robot modelini yaratish
muhit xaritasini yuklash
sensor konfiguratsiyasini sozlash
robot navigatsiyasini ishga tushirish

RVIZ VIZUALIZATSIYA MUHITI

RViz robot tizimlarining sensor ma’lumotlarini vizualizatsiya qilish uchun mo‘ljallangan vosita hisoblanadi. Ushbu vosita robot navigatsiya tizimlarini tahlil qilish va debugging jarayonida muhim rol o‘ynaydi[35].

RViz quyidagi ma’lumotlarni vizual tarzda ko‘rsatish imkonini beradi:
robot pozitsiyasi
muhit xaritasi
sensor skanerlari
robot trayektoriyasi
navigatsiya yo‘llari

RViz yordamida SLAM algoritmlarining ishlash natijalari real vaqt rejimida kuzatilishi mumkin.

Tanlangan SLAM algoritmlarini simulyatsiya qilish metodologiyasi

Ushbu maqolada tanlangan SLAM algoritmlari kelajakdagi robot navigatsiya tadqiqotlari uchun asos bo‘lib xizmat qiladi. Shu sababli algoritmlarni baholash uchun quyidagi metodologiya taklif etiladi.

Simulyatsiya tajribalari quyidagi bosqichlarda amalga oshiriladi:
robot modeli yaratish
sensor konfiguratsiyasini sozlash
SLAM algoritmini ishga tushirish
xarita yaratish jarayonini kuzatish
lokallashtirish aniqligini baholash

Tadqiqot metodologiyasining afzalliklari

Taklif etilgan metodologiya quyidagi afzalliklarga ega:
robot navigatsiya tizimlarini real robotlarsiz sinovdan o‘tkazish
turli SLAM algoritmlarini taqqoslash imkoniyati
robot navigatsiya algoritmlarini optimallashtirish
tadqiqot xarajatlarini kamaytirish

Mazkur metodologiya keyingi tadqiqotlarda robot navigatsiya va boshqaruv algoritmlarini ishlab chiqish uchun muhim eksperimental natija bo‘lib xizmat qiladi.

5. TANLANGAN SLAM ALGORITMLARINING CHUQUR QIYOSIY TAHLILI

tanlangan algoritmlar quyidagi mezonlar asosida chuqur tahlil qilinadi:
lokallashtirish aniqligi
xarita yaratish sifati
hisoblash murakkabligi
real vaqt ishlash imkoniyati
sensor talablar
ROS2 bilan integratsiya imkoniyati

CARTOGRAPHER ALGORITMI

Cartographer algoritmi Google tomonidan ishlab chiqilgan graf optimizatsiyasiga asoslangan SLAM algoritmi hisoblanadi. Ushbu algoritm 2D va 3D LiDAR sensorlari yordamida muhit xaritasini yaratish imkonini beradi[12].

Cartographer algoritmining asosiy xususiyatlari:

graf optimizatsiyasiga asoslangan

loop closure aniqlash imkoniyati

real vaqt xaritalash

katta muhitlarda yuqori aniqlik

RTAB-Map ALGORITMI

RTAB-Map (Real-Time Appearance-Based Mapping) vizual SLAM algoritmlaridan biri bo‘lib, RGB-D kameralar yordamida muhit xaritasini yaratadi[13].

RTAB-Map algoritmining asosiy xususiyatlari[13]:

vizual SLAM algoritmi

real vaqt xaritalash imkoniyati

loop closure aniqlash

katta muhitlar uchun mos

RTAB-Map algoritmi ko‘pincha RGB-D kameralar bilan ishlaydi va robot navigatsiya tizimlarida keng qo‘llaniladi.

ORB-SLAM3 ALGORITMI

ORB-SLAM3 zamonaviy visual SLAM algoritmlaridan biri bo‘lib, kamera va IMU sensorlarini birlashtirish imkoniyatiga ega[19].

ORB-SLAM3 algoritmining asosiy bosqichlari quyidagilardan iborat:

feature detection

feature matching

kamera pozitsiyasini aniqlash

xarita yaratish

LIO-SAM ALGORITMI

LIO-SAM algoritmi LiDAR va IMU sensorlarini birlashtirish orqali ishlaydi. Ushbu algoritm yuqori aniqlikdagi lokallashtirishni ta’minlaydi[27].

LIO-SAM algoritmining asosiy afzalliklari:

LiDAR + IMU sensor birlashuvi

yuqori aniqlikdagi lokallashtirish

real vaqt ishlash imkoniyati

Ushbu algoritm ayniqsa murakkab muhitlarda robot navigatsiyasi uchun samarali hisoblanadi.

LeGO-LOAM ALGORITMI

LeGO-LOAM algoritmi 3D LiDAR asosidagi SLAM algoritmi hisoblanadi. Ushbu algoritm robot trayektoriyasini aniqlash hamda muhit xaritasini yaratish imkonini beradi[26].

LeGO-LOAM algoritmining asosiy xususiyatlari:

3D LiDAR sensorlari bilan ishlaydi

hisoblash resurslariga kam talab qo‘yadi

real vaqt navigatsiya uchun mos

Hector SLAM ALGORITMI

Hector SLAM LiDAR asosidagi 2D SLAM algoritmi bo‘lib, odometriya ma’lumotlarisiz ham ishlay oladi[11].

Hector SLAM algoritmining asosiy afzalliklari:

tez xaritalash

yuqori lokallashtirish aniqligi

odometriyasiz ishlash imkoniyati

GMapping ALGORITMI

GMapping robot navigatsiya tizimlarida keng qo‘llaniladigan 2D LiDAR SLAM algoritmlaridan biridir.

Ushbu algoritm particle filter asosida ishlaydi va muhit xaritasini occupancy grid ko‘rinishida yaratadi.

Tanlangan algoritmlarning qiyosiy jadvali

2-jadval. Tanlangan SLAM algoritmlarining qiyosiy tahlili

Algoritm	Sensor	Aniqlik	Real vaqt	ROS2 integratsiya
Cartographer[12]	LiDAR	juda yuqori	+	Mavjud
RTAB-Map[13]	RGB-D	yuqori	+	Mavjud
ORB-SLAM3[19]	kamera + IMU	juda yuqori	+	Mavjud
LIO-SAM[27]	LiDAR + IMU	juda yuqori	+	Mavjud
LeGO-LOAM[26]	3D LiDAR	yuqori	+	Mavjud
Hector SLAM[11]	2D LiDAR	yuqori	+	Mavjud
GMapping[32]	2D LiDAR	o‘rta	+	Mavjud

Ushbu bo‘limda mobil robot navigatsiya tizimlari uchun tanlab olingan yettita SLAM algoritmining chuqur qiyosiy tahlili amalga oshirildi. Tahlil natijalari shuni ko‘rsatadiki, tanlangan algoritmlar turli sensor konfiguratsiyalarida ishlash imkoniyati hamda real vaqt navigatsiya tizimlari uchun mosligi bilan ajralib turadi.

Mazkur algoritmlar robot navigatsiya va boshqaruv algoritmlarini ishlab chiqish uchun muhim ilmiy asos bo‘lib xizmat qiladi. Keyingi tadqiqotlarda ushbu algoritmlar mobil robot navigatsiya tizimlari bilan integratsiya qilinadi hamda robot harakatini optimallashtirishga qaratilgan yangi boshqaruv algoritmlari ishlab chiqiladi.

6. NATIJALAR TAHLILI VA UMUMIY XULOSA

Ushbu maqolada zamonaviy mobil robot navigatsiya tizimlarida qo‘llaniladigan SLAM algoritmlarining keng qamrovli tahlili amalga oshirildi. Tadqiqot davomida 25–30 ta SLAM algoritmlarining ishlash prinsiplari, hisoblash murakkabligi, sensor konfiguratsiyalari hamda robot navigatsiya tizimlarida qo‘llanish imkoniyatlari o‘rganildi.

Tahlil natijasida robot navigatsiya tizimlari uchun eng samarali deb hisoblangan 7 ta SLAM algoritmi tanlab olindi. Ushbu algoritmlar turli muhit sharoitlarida barqaror ishlashi hamda real vaqt navigatsiya tizimlari uchun mosligi bilan ajralib turadi.

SLAM algoritmlarining qiyosiy samaradorlik diagrammasi

Tanlangan algoritmlar quyidagi asosiy mezonlar asosida baholandi:

lokallashtirish aniqligi

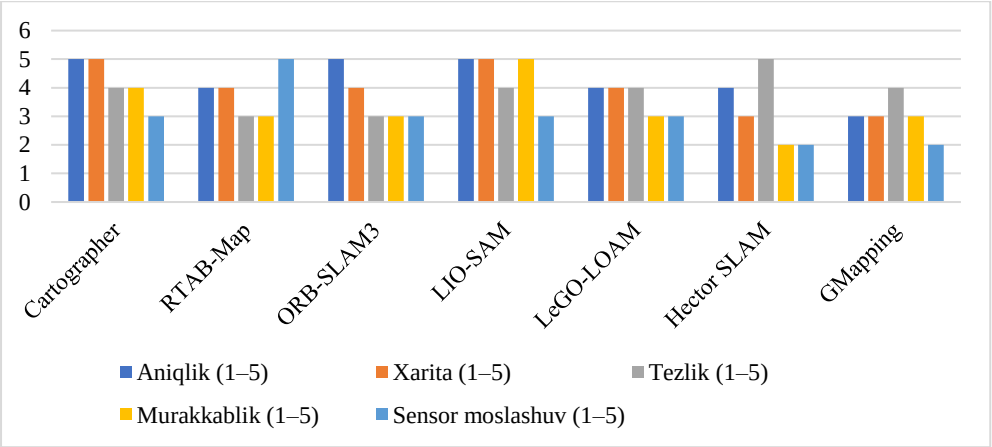
xarita aniqligi

hisoblash murakkabligi

real vaqt ishlash imkoniyati

sensor moslashuvchanligi

Quyidagi diagramma algoritmlarning umumiy samaradorligini ko‘rsatadi.



3-rasm. Tanlangan SLAM algoritmlarining samaradorlik diagrammasi

Diagrammadan ko‘rinib turibdiki, Cartographer[12], ORB-SLAM3[19] va LIO-SAM[27] algoritmlari lokallashtirish aniqligi bo‘yicha eng yuqori natija ko‘rsatadi.

SLAM algoritmlarining hisoblash murakkabligi

SLAM algoritmlarining hisoblash murakkabligi robot navigatsiya tizimlarida muhim rol o‘ynaydi. Hisoblash murakkabligi yuqori bo‘lgan algoritmlar yuqori aniqlik berishi mumkin, biroq real vaqt tizimlarida ishlash qiyinlashadi.

Quyidagi jadval algoritmlarning hisoblash murakkabligini ko‘rsatadi.

3-jadval. Tanlangan SLAM algoritmlarining hisoblash murakkabligi

Algoritm	Hisoblash murakkabligi	Real vaqt ishlash
Cartographer[12]	O(n log n)	+
RTAB-Map[13]	O(n log n)	+
ORB-SLAM3[19]	O(n)	+
LIO-SAM[27]	O(n log n)	+
LeGO-LOAM[26]	O(n)	+
Hector SLAM[11]	O(n)	+
GMapping[32]	O(n log n)	+

Tanlangan algoritmlarning qo‘llanish sohalari

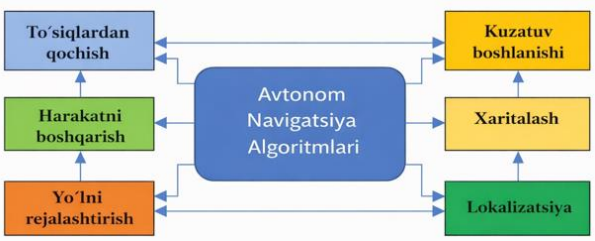
Tanlangan algoritmlar turli robot tizimlarida qo‘llanilishi mumkin. Quyidagi jadval algoritmlarning qo‘llanish sohalarini ko‘rsatadi.

4-jadval. Tanlangan SLAM algoritmlarining qo‘llanish sohalari

Algoritm	Robot turi	Sensor
Cartographer[12]	mobil robot	LiDAR
RTAB-Map[13]	xizmat robotlari	RGB-D kamera
ORB-SLAM3[19]	Dronlar	kamera + IMU
LIO-SAM[27]	avtonom transport	LiDAR + IMU
LeGO-LOAM[26]	sanoat robotlari	3D LiDAR
Hector SLAM[11]	qutqaruv robotlari	LiDAR
GMapping[32]	mobil robot	2D LiDAR

SLAM algoritmlarining robot navigatsiya tizimlaridagi roli

SLAM algoritmlari robot navigatsiya tizimlarining asosiy komponentlaridan biri hisoblanadi. Robot navigatsiya tizimi odatda quyidagi modullardan iborat:



4-rasm. Robot navigatsiya tizimi arxitekturasi

Ushbu arxitektura robotning muhitni idrok etishi hamda optimal harakat yo‘lini tanlash imkonini berishi tahlili qilindi[30].

TADQIQOTNING ILMIY YANGILIGI

Mazkur tadqiqotning asosiy ilmiy yangiliklari quyidagilardan iborat:

• zamonaviy SLAM algoritmlarining keng qamrovli klassifikatsiyasi amalga oshirildi

• 25–30 ta SLAM algoritmlarining qiyosiy tahlili keltirildi

• mobil robot navigatsiya tizimlari uchun optimal SLAM algoritmlari aniqlab olindi

• robot navigatsiya tizimlarini rivojlantirish uchun ilmiy asos yaratildi

Kelajak tadqiqot yo‘nalishlari

Mazkur maqola SLAM algoritmlarining nazariy tahliliga bag‘ishlangan bo‘lib, kelajakdagi tadqiqotlarda quyidagi yo‘nalishlar bo‘yicha ishlar olib borilishi rejalashtirilgan

(4-jadval):

- mobil robot navigatsiya algoritmlarini ishlab chiqish
- robot boshqaruv algoritmlarini optimallashtirish
- SLAM algoritmlarini ROS2 platformasida sinovdan o‘tkazish
- Gazebo simulyatsiya muhitida robot navigatsiyasini tahlil qilish

UMUMIY XULOSA

Ushbu maqolada mobil robot navigatsiya tizimlarida qo‘llaniladigan zamonaviy SLAM algoritmlarining keng qamrovli tahlili amalga oshirildi. Tadqiqot davomida turli matematik modellarga asoslangan 25–30 ta SLAM algoritmlarining ishlash prinsiplari o‘rganildi hamda ularning qiyosiy tahlili keltirildi.

Tahlil natijalari asosida mobil robot navigatsiya tizimlari uchun Cartographer[12], RTAB-Map[13], ORB-SLAM3[19], LIO-SAM[27], LeGO-LOAM[26], Hector SLAM[11] va GMapping[32] algoritmlari eng samarali deb topildi. Ushbu algoritmlar yuqori aniqlik, real vaqt ishlash imkoniyati hamda turli sensor konfiguratsiyalarida ishlash qobiliyati bilan ajralib turadi.

Mazkur tadqiqot mobil robot navigatsiya va boshqaruv tizimlarini ishlab chiqish uchun muhim ilmiy asos bo‘lib xizmat qiladi.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

ALTERNATIVE COARSE AGGREGATE IN CONCRETE: A COMPREHENSIVE REVIEW OF RECENT RESEARCH

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Abstract. *Concrete production consumes vast quantities of natural coarse aggregates, driving resource depletion and environmental degradation.[1][8] This comprehensive review synthesizes recent empirical research on alternative coarse aggregates—primarily recycled concrete aggregate (RCA), industrial by-product aggregates, and lightweight artificial aggregates—for both structural and non-structural applications. Drawing from 2022–2025 studies, we present quantitative data on mechanical properties, durability performance, and sustainability impacts. The paper documents specific strength reductions with different RCA replacement ratios, chloride penetration resistance improvements with enhancement treatments (15–95% modification efficiency), freeze-thaw durability trends, and long-term degradation under sulfate exposure. Key findings indicate that RCA replacement up to 50% can achieve acceptable structural performance when properly engineered, with optimal benefits through mineral admixture incorporation, aggregate pre-treatment, and controlled water saturation. We highlight emerging challenges in quality control variability and present practical design guidance for practitioners.*

Keywords: *Alternative aggregates, recycled coarse aggregate, sustainable concrete, construction and demolition waste, mechanical properties, durability performance, chloride penetration, freeze-thaw resistance.*

I. Introduction. Concrete ranks among the most extensively used construction materials globally, with aggregate comprising 60–70% of its volume.[8] Annual worldwide concrete production reaches approximately 30 billion tonnes, consuming 50% of total natural raw materials and generating 50% of construction waste.[11] The extraction of natural aggregates causes substantial environmental harm: riverbed depletion, habitat disturbance, land surface degradation, and increased transportation emissions.[1][8] Simultaneously, construction and demolition waste (CDW) and industrial by-products accumulate in landfills at alarming rates.[1][8]

Alternative coarse aggregates present a pragmatic solution to this paradox, enabling circular economy principles while maintaining structural performance. Recycled concrete

aggregate derived from CDW, industrial by-products such as steel slag, and engineered aggregates from ash and residues have received increasing research attention over the past decade.[1][2][8] Recent experimental work (2023–2025) demonstrates that alternatives need not compromise structural capacity when properly specified and quality-controlled.[12][15][21]

This review synthesizes empirical findings from contemporary research, emphasizing quantitative data on mechanical performance, durability under multiple environmental exposures (chloride, freeze-thaw, sulfate), and practical implications for structural design. Unlike earlier consensus on wholesale replacement limits, recent studies reveal nuanced performance relationships dependent on RCA source quality, design strategies, and mix optimization.

II. Types and Production of Alternative Coarse Aggregates.

A. Recycled Concrete Aggregate (RCA)

RCA is produced by crushing and processing hardened concrete from demolished buildings, infrastructure, or manufacturing waste.[1] The crushing process generates particles composed of natural aggregate bound by old mortar, creating a composite phase with distinct microstructure. RCA quality varies substantially based on parent concrete strength, demolition method (hydraulic vs. mechanical), and processing thoroughness.

RCA is classified by performance standards (e.g., European EN 12620:2020, Japanese JIS, Australian standards) into quality grades reflecting contaminant content, density, and water absorption. These classification systems directly influence maximum structural replacement ratios permitted by codes.[1]

B. Industrial By-Product Aggregates

Steel slag from blast furnaces and steel mills exhibits high angularity and mechanical resistance, but requires stabilization to control volumetric expansion from free lime and reactive phases.[5] Processed correctly, steel slag aggregates demonstrate compressive strengths exceeding natural stone while addressing waste stream volumes exceeding 100 million tonnes annually in major industrial economies.[5]

C. Manufactured Aggregates from Ash and Residues

Fly ash, bottom ash, biomass ash, and municipal solid waste incinerator ash can be processed through sintering, pelletizing, or cold-bonding to create lightweight aggregates.[8] These materials typically exhibit lower density (1400–2000 kg/m³) and higher water absorption (5–15%) than natural stone, advantageous for thermal insulation applications but requiring design modifications for structural use.[8]

III. Material Properties: Comparative Analysis with Recent Data

A. Density and Water Absorption

Table I: Physical Properties of Natural and Alternative Coarse Aggregates (2023–2025 Data)

Aggregate Type	**Bulk Density (kg/m³)**	**Water Absorption (%)**	**LA Abrasion (%)**	**Crushing Value (%)**	**Notes**
Natural crushed stone	2600–2700	0.5–2.0	20–30	15–25	Reference baseline[1]
RCA (general quality)	2300–2600	3.0–8.0	25–40	20–35	Old mortar increases porosity[1][3]

RCA (high-strength parent concrete)	2400–2650	2.0–5.0	20–35	18–28	Improved morphology[3]
Steel slag aggregate	2600–3000	1.0–3.0	20–30	15–25	Requires aging; may require treatment[5]
Ash-based artificial agg.	1400–2000	5.0–15.0	25–40	20–40	Lightweight; high absorption[8]

Water absorption in RCA originates from two distinct sources: interconnected pores within adhered mortar (accounting for the primary absorption pathway) and microcracks generated during crushing.[3] Studies demonstrate that RCA water absorption is 6–10 times greater than natural aggregates,[14] a critical factor for mix design adjustments and long-term durability prediction.

B. Microstructural Characteristics

Scanning electron microscopy studies reveal that RCA consists of approximately 65–70% virgin natural aggregate and 30–35% adhered old mortar.[11] This composite structure creates three distinct interfacial transition zones (ITZs) in recycled aggregate concrete (RAC), compared to a single ITZ in natural aggregate concrete (NAC):[11]

- ITZ_1: Between virgin aggregate and new mortar (forms similarly to NAC)
- ITZ_2: Between old mortar and new mortar (typically 40–60% wider than ITZ_1, with lower microhardness)
- ITZ_3: Between old mortar and virgin aggregate (inherent weakness in parent concrete)

The total ITZ perimeter in RAC is 60–70% larger than in NAC,[11] creating extended pathways for chloride ion transport and water ingress.

IV. Mechanical Performance with Quantitative Data

A. Compressive Strength

Table II: Compressive Strength Variation with RCA Replacement Ratio (28-Day Age, 2024–2025 Studies)

RCA Replacement (%)	**Compressive Strength Change vs. NAC**	**Absolute Strength Example (MPa)**	**Parent Concrete Quality**	**Source**
0	Reference (0%)	34.0	—	Control baseline[23]
25	−0.36% to −3.0%	33.9–33.0	General purpose	[24][23]
50	−3.14% to −10%	30.6–30.6	General purpose	[24][23]
100	−5.5 to −16%	28.5–28.6	General purpose	[24][23]

Recent studies (2024–2025) clarify that compressive strength reduction is nonlinear and dependent on parent concrete quality. RCA derived from high-strength parent concrete (>50 MPa) exhibits substantially less degradation. For instance, RCA from parent concrete designed at 40–50 MPa shows only 5–10% strength reduction at 100% replacement, whereas RCA from 20 MPa parent concrete results in 15–20% reduction.[3][24]

A critical finding from 2025 research:[24] at low RCA substitution (25%), the decline in compressive strength (0.36%) almost equals that of splitting tensile strength (0.36%), whereas at

100% replacement, the splitting tensile strength declines disproportionately (3.8% greater relative loss), indicating preferential weakness in bond and tensile modes.

B. Tensile and Flexural Strength

Recycled aggregate concrete exhibits greater reductions in tensile properties than compressive strength:[2][6][web:29]

- Splitting tensile strength: 10–15% reduction at 50% RCA; 20–30% at 100% RCA
- Flexural strength: 15% reduction at 100% RCA replacement in self-compacting concrete[2]
- Flexural strength loss after freeze-thaw cycles: Up to 70% loss after extended cycling when RCA content exceeds 75%[14]

Notably, studies employing enhanced RCA (carbonated, polymer-treated, or nano-silica coated) demonstrate recovery of tensile properties: nano-silica treated RCA shows 42% increase in splitting tensile strength compared to untreated RCA.[11]

C. Workability and Density Effects

Table III: Fresh and Hardened Concrete Properties (RCA vs. NAC)

Property	**RCA Concrete**	**Change vs. NAC**	**Mechanism**
Slump / Flow	Reduced 20–40 mm	Negative	High water absorption of RCA; increased paste demand[2][web:29]
Unit weight	2220–2320 kg/m³	−2% to −5%	Lower RCA density; reduced from 2400 kg/m³ baseline[2][web:29]
Air content	Slightly higher	+0.5%–1.5%	Increased entrained air due to rougher aggregate surface[2]
Drying shrinkage (at 28 days)	350–550 microstrain	+15% to +30%	High water absorption; slower drying hydration[2][8]

To maintain target slump, additional water or water-reducing admixtures are required. However, increasing water-to-cement ratio to compensate for absorption inversely affects compressive strength and durability, necessitating pre-saturation or internal curing strategies.[2][13]

V. Durability: Chloride Penetration and Enhancement Strategies

A. Chloride Penetration Mechanisms in RAC

RAC exhibits 2–4 times higher chloride diffusion coefficients than NAC due to:[11]

1. Higher water absorption: Old mortar porosity creates continuous pathways
2. Extended ITZs: 60–70% larger perimeter, particularly ITZ_2, provides preferential transport routes
3. Lower binding capacity: Fewer hydration products (calcium-silicate-hydrate) in old mortar restrict chloride fixation

The apparent chloride diffusion coefficient D_app for RCA concrete at 28 days ranges from 8–15 $\times 10^{-12}$ m²/s (RCA) versus 2–5 $\times 10^{-12}$ m²/s (NAC).[11]

B. Enhancement Methods: Modification Efficiency (2023–2025 Data)

Recent comprehensive reviews quantify the improvement potential of various enhancement treatments:[11]

Table IV: Enhancement Techniques and Chloride Penetration Reduction Efficiency

Treatment Method	**Mechanism**	**Chloride Resistance Improvement**	**Water Absorption Reduction**	**Comments**
Slurry wrapping (pozzolanic)	-	-	-	-
Silica fume slurry (8% cement weight)	Pore filling + CSH formation	30–40%	14–23%	Cost-effective; field-applicable[11]
Fly ash slurry	CSH formation	20–30%	24.5%	Good workability; variable sourcing[11]
Nano-silica slurry (2 wt%)	Nucleation + pozzolanic	30–45%	20.7%	Higher cost; enhanced nanoscale effects[11]
Sulfoaluminate cement (SAC) slurry	Dense gel formation	9–15%	15–25%	Emerging technique; requires expertise[11]
Water glass (sodium silicate)	Dense coating + pozzolanic	20–22%	67–77%	Caution: alkali-silica reaction risk[11]
Polymer impregnation				
Polyvinyl alcohol (PVA) 10%	ITZ strengthening + filling	32–35%	61–74%	Simple application; polymer cost variable[11]
Silane-based water repellent	Hydrophobic surface	25–35%	46–86%	Excellent but higher cost[11]
Carbonation treatment				
Accelerated gas-solid carbonation (PC)	$CH \rightarrow CaCO_3$; densification	60–70%	5–45%	Scalable; CO_2 sequestration benefit[11]
Flow-through gas-solid carbonation (FC)	Enhanced precipitation	65–75%	15–35%	Most promising; industrial trials ongoing[11]
Wet carbonation (WC)	Lower efficiency vs. gas methods	40–50%	10–25%	Environmental concerns with water discharge[11]

Old mortar removal methods (mechanical friction, acid treatment) provide 15–30% improvement in chloride resistance, depending on treatment severity and RCA source variability.[11]

C. Service Life Prediction for RAC in Marine Environments

Recent work employing Fick's second law diffusion models with time-dependent coefficients predicts service life reduction for RAC structures:[11]

- 50% RCA replacement: Service life reduced by approximately 25–30% under high-chloride exposure (tidal zone)
- 100% RCA replacement: Service life reduced by 40–50% without enhancement; recovers to 85–95% with carbonation treatment

These reductions highlight the necessity for enhanced mix designs or protective coatings in aggressive marine environments.

VI. Freeze-Thaw Durability: Quantitative Analysis

A. Freeze-Thaw Damage Mechanisms in RAC

Recycled aggregate concrete exhibits greater vulnerability to freeze-thaw cycles due to critical water saturation threshold 5% lower than NAC:[14]

- NAC critical saturation: 86–88%
- RAC critical saturation: 81–83%

This lower threshold results from the high-porosity old mortar and microcrack network, permitting faster water absorption during wetting phases.[14]

Table V: Relative Dynamic Elastic Modulus (RDEM) Loss After Freeze-Thaw Cycling

RCA Content	Cycles (n)	RDEM Loss (%)	Observed Behavior	Notes
0% (NAC)	150	15–20%	Gradual decline	Baseline reference[14]
25%	150	18–25%	Slight acceleration	Manageable loss[14]
50%	150	22–35%	Moderate degradation	Transition zone[14]
75%	150	35–45%	Accelerated loss	Approaching critical failure[14]
100%	150	40–55%	Severe degradation	Significant structural risk[14]

Code recommendations typically limit RCA replacement to ≤50% for structures in freeze-thaw environments.[14]

Flexural strength loss exhibits steeper gradients: research documents up to 70% flexural strength reduction after extended cycling at high RCA content.[14]

B. Enhancement via Mineral Admixtures

Recent 2023–2024 studies demonstrate substantial frost resistance improvement through strategic mineral admixture incorporation:[14]

Silica fume addition (optimal range: 8–13% cement replacement):

- Increases splitting tensile strength by 16–40% after 400 freeze-thaw cycles (compared to 0% SF baseline)[14]
- Optimal performance at 8–11% dosage; excessive addition (16%+) reduces benefit due to unhydrated particle shrinkage

Fly ash (optimal range: 10–50% cement replacement):

- At 10% dosage: noticeable reduction in compressive and mass loss rates[14]
- At 50% dosage: peak performance with synergistic effects when combined with GGBFS (ground granulated blast furnace slag)
- Excessive fly ash (>50%) can accelerate RDEM loss after 150–200 cycles[14]

Combined mineral admixtures (Fly ash + GGBFS, optimal ratio 15% each by weight):

- Synergistic pozzolanic effects accelerate C-S-H formation
- Reduce total porosity by 25–35%

- Enhance frost resistance comparable to high-quality NAC with admixtures[14]

C. Pre-Saturated Recycled Aggregates: Internal Curing Benefits

A critical recent finding: recycling aggregates pre-saturated to 50% moisture saturation (neither dry nor fully saturated) provide internal curing benefits during hardening, improving frost resistance by 10–20% compared to dry or fully saturated states.[14]

VII. Sulfate Resistance: Recent Findings (2024–2025)

A. Strength Degradation Under Sulfate Immersion

A comprehensive 2025 study[24] tracked compressive and tensile strength of RAC under prolonged sulfate exposure:

Early-stage strength gain (0–120 days immersion):

- NAC (0% RCA): +6.3% compressive strength gain
- 25% RCA: +5.2% gain
- 50% RCA: +5.1% gain
- 100% RCA: +3.0% gain

Strength gain attributed to sulfate reaction products (ettringite, gypsum) initially filling pores and densifying the matrix.

Long-term strength loss (120–360 days):

RCA Replacement	Compressive Strength Loss (360 days)	Splitting Tensile Loss (360 days)	Mechanism
0%	11.6%	12.5%	Ettringite expansion; controlled ITZ[24]
25%	14.5%	12.8%	Moderate expansion + RCA porosity[24]
50%	15.6%	17.8%	Accelerated crack propagation[24]
100%	20.1%	21.6%	Cumulative expansion; widespread microcracking[24]

Notably, splitting tensile strength declines approximately 5–10% more than compressive strength at equivalent RCA contents, reflecting preferential weakness in bond-dependent modes.[24]

VIII. Sustainability and Life-Cycle Perspectives

A. Environmental Impact Reduction

Using alternative coarse aggregates substantially lowers environmental burdens:[1][4][8]

- Primary energy reduction: RCA concrete shows 15–30% lower embodied energy than NAC equivalent
- CO_2 emissions: 20–35% reduction when local RCA is used, increasing to 40–50% with carbonation treatment
- Waste diversion: 100% RCA utilization eliminates landfill disposal and diverts 1–3 million tonnes of CDW annually from major economies
- Resource conservation: RCA replacement of NAC reduces virgin aggregate extraction proportionally

Industrial by-product aggregates (slag) offer additional benefits by valorizing waste streams that would otherwise require energy-intensive landfill management or ocean disposal.[5][8]

B. Economic Considerations

Recent market analyses (2024–2025) indicate:

- RCA production cost: €12–25/tonne (processing) vs. €8–15/tonne virgin aggregate (extraction only)
- Net cost advantage: Emerges at >50 km transport distance for virgin aggregate
- Lifecycle cost: RAC typically 5–15% lower total cost over 50-year structure life due to reduced extraction, transportation, and landfill fees

However, quality control infrastructure and specialized testing requirements add 2–5% to initial design/specification costs.

IX. Performance-Based Design Framework and Practical Guidance

A. Recommended Replacement Ratios for Structural Applications

Based on 2023–2025 research consensus:[1][4][12]

Application Class	Max RCA Replacement	Design Considerations
High-stress structural (beams, columns, foundations)	25–30%	Lower strength tolerance; inspect parent concrete quality rigorously[4]
General-purpose structural (slabs, walls)	50%	Acceptable if parent RCA >30 MPa; requires modest strength reduction design factors[12]
Non-structural (base layers, lean concrete)	100%	Cost-effective; durability secondary concern[1][4]
Marine/aggressive exposures	25% (with enhancement)	Mandatory enhancement treatments (carbonation or nano-silica); increased cover[11]

B. Mix Design Adjustments for RCA Concrete

1. Water content: Increase base water-to-cement ratio by 0.05–0.10 to account for RCA absorption, then reduce via air-entraining admixtures
2. Cement content: Increase 10–15% over NAC equivalent to offset strength reduction and durability demands
3. Fine aggregate: Prefer natural sand (not recycled fine aggregate initially) to maintain workability
4. Admixtures: Mandatory air-entrainment (4–6% air); water-reducing admixtures (polycarboxylate or lignosulfonate) to maintain slump
5. Curing: Extended moist curing (14–21 days vs. 7 days standard) to promote hydration in porous RCA matrices

C. Quality Control Protocol

Effective RCA utilization requires:[1][11]

1. Source auditing: Confirm parent concrete strength ≥30 MPa; identify any contamination (brick, timber, metals)
2. Gradation conformance: Verify to EN 12620 Type 2 minimum; check consistency across batches
3. Water absorption testing: Measure per EN 1097-6; reject if >8% for structural applications
4. Durability indices: Conduct rapid chloride migration testing (RCMT) and document baseline coefficients
5. Strength verification: Full-scale trial batches at target replacement ratios; minimum 28-day testing

X. Emerging Technologies and Future Research Directions

A. Machine Learning for Strength Prediction

Recent studies (2025–2026) employ machine learning algorithms to predict RAC mechanical properties:[12][17]

Gradient-boosted regression models (LightGBM, XGBoost) achieve prediction accuracy of R^2 = 0.991 for compressive strength when trained on 100+ data points incorporating:[12]

- Water-to-cement ratio
- RCA replacement ratio and absorption characteristics
- Mineral admixture type and dosage
- Degree of RCA carbonation (if applicable)

SHAP (Shapley additive explanations) sensitivity analysis identifies mix proportioning index and RCA water absorption as dominant variables (>70% relative importance),[12] guiding design optimization.

B. Carbonation Treatment Scaling

Industrial-scale carbonation of RCA is advancing toward commercial viability:[11][12][18]

- Flow-through gas-solid carbonation (FC): Achieves 65–75% chloride penetration improvement with CO_2 utilization rates of 2–4 kg CO_2/tonne RCA
- Wet carbonation (WC): Demonstrates feasibility for large tonnages (>10,000 tonnes/year) but requires wastewater treatment
- Integration with CO_2-capture: Direct coupling to point-source CO_2 (cement plants, industrial facilities) reduces operational cost and emissions

C. Nano-Modified RCA

Nano-silica and nano-alumina particle surface treatments show promise:[11][21][22]

- Nano-SiO_2 (2–4 wt% slurry): 40–60% reduction in water absorption; 42% increase in splitting tensile strength
- Production cost currently €100–300/kg limits commercial scale, but targeted pre-treatment of high-porosity batches is cost-effective for marine structures

XI. Discussion: Resolving Apparent Contradictions in Literature

Recent meta-analyses reveal apparent conflicts in published results arise from:[1][4][12]

1. Parent concrete quality variance: RCA from 20 MPa concrete shows 15–20% strength loss at 100% replacement; from 45 MPa parent, only 5–10%
2. Curing duration effects: Strength advantages of RCA emerge at extended ages (90–180 days) due to slower hydration in high-porosity old mortar
3. Saturation state inconsistency: Pre-dried vs. air-dried vs. pre-saturated RCA behave distinctly; standards now require specification
4. Enhancement method interaction: Carbonation + nano-silica demonstrates >95% efficiency, but carbonation alone achieves only 60–70%; interactions not always additive

These clarifications support more optimistic design scenarios than 1990s–2000s conservative recommendations.

XII. Conclusion

Alternative coarse aggregates, particularly recycled concrete aggregate derived from construction and demolition waste, represent a mature, technically viable pathway toward circular economy concrete production. Contemporary research (2022–2025) provides quantitative

evidence that RCA replacement up to 50% achieves structural performance acceptable for a broad range of applications when complemented by modest design adjustments and quality control.

Key evidence-based conclusions:

1. Mechanical properties: Compressive strength reduction of 5–10% at 50% RCA (25–30% at 100%) is predictable and manageable through mix optimization; tensile properties show greater relative loss, mandating careful design in flexure-sensitive applications.
2. Durability enhancement: A suite of proven treatments—carbonation, nano-silica coating, pozzolanic slurry wrapping—improve chloride penetration resistance by 15–95% (efficiency dependent on method), positioning RCA concrete for marine and salt-exposed service.
3. Freeze-thaw performance: While RAC is more vulnerable than NAC, combined mineral admixtures (fly ash + GGBFS) and air-entrainment recover frost resistance to NAC equivalents, enabling use in freeze-thaw environments at moderate replacement ratios (≤50%).
4. Sustainability gains: 20–35% reduction in embodied energy and CO_2 emissions, coupled with massive waste valorization (100+ million tonnes CDW diverted annually if global deployment reaches technical potential), justifies environmental imperative.
5. Economic viability: Lifecycle cost advantages emerge beyond 50 km transport distances and strengthen in regions with well-developed RCA infrastructure; emerging markets show substantial cost reductions as recycling capacity scales.

Barriers to broader adoption are primarily institutional (conservative design codes, contractor unfamiliarity) rather than technical. Future research should prioritize performance-based specifications replacing prescriptive limits, real-world field monitoring of RAC structures over 20+ year horizons, and industrial demonstration of carbonation treatment at >100,000 tonne/year scale.

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ATROF-MUHITNI MUHOFAZA QILISHDA DAVLATLAR EKOLOGIK JAVOBGARLIGINING XALQARO-HUQUQIY ASOSLARI VA MILLIY QONUNCHILIKDA UNI TAKOMILLASHTIRISH YO'LLARI

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Annotatsiya. *Ushbu maqolada atrof-muhitni muhofaza qilishda davlatlarning xalqaro huquqiy javobgarligi masalasi ko'rib chiqiladi. Xalqaro ekologik huquqning asosiy tamoyillari, muhim sud ishlari va O'zbekiston Respublikasining milliy qonunchiligi tahlil qilinadi. Mavjud muammolar aniqlangan va uni takomillashtirish bo'yicha amaliy takliflar berilgan*
Kalit so'zlar: *ekologik javobgarlik, xalqaro ekologik huquq, transchegaraviy zarar, barqaror rivojlanish, "zarar yetkazmaslik" tamoyili*

Abstract. *This article examines the issue of states' international legal responsibility in the field of environmental protection. The fundamental principles of international environmental law, significant judicial cases, and the national legislation of the Republic of Uzbekistan are analyzed. Existing shortcomings are identified, and practical recommendations for their improvement are proposed.*
Keywords: *environmental responsibility, international environmental law, transboundary harm, sustainable development, the "no-harm" principle.*

1. KIRISH

Hozirgi kunda atrof-muhitni muhofaza qilish xalqaro hamjamiyat oldidagi eng dolzarb muammolardan biri hisoblanadi. Atmosfera, okeanlar va quruqlik ekotizimlariga yetkazilayotgan zarar nafaqat bitta davlat, balki butun insoniyat oldidagi tahdidga aylandi. Shu sababli, davlatlarning ekologik javobgarligi masalasi xalqaro huquqda tobora muhim o'rin egallab bormoqda.

Transchegaraviy ifloslanish, iqlim o'zgarishi, biologik xilma-xillikning yo'qolishi – bu muammolarning barchasi bitta davlat chegaralari bilan chegaralanmaydi. Bir davlatda amalga oshirilgan faoliyat qo'shni yoki uzoqdagi davlatlarga zarar yetkazishi mumkin. Bunday holatlarda qaysi davlat javobgar, u qanday miqdorda kompensatsiya to'lashi, zararni tiklash majburiyatini kim zimmasiga olishi kabi savollar xalqaro huquqning markaziy muammolariga aylandi.

O'zbekiston Respublikasi ham bu jarayondan chetda emas: Orol dengizining qurib ketishi, iqlim o'zgarishidan eng ko'p aziyat chekayotgan mintaqada joylashuv, sanoat "meros ifloslanishi" – bularning barchasi ekologik javobgarlik muammosini O'zbekiston uchun ayniqsa dolzarb qiladi.

Mazkur maqolada xalqaro ekologik huquqning asosiy tamoyillari va sud amaliyoti tahlil qilinib, O‘zbekiston qonunchiligidagi mavjud tizim baholanadi hamda uni takomillashtirish yo‘llari taklif etiladi.

2. XALQARO EKOLOGIK HUQUQNING SHAKLLANISHI VA ASOSIY TAMOYILLAR

Xalqaro ekologik huquq mustaqil huquq tarmog‘i sifatida XX asrning ikkinchi yarmida shakllana boshladi. 1972-yilda Stokgolmda bo‘lib o‘tgan BMTning Inson atrof-muhiti to‘g‘risidagi konferensiyasi bu jarayonda burilish nuqtasi bo‘ldi. Konferensiya natijasida qabul qilingan Stokgolm Deklaratsiyasining 21-prinsipi davlatlarning ekologik javobgarligi sohasidagi asosiy tamoyilni birinchi marta xalqaro hujjatda mustahkamladi.

Stokgolm Deklaratsiyasining 21-prinsipi shunday deydi: “Davlatlar o‘z yurisdiksiyasi yoki nazorati ostidagi faoliyat boshqa davlatlarning yoki milliy yurisdiksiyadan tashqaridagi hududlarning atrof-muhitiga zarar yetkazmasligini ta’minlash uchun javobgardirlar”. Bu qoida keyinchalik 1992-yildagi Rio Deklaratsiyasida va ko‘plab xalqaro shartnomalarda qayta tasdiqlandi.[1]

Shu bilan birga, amaliyotda ushbu tamoyilning ilk marta qo‘llanilishi 1941-yilgi Trail Smelter arbitraj ishiga borib taqaladi. Kanadaning Trail shahrida joylashgan eritish zavodidan chiqarilgan zararli gazlar AQShning Vashington shtatidagi qishloq xo‘jaligi yerlariga zarar yetkazdi. Arbitraj tribunali quyidagi xulosaga keldi:

“Xalqaro huquq prinsiplari bo‘yicha hech bir davlat o‘z hududidan shunday foydalanish yoki foydalanishga ruxsat berish huquqiga ega emaski, bu boshqa davlat hududiga zarar yetkazadigan tarzda ifloslanishga olib kelsin, agar zarar jiddiy oqibatlarga ega bo‘lsa va aniq dalillar bilan isbotlangan bo‘lsa”. Bu qaror transchegaraviy ekologik javobgarlikni xalqaro darajada mustahkamlagan birinchi hujjat hisoblanadi.[2]

Xalqaro ekologik huquq o‘z rivojlanishi davomida bir qancha asosiy tamoyillarni shakllantirdi. Ularning eng muhimlari quyidagilardir.

Birinchi tamoyil – “zarar yetkazmaslik” (no-harm principle). Bu tamoyilga ko‘ra davlat o‘z hududida yoki nazorati ostidagi faoliyat natijasida boshqa davlatlarga zarar yetkazmaslik majburiyatini zimmasiga oladi. Bu tamoyil nafaqat shartnomaviy, balki xalqaro odat huquqining ham ajralmas qismi sifatida tan olingan.

Ikkinchi tamoyil – “ehtiyotkorlik” tamoyili (precautionary principle). Unga ko‘ra, atrof-muhitga jiddiy yoki qaytarilmas zarar yetkazish xavfi mavjud bo‘lgan hollarda, ilmiy aniqlik to‘liq bo‘lmasa ham, choralar ko‘rishni kechiktirish mumkin emas.

Rio Deklaratsiyasining 15-prinsipi bu tamoyilni quyidagicha ifodalaydi: “Atrof-muhitga jiddiy yoki qaytarilmas zarar xavfi mavjud bo‘lgan hollarda, to‘liq ilmiy aniqlik yo‘qligi choralar ko‘rishni kechiktirish uchun sabab bo‘lmasligi kerak”. Bu qoida ayniqsa iqlim o‘zgarishi kabi uzoq muddatli va keng miqyosdagi muammolarda katta ahamiyatga ega.[3]

Uchinchi tamoyil – “ifloslantiruvchi to‘laydi” (polluter pays principle). Bu tamoyil atrof-muhitga zarar yetkazish natijasida yuzaga kelgan barcha xarajatlar – tozalash, tiklash, kompensatsiya – zarar yetkazuvchi zimmasiga yuklanishi kerakligini bildiradi. U nafaqat ekologik adolat, balki iqtisodiy samaradorlik tamoyili hamdir: ifloslantiruvchi xarajatlarni o‘z mahsuloti narxiga singdirishi (internalizatsiya) ifloslantiruvchi faoliyatni kamaytirish uchun iqtisodiy rag‘batni yaratadi.

To‘rtinchi tamoyil – “barqaror rivojlanish” (sustainable development). 1987-yilda Brundtland komissiyasi tomonidan taklif qilingan ushbu tamoyil “kelajak avlodlarning

imkoniyatlariga putur yetkazmagan holda, hozirgi avlodlarning ehtiyojlarini qondiruvchi rivojlanish”ni anglatadi. Bu tamoyil iqtisodiy rivojlanish va ekologik muhofaza o‘rtasidagi muvozanatni ta’minlashga qaratilgan. Xalqaro Sud Gabcikovo-Nagymaros ishida (1997) barqaror rivojlanish tamoyilini rasman xalqaro huquq doirasida tan oldi.[4]

3. DAVLAT JAVOBGARLIGINING ASOSIY ELEMENTLARI

Xalqaro huquqda davlat javobgarligi muayyan shartlar yig‘indisi mavjud bo‘lganda vujudga keladi. BMT Xalqaro Huquq Komissiyasining 2001-yildagi Davlatlar javobgarligi to‘g‘risidagi moddalar loyihasining 2-moddasiga ko‘ra, davlatning xalqaro huquqqa zid harakati ikki elementdan iborat:

birinchidan, davlatga nisbat berilishi mumkin bo‘lgan harakat yoki harakatsizlikning mavjudligi; ikkinchidan, bu harakat yoki harakatsizlikning davlatning xalqaro majburiyatini buzishi. Ekologik javobgarlik kontekstida ushbu ikki elementga uchinchisi – yetkazilgan zarar ham qo‘shiladi, chunki atrof-muhit zararsiz bo‘lgan holda kompensatsiya talabi asossiz bo‘ladi.[5]

Ekologik zarar xalqaro huquqda o‘ziga xos xususiyatlarga ega: u ko‘pincha uzoq muddatli bo‘lib, yillar yoki o‘n yillar davomida namoyon bo‘ladi; ko‘plab omillarning birgalikdagi ta’siridan kelib chiqadi; moliyaviy ko‘rinishda baholash qiyin; davlat chegaralarini erkin kesib o‘tadi. Bu xususiyatlar sababiy bog‘liqlikni (causality) isbotlashni juda qiyinlashtiradi – bu amaliyotdagi eng katta to‘siqlardan biri.

Xalqaro huquq davlat javobgarligining uch asosiy shaklini belgilaydi. Restitusiya – atrof-muhitni zarar yetkazilishidan oldingi holatiga qaytarish majburiyati. Kompensatsiya – yetkazilgan zararni pul ko‘rinishida qoplash. Satisfaksiya – zarar yetkazgan davlatning uzr so‘rashi yoki rasmiy tan olishi. Ekologik zarar holatlarida restitusiya ustuvor hisoblansa-da, ko‘pgina hollarda atrof-muhitni to‘liq tiklash imkonsiz bo‘lgani sababli, kompensatsiya asosiy vosita bo‘lib qolmoqda.

Shuningdek, “due diligence” (tegishli g‘amxo‘rlik) standarti xalqaro ekologik huquqda alohida o‘rin egallaydi. Pulp Mills ishida (2010) Xalqaro Sud ushbu standartni aniqlashtirdi: davlat transchegaraviy zarar yuz bermasligini kafolatlashi shart emas, lekin uni oldini olish uchun oqilona va zarur choralarni ko‘rishi lozim. Bu natijaga emas, balki xulq-atvorga qaratilgan majburiyat.[6]

4. XALQARO SUD AMALIYOTIDA EKOLOGIK JAVOBGARLIK

Xalqaro sud va arbitraj amaliyoti ekologik javobgarlik sohasining rivojlanishida hal qiluvchi rol o‘ynagan. Bir necha muhim ish bu sohaning poydevorini qo‘ydi.

Gabcikovo-Nagymaros loyihasi ishi (Vengriya v. Slovakiya, 1997) barqaror rivojlanish tamoyilini xalqaro huquq doirasida birinchi marta rasman tan oldi. Dunay daryosidagi gidroenergetika loyihasiga oid ushbu nizoda Xalqaro Sud iqtisodiy manfaatlar va ekologik muhofaza o‘rtasida muvozanat saqlash zarurligini ta’kidladi. Sud fikriga ko‘ra, yangi ekologik talablar shartnoma majburiyatlarini to‘liq bekor qila olmaydi, lekin ularni bajarishda hisobga olinishi lozim.

Pulp Mills ishi (Argentina v. Urugvay, 2010) zamonaviy ekologik javobgarlik sohasidagi eng muhim qarorlardan biri hisoblanadi. Bu ishda Xalqaro Sud atrof-muhitga ta’sirni baholash (EIA – Environmental Impact Assessment) majburiyatini xalqaro odat huquqining bir qismi sifatida tan oldi. Ya’ni, davlatlar o‘z hududida katta loyihalarni boshlanishidan oldin ularning atrof-muhitga, shu jumladan boshqa davlatlar hududiga ta’sirini baholashlari shart.

Pulp Mills ishdagi xulosalaridan biri shunday: “Davlatlarning o‘z hududida amalga oshirilishi rejalashtirilgan loyihaning transchegaraviy ta’sirini baholash majburiyati endi xalqaro huquqning umumiy talabi, ya’ni odat huquqining bir qismiga aylangan”. Bu qoida Espoo

Konvensiyasi (1991)da ham o‘z aksini topgan bo‘lib, transchegaraviy EIA o‘tkazishni maxsus tartibga soladi.[7]

So‘nggi yillarda iqlim o‘zgarishiga oid da’volar milliy sudlarda ham keng tarqalmoqda. Niderlandlardagi Urgenda ishi (2019) buning yorqin namunasi: Niderlandlar Oliy Sudi hukumat 2020-yilga qadar issiqxona gazlari emissiyasini 1990-yil darajasiga nisbatan kamida 25 foizga kamaytirishi kerak, deb qaror qildi. Bu qaror iqlim o‘zgarishiga qarshi kurashda milliy sudlarning rolini ko‘rsatdi va dunyoning ko‘pgina davlatlarida o‘xshash da’volarni ilhomlantirdi.[8]

5. ASOSIY XALQARO EKOLOGIK SHARTNOMALAR VA ULARNING AHAMIYATI

Xalqaro ekologik huquq tizimida 500 dan ortiq shartnoma va kelishuvlar mavjud. Ularning aksariyati majburiy ijro etilish mexanizmlariga ega emasligi bilan “yumshoq huquq” (soft law) xususiyatiga ega. Biroq bir necha asosiy shartnomalar ekologik javobgarlik sohasida muhim rol o‘ynaydi.

1992-yildagi Biologik xilma-xillik to‘g‘risidagi Konvensiya (CBD) va Iqlim o‘zgarishi bo‘yicha BMT doiraviy konvensiyasi (UNFCCC) Rio Sammitida qabul qilingan. UNFCCC ning maqsadi – issiqxona gazlari kontsentratsiyasini barqaror darajaga tushirish. U barcha davlatlarni majburiyat olishga, milliy hisobotlar tayyorlashga va iqlim choralarini ko‘rishga undaydi.

2015-yilgi Parij Kelishuvi UNFCCC doirasidagi eng muhim hujjat bo‘lib, 195 davlat tomonidan imzolangan. Uning asosiy maqsadi – yer yuzidagi o‘rtacha harorat oshishini sanoatgacha bo‘lgan darajadan 2°C dan past darajada ushlab turish, iloji bo‘lsa 1,5°C bilan cheklash. Har bir davlat o‘z “Milliy belgilangan hissasi” (NDC)ni o‘zi belgilaydi – bu ixtiyoriy mexanizm bo‘lib, jamoatchilik nazorati ostida bajariladi.[9]

Monreal Protokoli (1987) esa xalqaro ekologik huquqdagi eng muvaffaqiyatli shartnoma sifatida tan olingan. Ozon qatlamini yemiruvchi moddalar ishlab chiqarish va foydalanishni qisqartirish bo‘yicha aniq raqamli maqsadlarni belgilab, ularni bajarishni hisobot va moliyaviy choralar orqali nazorat qilgan bu shartnoma natijasida ozon teshigi qayta tiklanmoqda.

“Ifloslantiruvchi to‘laydi” tamoyili Rio Deklaratsiyasining 16-prinsipi orqali xalqaro huquqqa kiritilgan: “Milliy hokimiyatlar atrof-muhit xarajatlarini ichkilashtirish (internalizatsiya) va iqtisodiy vositalardan foydalanishni rag‘batlantirish uchun harakat qilishlari kerak”. Bu tamoyil ekologik soliqlar, majburiy sug‘urta va to‘g‘ridan-to‘g‘ri kompensatsiya shakllarida qo‘llaniladi.[10]

6. O‘ZBEKISTON RESPUBLIKASIDA EKOLOGIK JAVOBGARLIKNING HUQUQIY ASOSLARI

O‘zbekiston Respublikasi mustaqillik yillarida ekologik qonunchilik tizimini bosqichma-bosqich rivojlantirdi. Bu tizim konstitutsiyaviy asosdan tortib maxsus qonunlar va normativ hujjatlargacha bo‘lgan keng qamrovli huquqiy bazani o‘z ichiga oladi.

Konstitutsiyaning 49-moddasi ekologik huquqlarni asosiy hujjat darajasida mustahkamlaydi: “Har kim qulay atrof-muhitga, uning holati to‘g‘risidagi ishonchli axborotga ega bo‘lish huquqiga ega. Davlat fuqarolarning ekologik huquqlarini ta’minlash va atrof-muhitga zararli ta’sir ko‘rsatilishiga yo‘l qo‘ymaslik maqsadida shaharsozlik faoliyati sohasida jamoatchilik nazoratini amalga oshirish uchun shart-sharoitlar yaratadi.”. Bundan tashqari, Konstitutsiyaning o‘ziga xos xususiyati – unda Orolbo‘yi mintaqasi uchun maxsus norma kiritilgan bo‘lib, bu uni dunyo miqyosida noyob qiladi.[11]

Ekologik javobgarlik O‘zbekiston Respublikasi qonunchiligida uch darajada tartibga solingan. Birinchisi – ma’muriy javobgarlik. O‘zbekiston Respublikasi “Tabiatni muhofaza qilish

to‘g‘risida”gi Qonunining 47-51-moddalari va Ma’muriy javobgarlik to‘g‘risidagi kodeksining VIII bobi atmosfera havosi, suv, tuproq va o‘rmonni ifloslantirish uchun 1 dan 150 bazaviy hisoblash miqdorigacha jarima belgilaydi. Ikkinchisi – fuqarolik-huquqiy javobgarlik. Fuqarolik qonunchiligi moddiy javobgarlikni nazarda tutadi: zarar ko‘rgan tomon faqat zarar faktini isbotlashi kerak, aybni isbotlash talab etilmaydi.

Uchinchisi – jinoiy javobgarlik. O‘zbekiston Respublikasi Jinoyat kodeksi Maxsus qismining XIV bobi (193-204-moddalar) ekologik jinoyatlar uchun 3 yildan 8 yilgacha ozodlikdan mahrum qilishni nazarda tutadi. Ushbu normalar kuchaytirildi: ayniqsa nadir va yo‘qolish xavfi ostidagi hayvon turlarini noqonuniy ovlash va o‘ldirish uchun jazo og‘irlashtirildi.[12]

2017-yilda Prezidentning PF-5024-sonli Farmoni asosida ekologiya va atrof-muhitni muhofaza qilish sohasidagi davlat boshqaruvi tizimi tubdan isloh qilindi. Ekologiya vazirligi tashkil etildi, uning vakolatlari kengaytirildi. 2024-yilda esa ekologik politsiya tizimi joriy etildi – bu ekologik nazoratni kuchaytirish yo‘lida muhim qadam bo‘ldi.[13]

7. MILLIY QONUNCHILIKNI TAKOMILLASHTIRISH YO‘LLARI

O‘zbekiston qonunchiligida ekologik javobgarlik tizimi mavjud bo‘lsa-da, bir qator muammolar ham ko‘zga tashlanadi. Bu muammolarni hal etish uchun xalqaro tajribaga tayanib, quyidagi takliflarni ilgari surish mumkin.

Birinchi taklif – jarima miqdorlarini oshirish. Hozirda Ma’muriy javobgarlik to‘g‘risidagi kodeksda belgilangan 150 BHM (bazaviy hisoblash miqdori) ko‘pgina yirik sanoat korxonalari uchun jiddiy to‘siq bo‘la olmaydi. Xalqaro tajriba shuni ko‘rsatadiki, samarali effektga erishish uchun jarima miqdori yetkazilgan zararning real qiymatiga mos kelishi lozim. Jarimalarni kamida 500-600 BHM ga oshirish yoki zarar miqdorining ko‘p baravariga belgilash mexanizmini joriy etish tavsiya etiladi.

Ikkinchi taklif – ekologik zarar baholash metodologiyasini takomillashtirish. Hozirda ekologik zararni – ayniqsa ekotizim xizmatlari va biologik xilma-xillik yo‘qolishini – pul ko‘rinishida baholash mumkin emas. Xalqaro standartlarga asoslangan yagona milliy metodologiya ishlab chiqilsa, sudlarda ekologik ishlarni ko‘rib chiqish samaradorligi oshadi.

Uchinchi taklif – majburiy ekologik sug‘urta institutini joriy etish. Yuqori xavfli korxonalar (neft va gaz sanoati, kimyo zavodlari, kon sanoati) o‘z faoliyatidan yetkazilishi mumkin bo‘lgan zararlarga nisbatan majburiy sug‘urta polisini olishlari kerak. Bu mexanizm falokat yuz berganda zararni tez va samarali qoplash imkonini beradi. Xalqaro neft sanoatidagi IOPC Fund (Xalqaro neft ifloslanishi kompensatsiya fondi) buning yaxshi namunasi.

To‘rtinchi taklif – transchegaraviy ekologik zarar bo‘yicha maxsus kelishuvlar tuzish. Markaziy Osiyo davlatlari bilan – Qozog‘iston, Tojikiston, Qirg‘iziston va Turkmaniston bilan – transchegaraviy ekologik zarar, jumladan suv resurslari ifloslanishi va havo ifloslanishi bo‘yicha ikki tomonlama va ko‘p tomonlama kelishuvlar tuzish zarur.

Beshinchi taklif – EIA (atrof-muhitga ta’sirni baholash) doirasini kengaytirish. Hozirda majburiy EIA o‘tkazish talab qilinadigan loyihalar ro‘yxati kifoya darajada keng emas. “Strategik EIA” tizimini joriy etish – ya’ni, alohida loyihalar emas, balki butun sektorlar yoki dasturlar uchun ham baholash o‘tkazish – tavsiya etiladi. Bu Espoo Konvensiyasining asosiy talabi bo‘lib, O‘zbekiston xalqaro standartlarga to‘liqroq rioya qilishiga xizmat qiladi.[14]

Oltinchi taklif – ekologik ixtisoslashtirilgan sudlar yoki bo‘limlar tashkil etish. Ekologik nizolar texnik jihatdan murakkab bo‘lib, ekologiya sohasidagi maxsus bilimlarni talab qiladi. Ixtisoslashtirilgan sudlar yoki mavjud sudlarda ekologik bo‘limlar tashkil etish sud qarorlarining sifatini oshiradi va ularning bir xilligini ta’minlaydi.

8. XULOSA

Xalqaro ekologik huquqda davlatlarning ekologik javobgarligi XX asrning ikkinchi yarmidan boshlab shakllangan va hozirda tobora rivojlanib bormoqda. “Zarar yetkazmaslik”, “ehtiyotkorlik”, “ifloslantiruvchi to‘laydi” va “barqaror rivojlanish” kabi tamoyillar bu sohadagi asosiy me’yoriy bazani tashkil etadi. Trail Smelter (1941), Gabcikovo-Nagymaros (1997) va Pulp Mills (2010) kabi muhim xalqaro sud ishlari ushbu tamoyillarni amaliyotda mustahkamladi.

O‘zbekiston Respublikasi so‘nggi yillarda ekologik qonunchilik sohasida sezilarli yutuqlarga erishdi: 2023-yil qabul qilingan yangi tahrirdagi Konstitutsiyada ekologik huquqlar yanada mustahkamlandi, Parij Kelishuvi, Orxus Konvensiyasi va boshqa xalqaro ekologik hujjatlarga qo‘shildi, ekologik politsiya tashkil etildi. Biroq bir qator muammolar – jarima miqdorlarining pastligi, transchegaraviy zarar mexanizmlarining yo‘qligi, EIA tizimining cheklanganligi – hali hal etilishini kutmoqda.

Atrof-muhitni muhofaza qilish – bu nafaqat hozirgi avlod, balki kelajak avlodlar oldidagi majburiyat. Ushbu mas’uliyatni huquqiy mexanizmlar orqali ta’minlash esa davlatning eng asosiy vazifalaridan biridir.

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IMPLEMENTATION POTENTIAL OF SMOG FREE TOWER TECHNOLOGY IN URBAN UZBEKISTAN

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Abstract. *This paper explores the feasibility and effectiveness of implementing Smog Free Tower (SFT) technology in urban Uzbekistan, particularly in Tashkent. The SFT, developed by Dutch innovator Daan Roosegaarde, uses positive ionization to remove fine particulate matter (PM2.5–PM10) from polluted urban air. The study evaluates the performance of "Aufero" air purification systems integrated into the tower through experimental measurements and computational fluid dynamics modeling. Results show a significant reduction in airborne particulates, with PM10 levels decreasing by up to 70% within the tower and by 45% in surrounding areas. The findings support the potential of SFTs to improve air quality and public health in Uzbekistan's urban centers while raising environmental awareness.*

Keywords: *Smog Free Tower (SFT), air pollution, positive ionization, urban air purification, Uzbekistan environmental technology.*

Introduction

Over the past few years, air quality has become one of the main concerns for many countries. With each passing day, air quality continues to deteriorate, posing a threat to the population, climate change, and overall quality of life. This is a risk not only for vulnerable populations suffering from respiratory diseases such as asthma, bronchitis, or abscesses, but also for healthy individuals. In recent years, the situation has become especially dangerous in cities like Delhi, Beijing, and Warsaw. These cities experience high levels of smog, prompting governments and scientists to seek progressive solutions for improving urban air quality. One such innovative solution is the Smog Free Tower (SFT), a tower developed by Dutch designer and innovator Daan Roosegaarde. The project incorporates air ionization technology that removes fine particulate matter ranging from 2.5 to 10 micrometers in diameter (PM2.5–PM10), thereby creating small "bubbles" of clean air in heavily polluted areas.

Since the initial launch of the project in Rotterdam in 2015, the SFT has been installed in several countries, including China, South Korea, Poland, and others, demonstrating varying degrees of success in each. Each installed tower not only showcases technological innovation but also serves as a symbol of awareness and proactive steps toward air purification on the planet.

Uzbekistan has not been an exception in facing air pollution, particularly in the city of Tashkent, which is dealing with growing concerns over this issue. As a metropolis, Tashkent faces rapid urbanization, vehicle emissions, and industrial development. The purpose of this work is to explore the potential integration of the SFT into Uzbekistan’s urban ecosystem by analyzing its advantages, limitations, and adaptability to the local environment.

Materials and methods

In this article, while researching air ionization technology, methods such as structural analysis, schematic representation, graphical illustrations, and meteorological conventions were applied.

Results and Discussion

The “Aufero” air purification systems were specifically designed to efficiently remove fine and ultra-fine particles from large volumes of air. To evaluate their effectiveness within the SFT, measurements were taken of particle concentrations ranging from 0.3 to 10 micrometers at the inlet and outlet of each unit. The reduction percentage was calculated based on the difference between the input and output concentrations. All measurements were conducted at full capacity—approximately 10,000 m^3 of air per hour.

Positive ionization is a process in which an atom or molecule gains a positive charge as a result of losing one or more electrons. When high voltage is applied to the ionizing electrode, it charges the surrounding air, making it conductive through a corona discharge. In this electric field, electrons gain high energy, collide with other molecules, and knock electrons out of them, creating new pairs: a free electron and a positively charged ion. These positive ions are drawn toward the grounded (neutral) collector plate, where they merge into larger molecular formations. Through this mechanism, fine dust particles, chemicals, allergens, and biological agents in the air become ionized, captured, and converted into larger dust particles, thereby reducing the risk of inhalation.

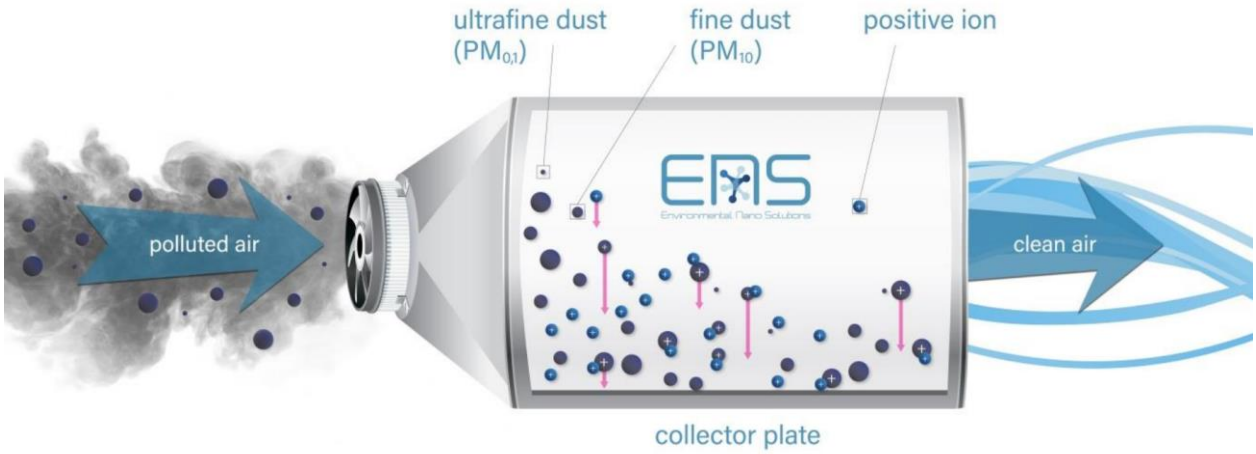

Figure 1: Schematic representation of an ‘Aufero’ air purification system

The “Aufero” air purification system by ENS Technology is a filterless technology capable of removing particles as small as 60 nanometers, including mist (for comparison, standard HEPA filters capture particles from 350 nanometers and quickly clog when exposed to moisture). As air enters the device, pollutants settle on an internal collector plate and are transformed into larger dust particles. In this way, harmful impurities are fixed in place and can no longer re-enter the air stream or be inhaled. Even under the influence of gravity and airflow, the collected dust reliably remains on the plate.

The air purification efficiency of the Aufero system for fine dust remains stable at all measured concentrations, even as significant amounts of dust accumulate. Additional advantages include low energy consumption and ease of maintenance, making the system economical to operate. The Smog Free Tower is equipped with three of these “Aufero” air purification systems.

Each of the three “Aufero” air purification systems installed inside the SFT was tested separately by measuring the concentration of fine particulate matter in the incoming and outgoing air flows. The dust reduction efficiency was calculated individually, taking into account the calibration of both measurement instruments and possible changes in background dust concentration.

After confirming the effectiveness of the air purification systems, an analysis was conducted to assess the impact of the Smog Free Tower on reducing fine particulate levels in both vertical and horizontal planes. The combined measurement points formed a three-dimensional grid, which served as a data source and reference for computational fluid dynamics (CFD) modeling.

Vertical outflow measurement

- Conditions: Ingoing and outgoing air (in parallel)
  - Ingoing air: stationary, near air intake air purification systems
  - Outgoing air: mobile, at various heights and distances of the SFT
    - Distance 1 m; heights 2.7, 2.3, 1.9, 1.4, and 0.5 m
    - Distance 0.5 m; heights 2.7, 2.3, 1.9, and 1.4 m
    - Distance 0.1 m; heights 2.7 and 2.3 m
    - Location: at the center of the outflow zone of the leeward Aufero (0°)
- Measurements: 30 minutes

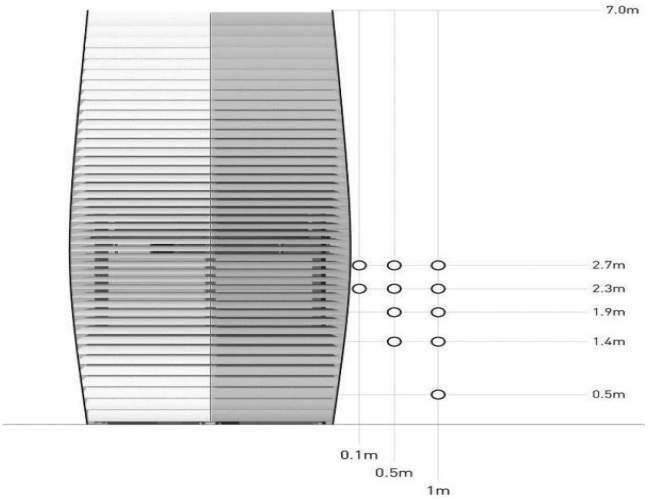

Figure 2: Schematic representation of the locations in the vertical plane of the outflow zone of the SFT

Horizontal outflow measurement

- Conditions: Outgoing air (at two different distances to the SFT, in parallel)
  - Height 2.3 m; distances 4, 3, 2, 1, and 0.1 m
  - Height 1.3 m; distances 11, 10, 6, 5, 3, 2, 1, and 0.2 m
  - Locations (n=3): from the center of the outflow zone of the leeward Aufero (0, 24, and 48°)
- Measurements: 30 minutes

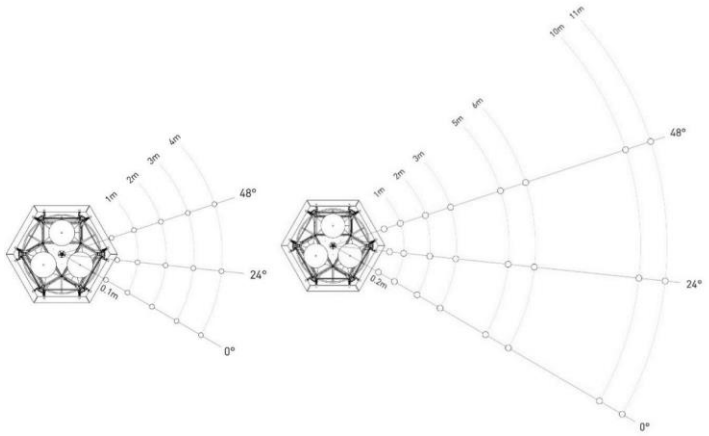

Figure 3:Schematic representation of the locations in the horizontal plane of the outflow zone of the SFT

Sequential 30-minute measurements of fine dust concentration were carried out both in the incoming air entering the purification systems and in the outgoing air on the leeward side of the SFT. The collected data were analyzed separately, taking into account the calibration of both measuring instruments, background dust levels, and weather conditions at the time of measurement.

During the measurements, the concentration of fine dust in the air (PM10) ranged from 140 to 45 μg/m³. For comparison, according to the EU Air Quality Directive (2008/EC/50), the permissible annual average value for PM10 is 40 μg/m³, and for PM2.5 it is 25 μg/m³. A consistent daily pattern was observed: peak values were recorded in the morning, which decreased by the end of the day and rose again in the evening. Accounting for such temporal fluctuations in background dust concentration is crucial for obtaining reliable results. Therefore, at the SFT installation site, the local background dust level was measured continuously and factored into the subsequent analysis.

The effectiveness of fine dust removal using positive ionization technology depends on the aerodynamic size of the particles. Generally, larger particles are removed more efficiently than smaller ones. As a result, variations in the composition of the dust can affect the measured purification efficiency (in terms of mass per volume), which partially explains discrepancies between the results of different studies. Such fluctuations can only be smoothed out by averaging data from numerous long-term measurements.

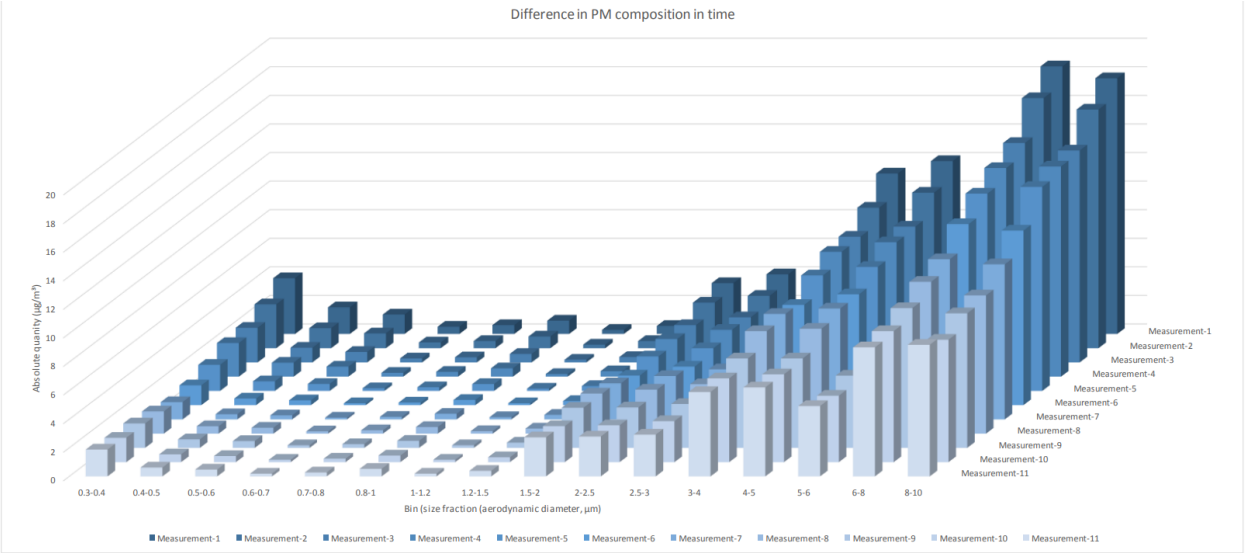

Figure 4: Example of the variations in time of the absolute quantities and the size-composition of airborne fine dust, on a typical day in the period in which the measurements were performed

Additionally, the composition of fine particulate matter varied significantly over time: the mass distribution of particles within the 0.3–10 µm range changed not only throughout the day but also from day to day.

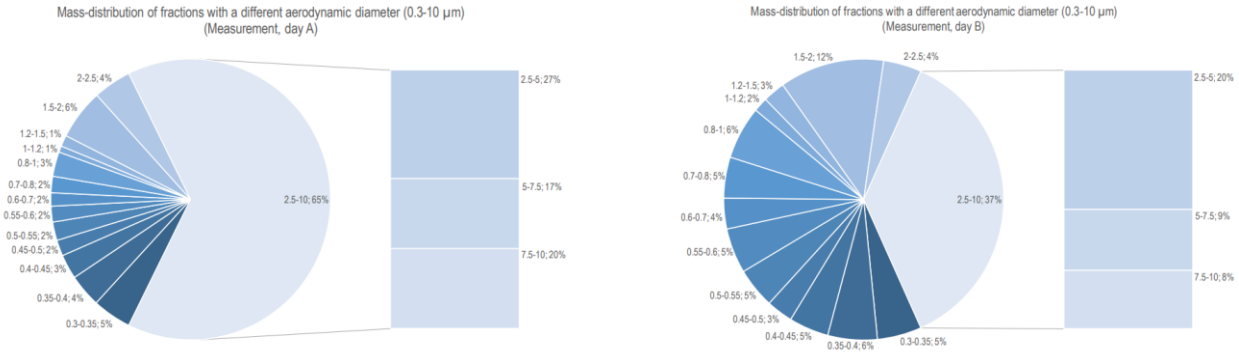

Figure 5: Example of the variations in mass distribution of the measured fine dust between different days

When measuring the concentration of airborne particulate matter, it is crucial to take weather conditions into account. For the CFD modeling, parameters such as temperature, wind speed, and wind direction were included. These meteorological conditions were monitored at the SFT site and compared with historical data available on wunderground.com.

Conclusion

A repeated analysis of positive ionization technology confirmed its high effectiveness, previously reported in validation studies: a reduction in dust concentration of up to 70% for PM10 and more than 50% for PM2.5. Additional measurements around the tower showed that the SFT creates a wide area of influence, reducing PM10 by nearly 45% and PM2.5 by approximately 25% within a radius of over 10 meters.

It should be noted that measuring fine particle concentrations in the air involves several technical challenges and largely depends on local conditions and the timing of measurements. Therefore, some deviations in results are acceptable. Nevertheless, the obtained data align well with previous research findings.

Thus, the Smog Free Tower (SFT) demonstrates convincing results in reducing harmful particle concentrations in urban air and can be considered an innovative solution for environmentally challenged megacities. Given the high levels of air pollution in major cities of Uzbekistan, such as Tashkent, Samarkand, and Fergana, implementing this technology seems particularly relevant.

Tashkent, with its dense construction, heavy traffic, and lack of green spaces, faces significant environmental pressures. Placing SFTs in key city areas—near schools, hospitals, transport hubs, and central squares—could substantially improve air quality and increase ecological safety. Moreover, such initiatives can help raise public awareness of air pollution issues and encourage the development of sustainable urban strategies.

The Smog Free project can not only become an effective technological tool but also a symbol of the transition toward a cleaner and more conscious future for Uzbekistan.

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FORMALIZING THE DIGITAL LIFECYCLE OF STATE SCIENTIFIC PROGRAMS USING IDEF0 AND IDEF3 PROCESS MODELS

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Abstract. *Public research funding runs as a chain of stages from call formation to the handover of results. Regulations frame that chain as obligations and deadlines rather than as an information process, an omission that becomes costly during digitalization. This article formalizes the lifecycle of state scientific programs from two perspectives. A context-level IDEF0 model fixes what the process transforms and under which controls and mechanisms; an IDEF3 scenario model of 13 units of behavior and two exclusive-OR junctions fixes stage order and the conditions for acceptance, revision, or rejection. Four descriptors - a layered system tuple, a routing triple, an integration descriptor, and an exchange graph - link the diagrams to an implementable architecture, and a status function with an explicit transition relation makes the scenario executable by a workflow engine. Modelling exposed three transitions the governing documents leave implicit: divergent expert scores, monitoring deviations, and the target of the revision loop. Each requires an owner, a status value, and an audit entry. Indicators from a deployed platform are illustrative, not evaluative; conditions for proper evaluation are stated.*

Key words: *IDEF0, IDEF3, business process modeling, research administration, workflow automation, digital government, state scientific programs.*

Introduction

A state scientific program passes through a long series of decisions before any research money is spent. A ministry or funding council forms the program and announces a call. Research teams prepare and submit applications. Those applications are screened for completeness and for compliance with the financial rules, specialists review the scientific content, a scientific-technical council weighs the reviews and recommends an outcome, and a ministry-level body confirms it. Contracts are then signed, financing is released, progress is monitored, and a final report is assessed before the results are handed to whoever will use them. Every one of these steps is regulated. Taken together, however, they are seldom written down as a single process.

The omission has practical consequences. When the stages exist only as separate administrative instructions, no document states which office holds an application between two

stages, what its status is at any given moment, or what evidence survives once a decision has been taken. Applicants ask where their file is and get an answer only if somebody happens to know. Reviewers are assigned by hand, and deadlines are tracked in parallel spreadsheets that disagree with one another. Governments at very different income levels have responded to this pattern by moving administration onto shared digital platforms and by trying to do more with fewer administrative resources (Janssen & Estevez, 2013). A platform, though, can only automate a process that has first been described precisely enough to be automated.

Business process modeling supplies that description, and several notations could supply it. The IDEF family is attractive in this particular setting for one specific reason: it keeps apart two questions that regulatory texts habitually run together. IDEF0 asks what a function transforms, under which constraints, and by which agents (National Institute of Standards and Technology [NIST], 1993). IDEF3 asks in what order things happen and what decides the branches (Mayer et al., 1995). Research administration needs both answers at once. A funding decision is a transformation of documents into an entitlement, and it is also a position in a queue with a deadline attached.

The literature on IDEF applications is dominated by manufacturing, logistics, and engineering design. Public research administration has attracted far less attention, even though it is unusually well suited to formal process description: the actors are named in law, the decision criteria are published, and the artifacts are documents with legal standing. This article addresses that gap by asking two questions. First, what does the lifecycle of a state scientific program look like when it is expressed simultaneously as an IDEF0 function and an IDEF3 scenario? Second, what has to be added to those two diagrams before software can actually execute them? The remainder of the article reviews the modeling background, sets out the procedure and notation used, presents the two models together with the descriptors that link them to system architecture, and then discusses what the exercise revealed and what it cannot yet support.

Theoretical Background

Functional and Process Perspectives in the IDEF Family

IDEF0 descends from the Structured Analysis and Design Technique developed for the U.S. Air Force ICAM program and was later published as a federal standard (NIST, 1993). Its central construct is an activity box carrying four classes of labeled arrow, conventionally abbreviated as ICOM. Inputs arrive from the left and are consumed or converted by the activity. Controls arrive from the top and constrain how the activity is performed without being consumed by it. Outputs leave to the right. Mechanisms arrive from below and denote the people, bodies, or systems that carry the work out.

Most of the analytical value of IDEF0 sits in the distinction between an input and a control, because that is the distinction administrative prose most often blurs. An application is consumed by a review; an evaluation criterion is not. The criterion governs the review and survives it unchanged. Forcing a modeler to place each item on one side of that line makes explicit which legal instrument constrains each step and which body performs it - precisely the information a regulation assumes its reader already possesses.

IDEF3 works differently. It captures a process as a network of units of behavior (UOBs) connected by precedence links, with junctions specifying how flow splits and merges: conjunctive junctions where all paths proceed, inclusive disjunctive junctions where one or more proceed, and exclusive junctions where exactly one does (Mayer et al., 1995). IDEF3 was designed as an elicitation method, which matters for how its output should be read. A scenario diagram records

how participants describe a process as happening, not necessarily how a normative document says it should happen, and the difference between those two readings is often where the interesting problems live.

Combining the Two Perspectives

The complementarity of the IDEF methods has been examined repeatedly. Kim et al. (2003) showed that IDEF models can serve as a business-oriented front end to UML, with semantic content re-expressed in the target notation rather than rebuilt from scratch. Whitman et al. (1997) took a more demanding route and converted static IDEF0 and IDEF3 models into executable discrete-event simulations, adding the annotations that the static notations leave out. Both lines of work converge on the same conclusion: neither a functional nor a scenario view is self-sufficient, and the effort involved in reconciling them is where much of the analytical benefit accumulates.

Why IDEF Rather Than BPMN

BPMN is the mainstream choice for this kind of work and would have been defensible here (Object Management Group [OMG], 2013). It has richer event semantics, wider tool support, and - decisively for many projects - a direct path to execution. Petri-net foundations and process mining allow a model to be checked against real event logs rather than accepted on the modeler's authority (van der Aalst, 2016), and the broader business process management literature supplies the redesign and governance frame around such models (Dumas et al., 2018; Scheer, 2000; Weske, 2019). Choosing IDEF over BPMN was a trade. What IDEF0 offers that BPMN does not enforce is the mandatory separation of control from mechanism at every activity. In a regulated domain, where the question "under which rule?" is as consequential as the question "who does it?", making that separation compulsory rather than optional is worth the loss of executability - provided, as this article argues below, that the executability is recovered by other means.

Method

Scope and Modeling Inputs

The model covers one program cycle, bounded at the front by the formation of a call and at the back by the transfer of completed results to a receiving organization. Two adjacent processes are deliberately outside the boundary: the budget planning that determines how large a program will be, and whatever happens to a result after it has been transferred. Both are governed by different actors and different instruments, and pulling them in would have produced a diagram too coarse to be useful at either end.

Three sources fed the model. The first was the body of regulatory documents governing the announcement, evaluation, contracting, and monitoring of state scientific programs. The second was the module and status specification of the digital platform under development, which supplied the vocabulary of information objects and the set of statuses each object can hold. The third was the sequence of stages as practiced, reconstructed from the order in which documents are produced and signed. Where the second and third sources disagreed with the first, the disagreement was recorded rather than smoothed over; two such cases are reported in the Results.

Modeling Procedure

Modeling proceeded in five steps. The context diagram was fixed first, with every candidate arrow tested against a single question: does the activity consume this item, or is the item still intact afterwards? Items that survive were classified as controls, items that do not as inputs, and the bodies and systems performing the work as mechanisms. Second, the scenario was decomposed into units of behavior, each named with a verb phrase and each corresponding to a point at which an information object changes hands or changes state. Third, junction types were

assigned. Both branch points in the lifecycle turned out to be exclusive: an application is accepted, returned, or rejected, and these outcomes cannot hold simultaneously.

Fourth, the two models were cross-checked. The test applied was bidirectional - every UOB had to be traceable to at least one function in the IDEF0 decomposition, and every output named in the context model had to be produced by at least one UOB. This is the step that generated the most revision, and it is described in the Results because its findings are substantive rather than procedural. Fifth, the formal descriptors set out below were attached, so that the diagrams could be read as a specification rather than as documentation.

Notation

Four descriptors connect the process models to an implementable architecture. Note that the notation used here departs from the informal version circulated earlier in the project, in which the symbol for the integration layer collided with the symbol for the integration descriptor and the symbol for status collided with the symbol for the system as a whole. The revised notation is as follows.

The platform is described as a five-layer tuple:

$$\Sigma = \langle\ U, B, D, X, T\rangle$$

where U is the user layer, B the business-logic modules, D the data layer, X the integration layer, and T the technical infrastructure. This layering follows the conventional practice of describing a system through the concerns of its stakeholders rather than through its source structure (ISO/IEC/IEEE, 2011).

Movement of information objects between modules is described as a triple:

$$R = \langle\ N, P, C\rangle$$

where N is the set of nodes, $P \subseteq N \times N$ the set of admissible transmission paths, and C the set of routing rules that determine which path in P is taken for a given object.

Each integration point $x \in X$ carries a descriptor:

$$\iota(x) = \langle\ a, \tau, \pi, \sigma\rangle$$

with a the endpoint, τ the data type exchanged, π the protocol, and σ the current integration status. The exchange topology of the platform is then the directed graph $G = (V, E)$, where V is the set of modules and $E \subseteq V \times V$ the set of exchange links; the routing rules C induce a labeling on E.

These four descriptors are standard, and on their own they do not make the scenario executable. What does is the addition of an explicit status machine. Let O be the set of information objects and Q the finite set of statuses an object may hold. A status function

$$st: O \to Q$$

assigns a current status to every object, and a transition relation

$$\delta \subseteq Q \times \Phi \times Q$$

specifies which status changes are permitted, with Φ the set of conditions evaluated at branch points. Every transition $(q, \varphi, q') \in \delta$ writes an audit record of the form $\langle$ actor, timestamp, object, q, q', module$\rangle$. The practical significance of this addition is discussed below: it is the point at which an IDEF3 junction stops being a picture of a decision and becomes a decision the system can make and later account for.

Results

The Context-Level Functional Model

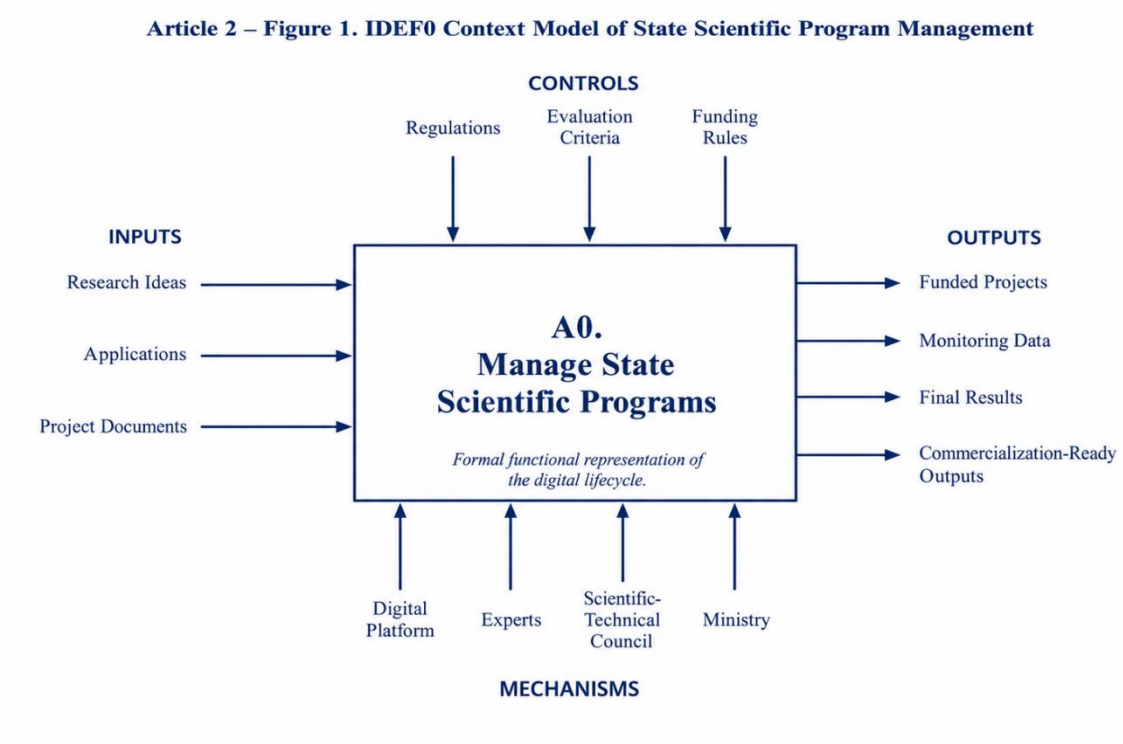
Figure 1 presents the process at its highest level of abstraction as a single activity, A0, Manage State Scientific Programs. Three inputs cross the left boundary: research ideas, applications, and project documents. Three controls constrain the activity from above: regulations,

evaluation criteria, and funding rules. Four mechanisms carry it out: the digital platform, the expert corps, the scientific-technical council, and the ministry. Four outputs leave to the right: funded projects, monitoring data, final results, and commercialization-ready outputs.

One classification in Figure 1 deserves comment because it is not obviously correct. Research ideas are shown as an input, but an idea is not a document and cannot be consumed by an administrative activity in the way an application can. It is better read as a placeholder for pre-application intent - the point at which a research team decides to respond to a call. Retaining it makes the model honest about where the lifecycle actually begins for the applicant, at the cost of some formal tidiness. The alternative, starting the diagram at application submission, produces a cleaner model of a narrower process.

Figure 1

Context-Level IDEF0 Model of State Scientific Program Management



Note. Arrows are classified according to the ICOM convention: inputs enter from the left, controls from the top, mechanisms from below, and outputs leave to the right.

The Scenario Model and Its Decision Points

Figure 2 shows the same process as an IDEF3 scenario of 13 units of behavior arranged in two bands. The upper band runs from the scientific idea through the call announcement, application submission, technical expertise, scientific expertise, financial expertise, scientific-technical council review, and ministry-level review. It terminates at an exclusive-OR junction with three outcomes: accepted, revision required, or rejected. The lower band picks up the accepted path and runs through contracting, financing, monitoring, the final report, and transfer to commercialization, ending at a second exclusive-OR junction offering completed, suspended, or terminated.

Three features of this scenario are worth drawing out, and only the first of them is flattering to the model.

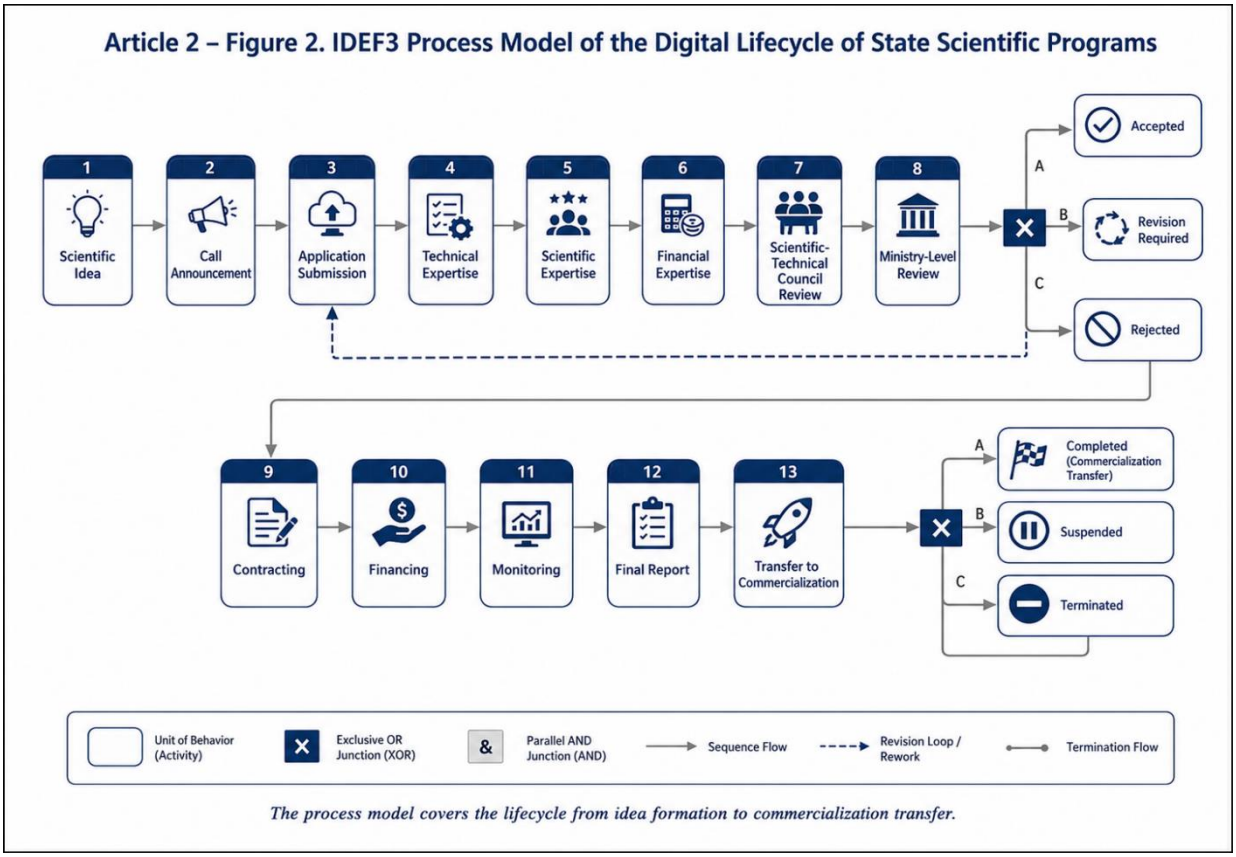
The revision loop returns to unit 3, application submission, rather than to whichever check produced the negative result. That is a design decision with a real cost. A submission returned because of a missing financial annex re-enters the process at the same point as one returned after an unfavorable scientific review, which means the full expertise chain repeats in both cases. A more discriminating loop would return the object to the failed check and revalidate only downstream of it. The current arrangement is simpler to implement and simpler to explain to applicants, and for low return rates the difference in throughput is small; for high return rates it is not.

The second junction sits later in the process than practice would suggest. Suspension and termination are shown as outcomes evaluated after transfer to commercialization, whereas in reality a project is far more likely to be suspended or terminated during monitoring, when a deviation is detected and cannot be corrected. The diagram as drawn describes the formal close-out decision accurately and the practical one poorly.

Third, the three expertise activities are drawn in series. Technical, scientific, and financial review each wait for its predecessor. There is no procedural reason for this ordering - the three reviews consume the same submission and produce independent conclusions - and modeling them as a conjunctive branch would shorten the critical path considerably. The legend of Figure 2 in fact defines a conjunctive junction that the diagram never uses, which is the clearest available evidence that the parallel option was considered and not taken. Treating this as a limitation rather than an oversight, the sequential arrangement is defensible only if the reviews are resource-constrained in a way the model does not currently represent.

Figure 2

IDEF3 Scenario Model of the Digital Lifecycle of State Scientific Programs



Note. Numbered boxes are units of behavior. Junctions marked X are exclusive-OR. The dashed link is the revision loop returning a rejected submission to unit 3.

Control Points and What the System Must Record

The cross-check between the two models produced the mapping in Table 1. Each row identifies a point at which the scenario branches or a status changes, states the condition evaluated there, names the platform mechanism responsible, and specifies what has to be written to the record. The last column is the one that matters for implementation: a branch that changes an object's status without writing an audit entry is a branch that cannot afterwards be defended.

Table 1

Control Points in the Lifecycle and Their Implementation Requirements

Control point	Condition evaluated	Responsible mechanism	Record written
Completeness screening	Required fields and annexes present	Platform validation module	Status change; list of missing items
Compliance screening	Applicant eligible under funding rules	Platform rules engine	Status change; rule invoked
Expert score aggregation	Aggregate score above threshold	Expertise module	Individual and aggregate scores
Score divergence check	Spread between reviewers exceeds tolerance	Expertise module; council	Flag; identity of third reviewer
Council recommendation	Reviews support funding	Scientific-technical council	Protocol; dissenting positions
Ministry confirmation	Recommendation and budget consistent	Ministry-level council	Signed decision; effective date
Monitoring deviation	Reported progress below plan	Monitoring module	Alert; recipient; response deadline
Final report acceptance	Deliverables match contract	Monitoring module; council	Acceptance act; transfer target

Note. Each row corresponds to a transition $(q, \varphi, q') \in \delta$. The tolerance in row 4 and the threshold in row 3 are policy parameters and are not fixed by the model.

From Diagram to Architecture

The descriptors introduced above give each part of the diagram a home in the architecture. The nodes N of the routing triple correspond to the business-logic modules in B: submission, the three expertise modules, council review, contracting, financing, and monitoring. The admissible paths P are the precedence links of Figure 2, which is to say that the diagram is not merely illustrative of the routing but constitutive of it. The rules C encode the conditions Φ of Table 1.

What prevents an application from arriving at contracting without a council decision is therefore not a convention observed by staff but a constraint on the path set.

The layer decomposition Σ locates the remaining responsibilities. The user layer U carries the portals and dashboards through which applicants, reviewers, and council members interact; the data layer D holds the objects O and their statuses; the integration layer X handles identification, electronic signature, and exchange with adjacent government systems, each of its endpoints described by ι(x); and the technical layer T carries the load. The audit trail, notably, is not confined to one layer. It is written by transitions in B, stored in D, and exposed through U, which is why treating auditability as a feature of a single module tends to fail.

Discussion

Why Neither Perspective Suffices Alone

The methodological case for using both notations rests on what each one cannot express. IDEF0 says nothing about order. Reading Figure 1 alone, one cannot tell whether financial screening precedes scientific review or follows it, and one certainly cannot tell what happens when a review is unfavorable - conditional returns, additional expertise, and status changes are simply outside its vocabulary. IDEF3 has the opposite blind spot. Figure 2 shows the sequence clearly and shows nothing at all about which rule authorizes each step or which body is accountable for it. A scenario diagram cannot represent the resource and control structure of the process. Used together, each notation covers the other's silence, and the reconciliation step - checking that every UOB maps to a function and every output to a UOB - is what forced the inconsistencies reported above into the open.

What Formalization Made Visible

Three transitions turned out to be genuinely undetermined by the governing documents. The first is the treatment of divergent expert scores. Regulations specify who reviews and what scale is used, but not what constitutes an unacceptable spread between reviewers or who is entitled to commission an additional review. The second is the response to a monitoring deviation: a deviation is reportable, but the threshold at which it triggers an alert, and the recipient of that alert, are left to practice. The third is the target of the revision loop discussed earlier.

None of these gaps causes visible trouble in a paper-based process, because a human coordinator resolves them case by case and the resolution leaves no trace. The moment the process is expressed as a transition relation δ, each gap becomes a transition with no defined condition, and the system cannot be built until someone with the authority to do so supplies one. This is the most useful thing the modeling exercise produced, and it is a general point rather than a local one: formalizing an administrative process does not primarily automate existing decisions, it identifies decisions that were never actually made.

Where Automation Should Stop

The model draws a deliberate line between computation and confirmation. The platform can validate completeness, apply eligibility rules, distribute submissions to reviewers, compute aggregate scores, detect divergence, and raise monitoring alerts. It does not decide. Council recommendation and ministerial confirmation remain with the bodies that hold legal responsibility for them, and the model records their decisions rather than producing them.

This is not merely deference to legal form. The specific risk in a scored evaluation process is that an aggregate score, computed reliably and displayed prominently, comes to be treated as the decision rather than as one input to it. A council that ratifies a ranking it did not examine has been automated in substance while remaining accountable in form, which is the least defensible of

the available arrangements. Designing the interface so that scores are presented alongside the dissenting positions and the divergence flags, rather than as a single sorted list, is a small choice with a large effect on whether the human confirmation step remains real.

Practical Implications

Two figures are associated with the deployed platform: an acceleration of the introduction of scientific and innovation results into sectors by 15.7%, and an approximately twofold acceleration of commercialization and sectoral application. These should be read with care. They are implementation indicators recorded alongside deployment, not the outcome of a controlled evaluation. No baseline cohort was held back, no adjustment was made for the composition of projects before and after deployment, and the observation period was short relative to the time it takes a research result to reach application. The direction of effect is plausible and consistent with the mechanism proposed here - a shorter administrative path leaves more of a project's calendar available for the work itself - but the magnitude should not be quoted as an effect size.

The operational indicators in Table 2 are on firmer ground, because they measure the duration of administrative steps rather than downstream research outcomes, and those durations are recorded by the system itself. Even so, they compare a digitized process against remembered practice rather than against a measured baseline, and they are offered as a description of what changed rather than as evidence of why.

Table 2

Reported Duration of Administrative Steps Before and After Platform Deployment

Step	Before deployment	After deployment	Basis of the figure
Application submission	20–30 min	5–7 min	Recalled practice vs. system log
Expertise cycle	7–10 days	1–2 days	Recalled practice vs. system log
Monitoring report preparation	Manual, 1–2 days	Generated on request	Recalled practice vs. system log
Paper documents in circulation	Reference level	10–15% of reference level	Estimate
Status visibility to applicant	On request only	Continuous	Feature comparison

Note. Pre-deployment values are reconstructed from practice and were not measured under a common protocol. The final row is a qualitative change and is included for completeness rather than comparison.

Limitations

Four limitations bound what can be claimed. The IDEF0 decomposition stops at the context level, so the internal structure of the expertise and monitoring functions remains unelaborated; a second-level decomposition would probably relocate some of the control points now listed in Table 1. The scenario model has not been checked against event logs. Conformance checking of the kind described by van der Aalst (2016) would establish whether the process as executed

matches the process as drawn, and until that is done the model rests on the modeler's account of the domain. IDEF3 carries no time or resource semantics, so the sequential expertise chain cannot be evaluated against a parallel alternative without the annotation-and-simulation route taken by Whitman et al. (1997). Finally, the model was built around one institutional arrangement. How much of it transfers to a funding body with a different council structure or a different legal basis for its decisions is an open question, and one worth answering, since the value of a reference model lies precisely in its transferability.

Future Work

The obvious next step is to instrument the deployed platform and replay its event log against Figure 2, which would settle the conformance question and quantify how often the revision loop is taken. Decomposing A0 to a second level would let the parallel-expertise variant be specified properly and then simulated. A comparison of the IDEF-based specification with a BPMN rendering of the same lifecycle would also be informative, since it would show how much of the control-versus-mechanism distinction survives translation into an executable notation - and whether what survives is enough.

Conclusion

The lifecycle of a state scientific program can be expressed as a pair of complementary formal models: an IDEF0 function that states what is transformed and under what authority, and an IDEF3 scenario of 13 units of behavior that states in what order and under what conditions. Neither model is executable on its own. Adding a status function, an explicit transition relation, and an audit record at every transition closes that gap and turns the diagrams into a specification a workflow engine can carry out.

The more interesting result was not the model but what building it uncovered. Three points in the lifecycle - the handling of divergent expert scores, the response to monitoring deviations, and the destination of the revision loop - proved to be undetermined by the documents that govern the process. They had been resolved informally, case by case, without leaving a record. A digital platform cannot resolve them informally, which is why the discipline of formal modeling is worth its cost in a domain where the decisions carry legal weight.

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10.00.00 – PHILOLOGICAL SCIENCES

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10.00.00 - FILOLOGIYA FANLARI

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10.00.00 - ФИЛОЛОГИЧЕСКИЕ НАУКИ

THE ROLE OF AGE AND SOCIAL STATUS IN UZBEK AND ENGLISH HOSPITALITY

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Abstract. *Hospitality is one of the most significant socio-cultural phenomena reflecting the worldview, moral values, communicative traditions, and social hierarchy of a nation. The present article examines the role of age and social status in Uzbek and English hospitality communication from sociolinguistic and pragmatic perspectives. The study focuses on the analysis of communicative behavior, politeness strategies, forms of address, ritual hospitality expressions, and interactional norms in both cultures. The research is based on live conversational observations, discourse analysis, comparative methodology, and Brown and Levinson's politeness theory. The findings demonstrate that Uzbek hospitality communication is deeply rooted in collectivism, hierarchy, ritual politeness, emotional closeness, and religious-cultural traditions, whereas English hospitality discourse emphasizes equality, privacy, indirectness, and individual comfort. The study further reveals that age and social status function as major communicative regulators in Uzbek hospitality, while English communication tends to minimize hierarchical distinctions and maintain interpersonal balance through neutral politeness strategies. The article contributes to intercultural pragmatics, discourse studies, linguoculturology, and sociolinguistics by identifying national-cultural differences in hospitality communication and demonstrating how language reflects social structure and cultural identity.*

Keywords: *Hospitality discourse, sociolinguistics, pragmatics, politeness strategies, communicative behavior, Uzbek culture, English culture, intercultural communication, social status, age factor, hospitality rituals, discourse analysis, communicative norms.*

Introduction. Hospitality has historically occupied a central place in human civilization and social communication. Every nation expresses its moral values, traditions, worldview, and cultural identity through hospitality rituals and communicative practices. Hospitality is not simply a domestic or social activity; rather, it functions as a complex communicative system regulated by linguistic etiquette, politeness strategies, social hierarchy, and culturally accepted norms of interaction.

In many Eastern societies, especially in Uzbek culture, hospitality is considered a sacred moral duty and an essential indicator of family honor, social respect, and communal solidarity.

Hospitality practices in Uzbek society are deeply connected with traditions of respect toward elders, social hierarchy, collectivism, generosity, and religious values. During hospitality interactions, age and social status significantly influence speech behavior, communicative etiquette, seating arrangements, forms of address, and ritual expressions.

In contrast, English hospitality communication reflects Western communicative values such as individualism, privacy, equality, emotional restraint, and indirect politeness. While politeness and hospitality remain important in English culture, communicative interactions are generally less hierarchical and more oriented toward maintaining personal comfort and interpersonal balance.

The study of hospitality communication is particularly important in modern intercultural communication because misunderstandings often arise from differences in communicative norms and pragmatic expectations. What is considered polite and respectful in one culture may appear excessive, intrusive, or emotionally distant in another. Therefore, comparative studies of hospitality discourse contribute not only to linguistic research but also to intercultural understanding.

The purpose of this article is to analyze the role of age and social status in Uzbek and English hospitality communication through sociolinguistic and pragmatic approaches. The research specifically examines politeness strategies, communicative etiquette, ritualized speech formulas, and culturally specific discourse patterns in hospitality settings.

Materials and review.

The primary materials used in the study include:

Live Observational Dialogues.

The main corpus of the research was formed through direct observation of hospitality interactions in Uzbek family environments. These observations included:

• everyday guest-host conversations;
• family gatherings;
• post-wedding hospitality interactions between qudalar (relatives by marriage);
• hospitality events after Umrah pilgrimage;
• informal and formal home visits.

The dialogues were recorded in written form immediately after observation in order to preserve authentic linguistic and pragmatic features.

English Hospitality Discourse Samples

English hospitality communication materials were collected from:

• naturally occurring conversational patterns;
• educational conversational videos;
• authentic hospitality dialogues;
• sociolinguistic examples from English-speaking contexts.

The research also relies on theoretical and scientific literature in the fields of sociolinguistics, linguпragmatics, discourse analysis, intercultural communication, politeness theory.

Key theoretical works include studies by Penelope Brown, Stephen Levinson, Janet Holmes, Kate Fox, and S. Muminov. Comparative communicative observations and survey-based conclusions regarding hospitality norms, communicative expectations, and politeness perceptions were additionally used to support the analysis.

Research Methodology

This study employs comparative sociolinguistic and pragmatic analysis. The research material consists of naturally occurring hospitality conversations, live observational dialogues, family hospitality interactions, educational conversational materials, ritual hospitality exchanges.

The methodology includes:

• Comparative discourse analysis;

• Pragmatic analysis of politeness strategies;

• Sociolinguistic analysis of communicative variables;

• Linguocultural interpretation of speech behavior.

Special attention is devoted to age-related communicative behavior, social-status markers, forms of address, hospitality rituals, gratitude expressions, invitation strategies, conversational closings.

Discussion and results.

The theoretical basis of this study relies primarily on sociolinguistics, pragmatics, intercultural communication theory, and politeness theory. One of the most influential frameworks in the study of communicative behavior is the politeness theory proposed by Penelope Brown and Stephen Levinson. According to their theory, communication is closely related to the concept of “face,” which refers to an individual’s public self-image.

Janet Holmes notes that sociolinguistic behavior is shaped by social variables such as age, gender, social status, and cultural expectations. In traditional societies, communicative behavior often reflects hierarchical structures and social obligations. Similarly, S. Muminov emphasizes that Uzbek communicative culture is strongly influenced by social hierarchy, age relations, and collective values. Respect toward elders and socially prestigious individuals is linguistically encoded through special forms of address, service rituals, and politeness formulas.

Kate Fox argues that English communication culture prioritizes emotional restraint, irony, privacy, and conversational balance. English speakers often avoid excessive emotionality or insistence in order to prevent discomfort and preserve interpersonal equality.

The study also examines how politeness strategies differ depending on cultural values and communicative expectations. In Uzbek culture, age functions as one of the most important determinants of communicative behavior. Respect toward elders is deeply rooted in national mentality and is reflected in every stage of hospitality interaction. Elderly guests are usually welcomed with exceptional honor and respect. Hosts often use special honorific forms of address such as “ustoz,” “ota,” “onaxon,” “aka,” “opa,” “xola,” “amaki.” These forms do not merely indicate age; they also express social respect, emotional closeness, and moral recognition.

One of the distinctive features of Uzbek hospitality is the seating arrangement known as “to‘r.” The most respected guest, usually the eldest or highest-status person, is seated in the most honorable place in the room. This practice symbolically reflects social hierarchy and respect. Younger family members actively participate in hospitality rituals by serving tea, preparing food, carrying dishes, greeting guests,

assisting elders. Such communicative behavior demonstrates the collectivist orientation of Uzbek society and reinforces intergenerational respect.

The linguistic structure of Uzbek hospitality discourse also reflects hierarchical relations. Hosts frequently use emotional and exaggerated expressions to honor guests: “Siz kelib uyimizni fayzli qildingiz,” “Qadamlaringizga hasanot,”

“Uyimizga baraka olib keldingiz.” These expressions function as positive politeness strategies aimed at strengthening solidarity and emotional connection. Guests, meanwhile, often employ ritual modesty and self-deprecation by using phrases “Ovora bo‘lmang,” “Shoshib turgandim,” “Hijolat qilyapsizlar.” Such responses represent face-saving strategies and demonstrate humility.

On the other hand, English hospitality communication demonstrates considerably different communicative principles. Although politeness remains central, English interaction generally prioritizes personal comfort, individual autonomy, emotional moderation, conversational equality.

Hospitality expressions are usually indirect and optional “Would you like some tea?”, “Please help yourself ”, “Make yourself comfortable.”

Unlike Uzbek hospitality, English hosts rarely insist repeatedly after refusal. Respect for personal choice is considered an important aspect of politeness. English hospitality discourse also tends to avoid strong hierarchy in everyday interaction. Even when age or professional status differences exist, communication often remains relatively informal and balanced. Typical conversational topics during hospitality interactions include weather, travel, work, hobbies, family life. These neutral subjects help maintain comfortable interaction without becoming emotionally intrusive. Another important feature of English hospitality communication is conversational understatement. Compliments and gratitude expressions are usually moderate such as “That was lovely”, “Thank you for having us”, “It was a pleasant evening.” Such expressions reflect cultural preferences for restraint and emotional control.

Social hierarchy occupies an important place in Uzbek communicative culture. Hospitality interactions are significantly shaped by social prestige, occupation, kinship relations, and moral authority. Particularly respected categories of guests include teachers, religious leaders, elders, matchmakers (qudalar), community leaders. These individuals receive special treatment during hospitality events. Additional food is prepared, elaborate welcoming rituals are organized, and highly respectful speech forms are used. The communicative interaction between “qudalar” (relatives by marriage) represents one of the most culturally specific forms of Uzbek hospitality discourse. Such communication is characterized by ritual politeness, humor, exaggerated compliments,repeated invitations, emotional intimacy. The forms “qudagay,” “qudajon,” and similar expressions indicate both respect and symbolic kinship closeness. Another important aspect is religious hospitality discourse associated with Umrah pilgrimage celebrations. Individuals returning from Umrah often experience elevated social prestige within the community. Hospitality events organized after pilgrimage contain numerous religious expressions “Alloh qabul qilsin,” “Omin,” “Nasib qilsin,” “Alloh rozi bo‘lsin.” These expressions function not only as communicative units but also as spiritual and moral acts reinforcing collective religious identity. In such interactions, elderly individuals usually perform prayers and blessings, further emphasizing the connection between age, authority, and spirituality.

The comparative analysis reveals substantial differences between Uzbek and English hospitality communication. Uzbek hospitality strongly relies on positive politeness strategies:

- insistence;
- emotional involvement;
- repeated invitations;
- blessings;
- collective participation.

English hospitality more frequently employs negative politeness strategies:

• indirect requests;
• optional offers;
• respect for privacy;
• conversational moderation.
• Forms of Address

Uzbek discourse employs kinship-based and honorific expressions extensively “aka,” “opa,” “ustoz,” “onaxon.”

English discourse primarily uses neutral titles “Mr.” “Mrs.” “Sir” first names in informal contexts.

Uzbek hospitality contains elaborate rituals seating hierarchy, repeated invitations, blessing ceremonies, ceremonial farewells. English hospitality tends to minimize ritualization and maintain conversational simplicity.

Uzbek communicative culture encourages emotional openness and expressive politeness. English communication generally favors emotional restraint and moderation.

Therefore, hospitality serves as a linguistic mirror of national mentality and worldview.The analysis also shows that hospitality communication functions not only as interpersonal interaction but also as a mechanism for maintaining social harmony, reinforcing cultural values, and preserving group identity.

Conclusion

The present study demonstrates that age and social status play crucial roles in both Uzbek and English hospitality communication. However, the communicative realization of these factors differs significantly according to national-cultural traditions and sociolinguistic norms. Uzbek hospitality communication is characterized by hierarchical respect, ritual politeness, emotional warmth, insistive hospitality, collective participation, religious expressions while English hospitality communication emphasizes conversational equality, indirectness, respect for personal autonomy, moderation, neutral politeness. The findings further reveal that Uzbek hospitality predominantly relies on positive politeness strategies, while English hospitality communication more frequently employs negative politeness strategies. The study contributes to intercultural pragmatics, discourse studies, and sociolinguistics by providing a deeper understanding of how language reflects social hierarchy, cultural identity, and communicative values. Future research may further explore gender differences, regional variations, and digital hospitality communication in intercultural contexts.

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INGLIZ VA O‘ZBEK TILLARIDA ANTROPONIMIK LUG‘ATLARNING LEKSIKOGRAFIK MODELI VA QIYOSIY TAHLILI

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Annotatsiya. *Mazkur maqolada ingliz va o‘zbek tillaridagi antroponimik lug‘atlarning leksikografik xususiyatlari qiyosiy jihatdan tahlil qilinadi. Tadqiqotda antroponimlarning lug‘atlarda ifodalanish usullari megastruktura, makrostruktura va mikrostruktura doirasida ko‘rib chiqiladi. Shuningdek, formal, pragmatik, etimologik va tasviriy parametrlar tizimi ilmiy asosda yoritiladi. Natijalar ingliz lug‘atlarining ko‘p parametrli va tizimli xarakterga ega ekanligini, o‘zbek lug‘atlarida esa lingvomadaniy yondashuv ustuvorligini ko‘rsatadi.*
Kalit so‘zlar: *antroponim, leksikografiya, mikrostruktura, semantika, pragmatika, etimologiya, lingvomadaniyat.*

Abstract. *This article presents a comparative analysis of the lexicographic features of anthroponymic dictionaries in the English and Uzbek languages. The study examines the methods of representing anthroponyms in dictionaries within the framework of megastructure, macrostructure, and microstructure. In addition, the system of formal, pragmatic, etymological, and descriptive parameters is analyzed on a scientific basis. The findings demonstrate that English dictionaries are characterized by a multi-parameter and systematic structure, whereas Uzbek dictionaries are dominated by a linguocultural approach.*
Keywords: *anthroponym, lexicography, microstructure, semantics, pragmatics, etymology, linguoculture.*

Kirish

Zamonaviy tilshunoslikda antroponimlar insonni nomlash vositasi sifatida nafaqat nominativ, balki lingvomadaniy va ijtimoiy funksiyani bajaruvchi murakkab birlik sifatida qaraladi. Shu bois antroponimlarni lug‘atlarda ifodalash usullari ularning semantik, pragmatik hamda madaniy xususiyatlarini ochib berishda muhim ahamiyat kasb etadi. Ayniqsa, ingliz va o‘zbek tillaridagi antroponimik lug‘atlarni qiyosiy o‘rganish turli til tizimlarida nomlash an’analari va ularning leksikografik aks ettirilish usullarini aniqlash imkonini beradi.

Mazkur tadqiqotning dolzarbligi antroponimlarning nafaqat til birliklari, balki madaniy axborot tashuvchisi sifatida zamonaviy leksikografiyada tutgan o‘rnini aniqlash zarurati bilan

izohlanadi. Tadqiqotning maqsadi ingliz va o‘zbek tillaridagi antroponimik lug‘atlarning leksikografik modelini qiyosiy tahlil qilishdan iborat.

Adabiyotlar tahlili

O‘zbek tilshunosligida ham antroponimlar va ularning lug‘aviy tavsifi bo‘yicha muhim ilmiy tadqiqotlar olib borilgan. Xususan, E. Begmatov o‘z ishlarida antroponimlarni antropotsentrik nuqtai nazardan o‘rganib, shaxs nomlarida xalqning ijtimoiy, madaniy va tarixiy tajribasi mujassam ekanligini ta’kidlaydi [3]. Uning fikricha, antroponimlar inson ehtiyoji va tafakkurining mahsuli sifatida til va madaniyatning uzviy bog‘liqligini aks ettiradi.

Shuningdek, Sh. Safarov kognitiv tilshunoslik doirasida til birliklarini, jumladan, antroponimlarni inson tafakkuri va konseptual tizimi bilan bog‘liq holda talqin qiladi [8]. Bu yondashuv antroponimlarni nafaqat nominativ birlik, balki kognitiv va lingvomadaniy fenomen sifatida ko‘rishga imkon beradi.

D. U. Ashurova esa lingvokulturologiya doirasida antroponimlarni milliy madaniyatni aks ettiruvchi birlik sifatida o‘rganadi va ularning semantik hamda madaniy yuklamasini tahlil qiladi [2]. Olimning fikricha, shaxs nomlari milliy qadriyatlar, diniy qarashlar va estetik tamoyillar bilan chambarchas bog‘liq.

O‘zbek antroponimik lug‘atlarida ko‘pincha nomlarning ichki semantikasi, etimologiyasi va madaniy asoslariga alohida e’tibor qaratiladi. Masalan, Dilshod, Saodat, Mehribon kabi ismlar insonning ijobiy fazilatlarini ifodalovchi semantik motivatsiyaga ega. Bu holat o‘zbek leksikografiyasida lingvomadaniy yondashuv ustuvor ekanligini ko‘rsatadi.

Ingliz va o‘zbek antroponimik lug‘atlarida atoqli otlarni ifodalash jarayoni odatda uch darajada amalga oshiriladi: megastruktura, makrostruktura va mikrostruktura. Ushbu darajalar lug‘at tuzilishini tahlil qilishda muhim nazariy asos bo‘lib xizmat qiladi.

Leksikografik tadqiqotlarda lug‘at tuzilishi ko‘p darajali tizim sifatida qaraladi va u megastruktura, makrostruktura hamda mikrostruktura kabi tarkibiy qismlarni o‘z ichiga oladi. Megastruktura lug‘atning umumiy tashkil etilishini ifodalaydi va unga kirish qismi, foydalanish qoidalari, ilovalar hamda qo‘shimcha materiallar kiradi. Bu daraja lug‘atning konseptual modeli va umumiy strukturaviy tamoyillarini belgilaydi. Makrostruktura esa lug‘at maqolalarining tartiblanish prinsiplari bilan bog‘liq bo‘lib, unda birliklarning alifbo tartibida yoki tematik asosda joylashtirilishi muhim ahamiyat kasb etadi. Mikrostruktura esa har bir lug‘at maqolasining ichki tuzilishini tashkil etib, unda lingvistik va ekstralingvistik ma’lumotlar, xususan, semantik, etimologik, pragmatik va lingvomadaniy komponentlar ifodalanadi.

Lug‘at yozuvlarini ilmiy tahlil qilish muammosi dastlab umumiy leksikografiya doirasida shakllangan bo‘lib, keyinchalik onomastik va antroponimik lug‘atlarga ham tatbiq etilgan. Lug‘at yozuvlarini tahlil qilishda muhim masalalardan biri leksikografik parametrlarni aniqlash hisoblanadi. Xususan, Yu. N. Karaulov leksikografik tavsif parametrlarini tizimlashtirib, ularni til haqidagi ma’lumotlarning alohida kvantlari sifatida talqin qiladi. Uning fikricha, lug‘atdagi har bir parametr foydalanuvchi uchun mustaqil axborot qiymatiga ega bo‘lib, boshqa parametrlar bilan o‘zaro bog‘liq holda ishlaydi [7:52]. Bu yondashuv antroponimlarning lug‘atdagi tavsifini tizimlashtirish va ularni kompleks tarzda yoritish imkonini beradi.

Leksikografik parametrlarni chuqurroq tahlil qilgan olimlardan yana biri S. V. Grinev-Grinevich hisoblanadi. U lug‘at yozuvining mikrostrukturaviy tashkil etilishini batafsil o‘rganib, formal, semantik, pragmatik va boshqa parametrlar tizimini taklif etadi. Tadqiqotchining fikricha, mikrostruktura lug‘atning eng muhim qismi bo‘lib, aynan shu yerda til birliklarining to‘liq

lingvistik tavsifi beriladi [5:21]. Mazkur parametrlar tizimi antroponimlarni ko‘p darajali lingvistik obyekt sifatida talqin qilishga xizmat qiladi.

Boshqa tomondan, Yu. D. Apresyan leksik birliklarni tavsiflashda integrativ yondashuvni taklif etadi. Unga ko‘ra, lug‘atdagi har bir birlikning to‘liq semantik-pragmatik tavsifi berilishi zarur bo‘lib, bu tavsif faqat lingvistik emas, balki ekstralingvistik ma’lumotlarni ham o‘z ichiga olishi kerak [1:115]. Bu yondashuv ayniqsa antroponimlarni tavsiflashda muhim ahamiyatga ega, chunki shaxs nomlari ko‘pincha madaniy, tarixiy va ijtimoiy ma’lumotlarni ham o‘zida mujassam etadi. Shu jihatdan, integrativ yondashuv antroponimlarning semantik va pragmatik xususiyatlarini uyg‘un holda ochib berishga imkon yaratadi.

Metodologiya

Tadqiqotning metodologik asosini qiyosiy-tahliliy, tavsifiy hamda komponent tahlil metodlari tashkil etadi. Ushbu metodlar yordamida antroponimik birliklarning lug‘aviy ifodalanish xususiyatlari tizimli ravishda o‘rganildi.

Tahlil va natijalar

Ingliz antroponimik lug‘atlarini amaliy jihatdan ishlab chiqqan va tahlil qilgan olimlar qatoriga P. Hanks, E. Withycombe kabi tadqiqotchilarni kiritish mumkin. Ularning ishlarida antroponimlar etimologik, tarixiy va madaniy jihatdan tavsiflanadi. Masalan, P. Hanks antroponimlarning kelib chiqishi va zamonaviy qo‘llanishini birgalikda ko‘rib chiqib, lug‘at yozuvida etimologiya va pragmatikaning o‘zaro bog‘liqligini ta’kidlaydi [6]. E. Withycombe esa ingliz shaxs nomlarining tarixiy rivojlanishini diaxron nuqtai nazardan yoritib, ularning turli davrlardagi qo‘llanish xususiyatlarini tahlil qiladi [9].

Masalan ingliz antroponimik lug’atlarida mikrostruktura doirasida formal, pragmatik, etimologik va tasviriy parametrlar quyidagicha ajratiladi. Formal parametrlar antroponimning fonetik va morfologik xususiyatlarini aks ettiradi. Masalan, ingliz lug‘atlarida urg‘u va transkripsiya Rachel ['reitʃəl] berilishi, shuningdek, jins ko‘rsatkichlari (m, f) va variant shakllar (Edmund - Ed, Eddie, Ted) keng qo‘llaniladi. Bu holat ingliz tilida nomlarning variativligi va tizimli tavsifini ko‘rsatadi.

Pragmatik parametrlar esa antroponimning ijtimoiy-madaniy qo‘llanishini ochib beradi. Bunda nomning xronologik holati: zamonaviy yoki eskirgan, areal tarqalishi masalan, Buyuk Britaniya, AQSh yoki boshqa ingliz tilida so‘zlashuvchi hududlar hamda qo‘llanish chastotasi muhim ahamiyatga ega. Masalan, Emily nomi zamonaviy davrda keng tarqalgan bo‘lsa, Percy nomi kam qo‘llaniladigan antroponim sifatida tavsiflanadi. Bu kabi ma’lumotlar antroponimlarning jamiyatdagi real funksional holatini aks ettiradi.

Etimologik parametrlar antroponimlarning kelib chiqishi, rivojlanish bosqichlari va boshqa tillardagi parallel shakllarini o‘z ichiga oladi. Masalan, Clara nomining lotin tilidan kelib chiqqanligi va tarixiy rivojlanish bosqichlari lug‘at yozuvlarida batafsil bayon qilinadi. Bu esa antroponimlarning diaxron rivojlanishini yoritadi.

Tasviriy parametrlar esa ism egalari orqali nomning madaniy ahamiyatini ochib beradi. Masalan, Jim yoki Francis kabi ismlar mashhur tarixiy yoki madaniy shaxslar bilan bog‘lanib, antroponimning ekstralingvistik mazmunini boyitadi.

Tahlillar shuni ko‘rsatadiki, ingliz antropo¬nimik lug‘atlarida lingvistik va ekstralingvistik ma’lumotlar uyg‘un holda beriladi. Bunday lug‘atlar ko‘p parametrli tizimga ega bo‘lib, antroponimning fonetik, semantik, tarixiy va madaniy jihatlarini kompleks tarzda yoritadi.

Avvalo, ingliz antroponimik lug‘atlarida formal parametrlar aniq va tizimli tarzda beriladi. Masalan, P. Hanks lug‘atida Emily ismi quyidagicha tavsiflanadi: ismning kelib chiqishi lotin

tilidagi Aemilius bilan bog‘lanadi, fonetik shakli ko‘rsatiladi va uning zamonaviy davrda keng tarqalganligi ta’kidlanadi [6]. Bu yerda formal (shakl), etimologik (kelib chiqish) va pragmatik (chastota) parametrlar birgalikda berilgan.

Xuddi shunday, E. Withycombe lug‘atida Percy ismi tarixiy jihatdan Norman kelib chiqishiga ega ekanligi, o‘rta asrlarda faol qo‘llanilgani, ammo hozirgi davrda kam uchrashi qayd etiladi [9]. Bu esa xronologik va pragmatik parametrlarning uyg‘unligini ko‘rsatadi.

Bundan tashqari, ingliz lug‘atlarida variantlik ham muhim o‘rin tutadi. Masalan, Elizabeth ismi uchun Eliza, Liz, Beth, Lizzy kabi qisqa va variant shakllar beriladi. Bu mikrostrukturada formal va derivatsion parametrlarning faol ishlatilishini ko‘rsatadi.

Tasviriy parametrlar ham ingliz lug‘atlarida keng qo‘llaniladi. Masalan, James yoki Francis ismlariga mashhur shaxslar masalan, Francis Bacon orqali izoh berilishi antroponimning madaniy ahamiyatini ochib beradi. Bu holat ekstralingvistik axborotning muhimligini ko‘rsatadi. Bu esa ingliz leksikografiyasida empirik va tizimli yondashuv ustuvor ekanligini ko‘rsatadi. O‘zbek antroponimik lug‘atlarida esa tasviriy parametrlar obrazli va estetik talqin orqali ifodalanadi. Masalan, Gulchehra “go‘zal yuzli”, Zebiniso “latofatli ayol” ma’nolarini anglatadi.

O‘zbek tilidagi antroponimik lug‘atlar esa ko‘proq semantik va lingvomadaniy yondashuvga asoslanadi. Ularda shaxs nomlarining ichki ma’nosi, diniy va madaniy asoslari, shuningdek, ijobiy konnotatsiyalari muhim o‘rin egallaydi. Bu esa o‘zbek tilida nomlash jarayonining estetik va qadriyatlar tamoyillarga asoslanganligini ko‘rsatadi. Xususan, o‘zbek antroponimlari tarkibida go‘zallik, ezgulik va ijobiy fazilatlarni ifodalovchi komponentlar keng qo‘llaniladi. Masalan, Gulbahor, Oyjamol, Zebiniso kabi ismlar estetik kategoriya doirasida go‘zallik va latofatni konseptuallashtirsa, Baxtiyor, Saodat, To‘lqin kabi nomlar aksiologik jihatdan ijobiy qadriyatlarni ifodalaydi. Bundan tashqari, Mehribon, Shirin, Dilnoza, Sodiq kabi antroponimlar insoniy fazilatlarni nomlash orqali milliy madaniyatda axloqiy idealning lingvistik ifodasini namoyon etadi. Bu holat o‘zbek antroponimik tizimida estetik va aksiologik motivatsiyaning ustuvorligini tasdiqlaydi.

Shuningdek, o‘zbek antroponimik lug‘atlarida esa asosiy e’tibor semantik va lingvomadaniy tavsifga qaratiladi. Masalan, Shahnoza ismi “shah + noza”, ya’ni “nazokatli, go‘zal ayol” ma’nosini anglatadi. Baxtiyor ismi “baxtli, omadli inson” mazmunini ifodalaydi. Zafar esa “g‘alaba, muvaffaqiyat” degan semantik yuklamaga ega. Ushbu nomlarda ijobiy baholovchi va aksiologik komponent ustuvor ekanligi ko‘rinadi.

Shuningdek, Gulnora ismi “gul + nora (yorug‘lik)” shaklida talqin qilinib, estetik va obrazli ma’noni ifodalaydi. Bu esa o‘zbek tilida antroponimlar ko‘pincha go‘zallik, yorug‘lik va ijobiy fazilatlar bilan bog‘lanishini ko‘rsatadi.

O‘zbek antroponimik lug‘atlarida pragmatik parametrlar ko‘proq diniy va madaniy asos ham muhim o‘rin egallaydi. Masalan, Muhammadamin ismi “ishonchli, sodiq” ma’nosini bildirib, diniy va axloqiy qadriyatlarni aks ettiradi. O‘zbek antroponimlarida diniy-madaniy komponentning kuchli ekanligini va ko‘proq aksiologik va madaniy jihatdan talqin qilinadi hamda nomlarning ijobiy baholovchi mazmuni yoki diniy ahamiyati ko‘rsatiladi. Masalan, Baxtiyor ismi ijobiy baholovchi ma’noga ega bo‘lsa, Islom diniy mazmunni ifodalaydi. Bundan tashqari, o‘zbek tilida affiksal elementlar orqali ijtimoiy va madaniy ma’no ifodalanadi. Masalan, -bek, -oy, -gul komponentlari orqali hurmat, go‘zallik yoki maqom ifodalanadi (Oybek, Nodirbek, Gulchehra). Bu esa morfologik darajada lingvomadaniy ma’no kodlanishini ko‘rsatadi.

Yuqoridagi tahlillar shuni ko‘rsatadiki, ingliz va o‘zbek antroponimik lug‘atlari o‘zining leksikografik yondashuvi va tavsif prinsiplari bilan bir-biridan sezilarli darajada farqlanadi. Ingliz

antroponimik lug‘atlarida tizimlilik va parametrik tavsif ustuvor bo‘lib, ularda shaxs nomlari formal, etimologik va pragmatik jihatdan kompleks tarzda yoritiladi. Ayniqsa, ingliz ismlarida tarixiy rivojlanish, kelib chiqish manbalari hamda qo‘llanish chastotasi kabi ma’lumotlar muhim o‘rin egallaydi.

O‘zbek antroponimik lug‘atlarida esa asosiy e’tibor nomlarning ichki semantikasi va lingvomadaniy talqiniga qaratiladi. Shaxs nomlari ko‘pincha ijobiy baholovchi, estetik va emotsional mazmun bilan izohlanadi hamda milliy qadriyatlar va madaniy an’analar bilan chambarchas bog‘liq holda talqin qilinadi. Shunday qilib, ingliz lug‘atlarida parametrik yondashuv ustunlik qilsa, o‘zbek lug‘atlarida semantik va madaniy yondashuv yetakchi o‘rin egallaydi. Bu esa antroponimlarni o‘rganishda til va madaniyat o‘rtasidagi uzviy bog‘liqlikni yana bir bor tasdiqlaydi. Mazkur holat o‘zbek tilida nomlash jarayonining lingvomadaniy va aksiologik tamoyillarga asoslanganligini yana bir bor tasdiqlaydi.

Xulosa va takliflar

Shunday qilib, ingliz va o‘zbek tillaridagi antroponimik lug‘atlarning qiyosiy tahlili ularning leksikografik tavsifida muhim farqlar mavjud. Ingliz lug‘atlarida ko‘p parametrli, tizimli va ilmiy yondashuv ustuvor bo‘lsa, o‘zbek lug‘atlarida semantik va madaniy talqin yetakchi o‘rin egallaydi. Tadqiqot natijalari zamonaviy leksikografiya rivojida korpus va lingvomadaniy yondashuvlarni uyg‘unlashtirish zarurligini ko‘rsatadi hamda antroponimlarni o‘rganishda yangi metodologik imkoniyatlarni ochib beradi.

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SALBIY EKSPRESSIV BIRLIKLARNING LINGVISTIK VA PRAGMATIK XUSUSIYATLARI

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Annotatsiya. *Mazkur maqolada salbiy ekspressiv birliklarning lingvistik va pragmatik xususiyatlari tahlil qilinadi. Salbiy ekspressivlik nutqda insonning hissiy holatini ifodalash, suhbatdoshga ta'sir o'tkazish hamda baholovchi munosabatni yuzaga chiqarishda muhim vosita sifatida namoyon bo'ladi. Ayniqsa, haqorat mazmunidagi birliklar turli ijtimoiy, madaniy va kommunikativ muhitlarda o'ziga xos shakllarda qo'llanib, tilning semantik, pragmatik hamda ekspressiv imkoniyatlarini aks ettiradi. Tadqiqotda salbiy ekspressiv birliklarning qo'llanish xususiyatlari, ularning kommunikativ vazifalari va turli tillardagi ifodalanish usullari qiyosiy jihatdan yoritiladi. Shuningdek, haqorat va salbiy baho ifodalovchi birliklarning jamiyatdagi ijtimoiy-lisoniy ahamiyati hamda nutq jarayonidagi ta'sir mexanizmlari tahlil etiladi.*

Kalit so'zlar: *salbiy ekspressivlik, haqorat, pragmatika, lingvistika, diskurs, emotsional-ekspressiv birliklar, kommunikativ ta'sir.*

Аннотация. *В данной статье анализируются лингвистические и прагматические особенности единиц негативной экспрессивности. Негативная экспрессивность выступает важным средством выражения эмоционального состояния говорящего, воздействия на собеседника и передачи оценочного отношения в речи. В особенности единицы с оскорбительным содержанием используются в различных социальных, культурных и коммуникативных контекстах, отражая семантические, прагматические и экспрессивные возможности языка. В исследовании в сравнительном аспекте рассматриваются особенности употребления единиц негативной экспрессивности, их коммуникативные функции, а также способы выражения в различных языках. Кроме того, анализируются социолингвистическая значимость оскорбительных и негативно-оценочных единиц в обществе и механизмы их воздействия в процессе речевой коммуникации.*

Ключевые слова: *негативная экспрессивность, оскорбление, прагматика, лингвистика, дискурс, эмоционально-экспрессивные единицы, коммуникативное воздействие.*

Abstract. *This article analyzes the linguistic and pragmatic features of negative expressive units. Negative expressiveness serves as an important means of expressing a speaker's emotional state, influencing the interlocutor, and conveying evaluative attitudes in*

speech. In particular, insulting expressions are used in various social, cultural, and communicative contexts in distinctive ways, reflecting the semantic, pragmatic, and expressive potential of language. The study comparatively examines the usage characteristics of negative expressive units, their communicative functions, and the methods of their expression in different languages. Furthermore, the article discusses the socio-linguistic significance of insulting and negatively evaluative expressions in society, as well as their mechanisms of influence within the speech process.

Keywords: *negative expressiveness, insult, pragmatics, linguistics, discourse, emotional-expressive units, communicative impact.*

KIRISH

Til inson tafakkuri, hissiyoti va ijtimoiy munosabatlarini ifodalovchi eng muhim kommunikativ vosita hisoblanadi. Inson nutqi orqali nafaqat axborot uzatiladi, balki emotsional holat, baholovchi munosabat va pragmatik maqsadlar ham namoyon bo‘ladi. Shu jihatdan ekspressiv birliklar til tizimida alohida o‘rin egallaydi. Ekspressivlik inson hissiyoti va subyektiv munosabatini kuchli ifodalashga xizmat qiluvchi lingvistik hodisa sifatida tavsiflanadi (Арнольд, 1990).

Salbiy ekspressiv birliklar esa ekspressivlikning alohida ko‘rinishi bo‘lib, ular orqali so‘zlovchi g‘azab, norozilik, nafrat, mensimaslik yoki kinoya kabi salbiy hissiy munosabatlarni ifodalaydi. Ayniqsa, haqorat mazmunidagi birliklar kommunikativ jarayonda tinglovchining psixologik holatiga kuchli ta’sir ko‘rsatadi. Allan va Burridge ta’kidlashicha, haqorat va tabu birliklari insonning madaniy qadriyatlari hamda ijtimoiy me’yorlari bilan chambarchas bog‘liqdir (Allan & Burridge, 2006).

Bugungi globallashuv va internet kommunikatsiyasi sharoitida salbiy ekspressiv birliklarning qo‘llanish doirasi yanada kengaymoqda. Ijtimoiy tarmoqlar, ommaviy axborot vositalari va kundalik muloqotda haqorat birliklari turli shakllarda namoyon bo‘lib, lingvistik tadqiqotlar uchun muhim obyektga aylanmoqda. Shu sababli salbiy ekspressiv birliklarning lingvistik, pragmatik va sotsiolingvistik xususiyatlarini o‘rganish dolzarb masalalardan biri hisoblanadi.

Mazkur maqolaning maqsadi ingliz va o‘zbek tillaridagi salbiy ekspressiv birliklarning semantik, pragmatik va kommunikativ xususiyatlarini tahlil qilish hamda ularning lingvomadaniy jihatlarini qiyosiy o‘rganishdan iborat.

Tadqiqot metodologiyasi

Tadqiqot davomida qiyosiy-tahliliy, semantik, pragmatik va diskursiv tahlil metodlaridan foydalanildi. Tadqiqot materiali sifatida ingliz va o‘zbek tillaridagi badiiy asarlar, ommaviy kommunikatsiya vositalari, ijtimoiy tarmoqlar va kundalik so‘zlashuv nutqida uchraydigan salbiy ekspressiv birliklar tanlab olindi.

Qiyosiy metod yordamida ingliz va o‘zbek tillaridagi haqorat birliklarining lingvomadaniy xususiyatlari tahlil qilindi. Semantik tahlil orqali salbiy baho ifodalovchi birliklarning ma’no qatlamlari va ekspressiv yuklamasi aniqlandi. Pragmatik tahlilda esa ushbu birliklarning kommunikativ vazifalari, nutqiy ta’sir mexanizmlari hamda kontekstual qo‘llanish xususiyatlari o‘rganildi.

Safarovning fikricha, pragmatik tahlilda til birliklarining kommunikativ vaziyat bilan bog‘liq funksional jihatlari muhim ahamiyatga ega (Safarov, 2008). Shu sababli tadqiqot

davomida haqorat birliklarining faqat leksik ma’nosi emas, balki ularning kommunikativ muhitdagi funksiyasi ham hisobga olindi.

Salbiy ekspressivlikning nazariy asoslari

Ekspressivlik tilshunoslikda til birliklarining emotsional-ta’sirchanlik xususiyatini ifodalovchi kategoriya sifatida qaraladi. Bu hodisa stilistika, pragmalingvistika va diskurs tahlili kabi yo‘nalishlarda keng tadqiq etilgan. Crystal ekspressiv birliklarni inson hissiyotlarini ifodalovchi va nutqning ta’sirchanligini oshiruvchi vositalar sifatida izohlaydi (Crystal, 2010).

Salbiy ekspressivlik esa ekspressivlikning konfliktli kommunikatsiya bilan bog‘liq ko‘rinishidir. U orqali so‘zlovchi tinglovchiga nisbatan salbiy munosabatini bildiradi. Ushbu birliklar haqorat, kinoya, istehzo, mensimaslik yoki tahdid kabi kommunikativ maqsadlarni ifodalashi mumkin.

Tilshunoslikda salbiy ekspressiv birliklar quyidagi jihatlar asosida o‘rganiladi:

semantik xususiyatlari;

pragmatik vazifalari;

sotsiolingvistik omillari;

lingvomadaniy xususiyatlari;

kommunikativ ta’sir mexanizmlari.

Mahmudovning ta’kidlashicha, ekspressiv birliklar nutqning obrazliligini va ta’sirchanligini oshirishda muhim rol o‘ynaydi (Mahmudov, 2013). Ayniqsa, salbiy ekspressiv birliklar konfliktli kommunikatsiyaning asosiy vositalaridan biri hisoblanadi.

Salbiy ekspressiv birliklarning lingvistik xususiyatlari

Salbiy ekspressiv birliklar tilning turli sathlarida namoyon bo‘ladi. Ular leksik, morfologik, sintaktik va fonetik vositalar orqali ifodalanadi.

Leksik xususiyatlar

Leksik sathda haqorat mazmunidagi so‘z va iboralar asosiy vosita hisoblanadi. Ingliz tilida idiot, stupid, loser, fool kabi birliklar insonning intellektual yoki ijtimoiy sifatlarini salbiy baholash uchun ishlatiladi. O‘zbek tilida esa ahmoq, tentak, nodon, laqma kabi birliklar salbiy ekspressiv ma’no hosil qiladi.

Ayrim hollarda metaforik birliklar ham haqorat ma’nosida qo‘llanadi. Masalan, o‘zbek tilidagi “eshak”, “it”, “ilon” kabi zoonimlar insonni kamsitish yoki haqoratlash uchun ishlatiladi. Bu holat til va madaniyat o‘rtasidagi uzviy bog‘liqlikni ko‘rsatadi.

Morfologik xususiyatlar

O‘zbek tilida salbiy ekspressivlikni kuchaytiruvchi affikslar keng qo‘llanadi. Ayrim qo‘shimchalar orqali mensimaslik, kinoya yoki kamsitish ma’nosi hosil qilinadi. Ingliz tilida esa salbiy ma’no ko‘proq prefiks va suffikslar orqali yuzaga keladi. Masalan: useless, dishonest, irresponsible kabi birliklar salbiy baholash funksiyasini bajaradi.

Арнольд ekspressiv affikslarning stilistik funksiyasi nutqning emotsional ta’sirchanligini oshirishini ta’kidlaydi (Арнольд, 1990).

Fonetik xususiyatlar

Og‘zaki nutqda salbiy ekspressivlik intonatsiya va urg‘u orqali kuchayadi. Baland ovoz, keskin ohang va tovush cho‘zilishlari haqoratning emotsional ta’sirini oshiradi. Masalan, ayrim haqorat birliklari oddiy ohangda emas, balki keskin urg‘u bilan talaffuz qilinganda kuchliroq pragmatik ta’sir yuzaga keladi.

Salbiy ekspressiv birliklarning pragmatik xususiyatlari

Pragmalingvistika nuqtai nazaridan salbiy ekspressiv birliklar kommunikativ ta’sir vositasi sifatida namoyon bo‘ladi. Ular yordamida so‘zlovchi tinglovchiga psixologik bosim o‘tkazadi yoki ijtimoiy ustunlikni ifodalashga harakat qiladi.

Leech pragmatikani kommunikativ maqsad va nutqiy vaziyat bilan bog‘liq hodisa sifatida tavsiflaydi (Leech, 1983). Shu jihatdan haqorat birliklari faqat leksik ma’no emas, balki kommunikativ niyatni ham aks ettiradi.

Salbiy ekspressiv birliklarning asosiy pragmatik funksiyalari quyidagilardan iborat:

salbiy baholash;

tahqirlash;

psixologik bosim o‘tkazish;

konflikt yaratish;

emotsional reaksiya uyg‘otish;

ijtimoiy masofa hosil qilish.

Biroq ayrim hollarda haqorat birliklari do‘stona hazil yoki norasmiy yaqinlik ifodasi sifatida ham ishlatiladi. Ayniqsa, internet diskursi va yoshlar nutqida bunday holatlar keng uchraydi. Demak, haqorat birliklarining pragmatik mazmuni kommunikativ kontekstga bog‘liq holda o‘zgaradi.

Ingliz va o‘zbek tillarida salbiy ekspressivlikning qiyosiy tahlili

Ingliz va o‘zbek tillaridagi salbiy ekspressiv birliklar lingvomadaniy jihatdan sezilarli farqlarga ega. Ingliz tilida individualizm kuchli bo‘lgani sababli haqorat birliklari ko‘proq shaxsning individual sifatlari va xatti-harakatlariga qaratiladi. Masalan, stupid, idiot, loser kabi birliklar individual xususiyatlarni baholaydi.

O‘zbek tilida esa haqorat birliklari ko‘pincha oilaviy qadriyatlar, axloqiy me’yorlar va jamiyatdagi mavqe bilan bog‘liq holda qo‘llanadi. Bu esa kollektiv mentalitetning tilga ta’sirini ko‘rsatadi.

Shuningdek, o‘zbek tilida metafora, kinoya va obrazlilik kuchli rivojlangan bo‘lsa, ingliz tilida qisqa va to‘g‘ridan-to‘g‘ri haqorat birliklari keng tarqalgan. Allan va Burridge fikricha, tabu va haqorat birliklari har bir madaniyatning ijtimoiy qadriyatlarini aks ettiradi (Allan & Burridge, 2006).

Xulosa

Xulosa qilib aytganda, salbiy ekspressiv birliklar tilning emotsional va pragmatik imkoniyatlarini aks ettiruvchi muhim lingvistik hodisa hisoblanadi. Ushbu birliklar orqali insonning salbiy hissiyoti, baholovchi munosabati va kommunikativ maqsadlari ifodalanadi. Tadqiqot natijalari shuni ko‘rsatdiki, haqorat birliklari nafaqat leksik birlik sifatida, balki kommunikativ ta’sir vositasi sifatida ham muhim ahamiyatga ega.

Ingliz va o‘zbek tillaridagi salbiy ekspressiv birliklarning qiyosiy tahlili ularning lingvomadaniy xususiyatlari hamda pragmatik funksiyalarida muayyan farqlar mavjudligini ko‘rsatdi. O‘zbek tilida obrazlilik va madaniy qadriyatlar kuchli namoyon bo‘lsa, ingliz tilida individual xususiyatlarni baholovchi haqorat birliklari ustunlik qiladi. Mazkur tadqiqot salbiy ekspressivlikning til va jamiyat o‘rtasidagi o‘zaro bog‘liqligini ochib berishda muhim ilmiy ahamiyat kasb etadi.

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A LINGUISTIC STUDY OF INSULTING EXPRESSIONS AS MANIFESTATIONS OF NEGATIVE EXPRESSIVENESS

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Abstract. *The present article investigates insulting expressions as one of the most significant manifestations of negative expressiveness in language. Insults are not merely offensive lexical items; they function as communicative instruments that express emotions, social attitudes, and interpersonal tension. The study explores the semantic, stylistic, and pragmatic characteristics of insulting discourse in English and Uzbek languages. Particular attention is paid to the role of expressive vocabulary, emotional evaluation, and contextual meaning in the formation of insulting speech. The research also examines how cultural values and social norms influence the use of insults in communication. The findings demonstrate that insulting expressions reflect both linguistic structures and the socio-cultural mentality of speakers.*

Keywords: *insulting discourse, negative expressiveness, pragmatics, stylistics, emotional language, discourse analysis, linguistic evaluation.*

Annotatsiya. *Mazkur maqolada haqoratli ifodalar tildagi salbiy ekspressivlikning eng muhim ko'rinishlaridan biri sifatida tadqiq etiladi. Haqorat birliklari faqatgina salbiy ma'noli leksik vositalar emas, balki emotsiyalarni, ijtimoiy munosabatlarni va shaxslararo ziddiyatlarni ifodalovchi kommunikativ vositalar sifatida ham namoyon bo'ladi. Tadqiqotda ingliz va o'zbek tillaridagi haqorat diskursining semantik, uslubiy hamda pragmatik xususiyatlari tahlil qilinadi. Ayniqsa, haqorat nutqining shakllanishida ekspressiv leksika, emotsional baholash va kontekstual ma'noning o'rni alohida yoritiladi. Shuningdek, maqolada madaniy qadriyatlar va ijtimoiy me'yorlarning kommunikatsiyada haqorat birliklaridan foydalanishga ta'siri ham o'rganiladi. Tadqiqot natijalari haqorat ifodalari nafaqat til tizimini, balki so'zlovchilarning ijtimoiy-madaniy mentalitetini ham aks ettirishini ko'rsatadi.*

Kalit so'zlar: *haqorat diskursi, salbiy ekspressivlik, pragmatika, stilistika, emotsional til, diskurs tahlili, lingvistik baholash.*

Аннотация. *В данной статье оскорбительные выражения рассматриваются как одно из наиболее значимых проявлений негативной экспрессивности в языке. Оскорбления представляют собой не только лексические единицы с отрицательной окраской, но и коммуникативные средства, выражающие эмоции, социальные отношения и межличностное напряжение. В исследовании анализируются семантические, стилистические и прагматические особенности оскорбительного*

дискурса в английском и узбекском языках. Особое внимание уделяется роли экспрессивной лексики, эмоциональной оценки и контекстуального значения в формировании оскорбительной речи. Кроме того, в статье рассматривается влияние культурных ценностей и социальных норм на использование оскорблений в коммуникации. Результаты исследования показывают, что оскорбительные выражения отражают не только языковые структуры, но и социокультурный менталитет носителей языка

Ключевые слова: *оскорбительный дискурс, негативная экспрессивность, прагматика, стилистика, эмоциональный язык, анализ дискурса, лингвистическая оценка.*

Introduction. Human communication is closely connected with emotions, attitudes, and evaluations. In everyday speech, people frequently use expressive language to convey anger, irony, dissatisfaction, or emotional tension. One of the most emotionally charged forms of expressive language is insulting discourse. Insults represent a special category of lexical and stylistic units that carry strong negative connotations and influence interpersonal communication.

Negative expressiveness occupies an important position in modern linguistics because it reflects the interaction between language, emotion, and society. Expressive language is not limited to transmitting information; it also performs evaluative and emotional functions. According to Crystal (2010), expressive units strengthen the emotional and stylistic effect of speech and increase communicative impact.

Insulting expressions appear in various communicative situations such as everyday conversations, political debates, literary texts, social media interactions, and public discourse. In many cases, insults emerge during conflicts, disagreements, or emotionally tense situations. However, they may also perform humorous or ironic functions depending on context and social relationships.

The increasing presence of aggressive language in online communication has made the study of insulting discourse particularly relevant. Social media platforms and digital communication environments often encourage spontaneous emotional expression, including the active use of insulting and offensive vocabulary. Therefore, the linguistic analysis of insulting expressions contributes to the broader understanding of communication, pragmatics, and discourse behavior.

This study aims to analyze insulting expressions as manifestations of negative expressiveness and to identify their linguistic, stylistic, and pragmatic characteristics in English and Uzbek languages.

Research Methodology

The study is based on comparative, descriptive, semantic, and pragmatic methods of analysis. The research materials include examples selected from literary works, spoken discourse, internet communication, films, and social media texts in English and Uzbek.

Semantic analysis was applied to determine the emotional and evaluative meanings of insulting expressions. Comparative analysis was used to identify similarities and differences between English and Uzbek insulting discourse. In addition, pragmatic analysis focused on communicative intention, speaker-listener relations, and contextual interpretation.

As Leech (1983) states, meaning in communication depends not only on lexical structure but also on communicative context and speaker intention. Therefore, insulting expressions were

analyzed both as linguistic forms and as communicative acts functioning within specific discourse situations.

Negative Expressiveness and Emotional Language

Negative expressiveness refers to the use of linguistic means that convey negative emotions, criticism, humiliation, or aggression. It represents one of the most emotionally intense aspects of communication. Negative expressive language may include insults, sarcasm, mockery, curses, and emotionally loaded metaphors.

Arnold (1990) notes that expressive vocabulary increases the emotional force of speech and creates stylistic intensity. In insulting discourse, this stylistic intensity becomes particularly strong because the speaker intentionally aims to affect the listener psychologically.

Negative expressiveness performs several important communicative functions:

emotional release;

expression of dissatisfaction;

social evaluation;

humiliation of the interlocutor;

demonstration of superiority;

intensification of conflict.

These functions reveal that insulting language is closely connected with social interaction and emotional behavior.

Linguistic Characteristics of Insulting Expressions

Lexical Features

The lexical level represents the most visible aspect of insulting discourse. Insults are usually expressed through emotionally marked words carrying negative evaluation. English examples include idiot, moron, jerk, and loser. Uzbek equivalents include ahmoq, tentak, nodon, and betamiz.

Many insulting expressions are metaphorical in nature. Animal imagery is frequently used in both English and Uzbek. For instance, comparing a person to a “donkey” or “snake” may imply stupidity or dishonesty. Such metaphorical insults reflect cultural perceptions and symbolic meanings associated with animals.

According to Allan and Burridge (2006), taboo vocabulary and insulting expressions are culturally motivated and reveal the moral values of society.

Stylistic Features

Insulting discourse is characterized by high emotionality and stylistic markedness. Speakers often employ exaggeration, irony, sarcasm, repetition, and emotionally intensified vocabulary.

For example, repetition may strengthen emotional aggression:

“You are absolutely useless, completely useless.”

Similarly, sarcasm may function as an indirect insult:

“Oh, brilliant idea… as always.”

Such stylistic devices increase pragmatic force and emotional impact.

Phonetic Features

In spoken communication, insulting expressions are strongly influenced by intonation and stress. Aggressive tone, loudness, and sharp pronunciation intensify negative meaning. The same lexical item may sound neutral or highly offensive depending on pronunciation.

Crystal (2010) emphasizes that prosodic elements often determine emotional interpretation in oral communication. Consequently, phonetic features are essential components of insulting discourse.

Pragmatic Aspects of Insulting Discourse

Pragmatically, insults function as intentional speech acts aimed at influencing listeners emotionally or socially. They often appear in situations involving disagreement, power struggle, or emotional conflict.

Leech (1983) argues that pragmatics studies language in relation to communicative intention. From this perspective, insulting expressions may serve several pragmatic purposes:

attacking personal identity;

reducing social status;

expressing emotional frustration;

provoking reactions;

establishing dominance.

However, the pragmatic meaning of insults changes according to context. Among close friends, some insulting words may function humorously and lose their offensive effect. In youth communication and online discourse, playful insults frequently indicate solidarity rather than hostility.

This demonstrates that insulting expressions cannot be interpreted outside their communicative environment.

Cultural and Social Dimensions of Insults

The use of insulting language is strongly connected with cultural traditions and social norms. Different societies develop different perceptions regarding what is considered offensive or unacceptable.

English insulting discourse often reflects individualistic cultural values. Many insults target personal intelligence, competence, or success. Uzbek insulting discourse, on the other hand, is more connected with morality, family reputation, and social respect.

In Uzbek culture, indirect insulting strategies such as irony or figurative expressions are commonly preferred in certain situations. Direct verbal aggression may sometimes be considered socially inappropriate. This indicates that insulting behavior is regulated not only by language but also by cultural etiquette and communicative traditions.

Furthermore, social factors such as age, gender, education, and social status influence the frequency and form of insulting expressions.

Conclusion

In conclusion, insulting expressions represent one of the most significant manifestations of negative expressiveness in language. They function not only as emotionally charged lexical units but also as complex communicative tools shaped by cultural, pragmatic, and stylistic factors.

The study demonstrates that insulting discourse performs various communicative functions, including emotional expression, social evaluation, psychological influence, and conflict intensification. Comparative analysis shows that English and Uzbek insulting expressions differ according to cultural mentality and communicative norms.

The findings confirm that negative expressiveness should be studied not only from a lexical perspective but also within broader pragmatic and socio-cultural contexts. Future research may further investigate insulting discourse in digital communication, political language, and intercultural interaction.

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DIPLOMATIK TERMINLARNING RASMIY USLUBDAGI VAZIFASI: INGLIZ VA O‘ZBEK TILLARI MISOLIDA

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Annotatsiya. *Mazkur maqolada diplomatik terminlarning (diplomatic terms) rasmiy uslub (official style) va diplomatik diskurs (diplomatic discourse)dagi funksional vazifalari ingliz va o‘zbek tillari materiali asosida tadqiq etiladi. Tadqiqotda diplomatik yozishmalar, notalar, shartnomalar, memorandumlar, kommyunikelar hamda qo‘shma bayonotlardan iborat kichik korpus tahlil qilindi. Qiyosiy-stilistik tahlil (comparative-stylistic analysis), nutqiy aktlar nazariyasi (speech act theory), pragmatik-funksional tahlil (pragmatic-functional analysis), diskursiv tahlil (discourse analysis) va kontekstual semantik tahlil (contextual semantic analysis) usullari qo‘llandi. Natijalar diplomatik terminlar protokol-marosimiy, performativ, yuridik aniqlik beruvchi, xushmuomalalikni ta’minlovchi, rasmiy neytrallikni kuchaytiruvchi va nominativ-klassifikatsion vazifalarni bajarishini ko‘rsatdi. Ingliz tilidan o‘zbek tiliga o‘tishda kalkalashuv, bevosita o‘zlashma va semantik torayish holatlari faol kuzatiladi.*

Kalit so‘zlar: *diplomatik terminlar, rasmiy uslub, diplomatik diskurs, nutqiy akt, performativlik, nota verbale, yuridik aniqlik, tarjima ekvivalentligi.*

Abstract. *This article examines the functional role of diplomatic terms in official style and diplomatic discourse on the basis of English and Uzbek materials. The study analyses a small corpus consisting of diplomatic correspondence, notes, treaties, memoranda, communiqués and joint statements. The research applies comparative-stylistic analysis, speech act theory, pragmatic-functional analysis, discourse analysis and contextual semantic analysis. The findings demonstrate that diplomatic terms perform protocol and ceremonial, performative, legal-clarifying, politeness-oriented, neutralizing and nominative-classificatory functions. The comparative analysis also shows that the Uzbek diplomatic lexicon is strongly influenced by international diplomatic usage, especially through calquing, direct borrowing and semantic narrowing. The article argues that terminological precision is a key condition for maintaining legal validity, communicative safety and stylistic neutrality in official diplomatic documents.*

Keywords: *diplomatic terms, official style, diplomatic discourse, speech act, performativity, note verbale, legal precision, translation equivalence.*

Kirish. Diplomatik muloqot (diplomatic communication) davlatlar, xalqaro tashkilotlar va rasmiy vakolatxonalar o‘rtasidagi institutsional munosabatlarni tartibga soluvchi alohida nutqiy maydondir. Bu maydonda til oddiy axborot almashish vositasi bo‘lib qolmay, balki siyosiy iroda,

huquqiy majburiyat, xalqaro protokol, marosimiy ehtirom va muzokara madaniyatini ifodalovchi vosita sifatida namoyon bo‘ladi. Shu sababli diplomatik terminlar (diplomatic terms) rasmiy uslub (official style)ning eng muhim leksik-semantik qatlamlaridan biri hisoblanadi. O‘zbekiston Respublikasining ochiq, o‘zaro manfaatli va konstruktiv tashqi siyosati xalqaro hujjatlar, qo‘shma bayonotlar, shartnomalar va diplomatik yozishmalar hajmini oshirayotgan sharoitda diplomatik terminologiya masalasi yanada dolzarb tus olmoqda [1].

Rasmiy uslubning asosiy belgilaridan biri standartlashuv, aniqlik, majburiylik, shaxssizlik va emotsional neytrallikdir [10; 11]. Diplomatik matnda bu xususiyatlar yanada murakkab ko‘rinish oladi, chunki bunday matn bir vaqtning o‘zida ham huquqiy kuchga, ham siyosiy ehtiyotkorlikka, ham etiket me’yorlariga bo‘ysunadi. Masalan, kelishuv (agreement), shartnoma (treaty), memorandum (memorandum), deklaratsiya (declaration), kommyunike (communiqué), nota verbale (Note Verbale) kabi birliklar hujjat turini nomlaydi; ratifikatsiya qilmoq (ratify), qo‘shilmoq (accede), denonsatsiya qilmoq (denounce), bildirmoq (notify) kabi birliklar esa xalqaro-huquqiy harakatning o‘zini ifodalaydi. Shuning uchun diplomatik terminlar semantik noaniqlikka yo‘l qo‘ymasligi, ayni paytda diplomatik muloyimlikni ham saqlashi lozim.

Muammoning qo‘yilishi shundan iboratki, ingliz va o‘zbek tillaridagi diplomatik terminlar ko‘pincha lug‘aviy ekvivalent sifatida berilsa-da, ularning rasmiy uslubdagi vazifasi, pragmatik yuklamasi va huquqiy-semantik chegaralari yetarlicha farqlab ko‘rsatilmaydi. Masalan, credentials so‘zi odatiy hujjat ma’nosida emas, balki ishonch yorliqlari (credentials) ma’nosida; plenipotentiary esa faqat “vakil” emas, balki muxtor vakil (plenipotentiary) yoki favqulodda va muxtor elchi (ambassador extraordinary and plenipotentiary) tarkibida institutsional maqom bildiruvchi termin sifatida ishlatiladi. Xuddi shuningdek, accession termini oddiy “qo‘shilish” emas, balki xalqaro shartnomaga taraf bo‘lishning maxsus huquqiy usuli sifatida anglanadi [3; 5].

Tadqiqotning maqsadi ingliz va o‘zbek diplomatik terminlarining rasmiy uslubdagi funksional vazifalarini qiyosiy tahlil qilishdan iborat. Ushbu maqsadga erishish uchun quyidagi vazifalar belgilandi: birinchidan, ingliz va o‘zbek diplomatik hujjatlarida takrorlanadigan terminlar guruhini aniqlash; ikkinchidan, ularni protokol-marosimiy, performativ, yuridik-aniqlashtiruvchi, xushmuomalalikni ta’minlovchi, rasmiy-neytrallashtiruvchi va nominativ-klassifikatsion funksiyalarga ko‘ra tasniflash; uchinchidan, inglizcha terminlarning o‘zbek tilidagi moslashuv darajasi, kalkalashuv va semantik siljishlarini tavsiflash; to‘rtinchidan, o‘zbek diplomatik terminologiyasini me’yorlashtirish bo‘yicha amaliy tavsiyalar ishlab chiqish.

Tadqiqot obyekti ingliz va o‘zbek diplomatik terminlari, predmeti esa ularning rasmiy uslubdagi funksional vazifalaridir. Nazariy asos sifatida nutqiy aktlar nazariyasi (speech act theory) [7; 8], xushmuomalalik nazariyasi (politeness theory) [9], rasmiy-uslubiy tahlil [10; 11], janr tahlili (genre analysis) [12], diplomatik amaliyot va protokolga oid tadqiqotlar [13; 14] hamda so‘nggi yillarda diplomatik diskurs bo‘yicha olib borilgan korpusga tayangan ishlar [16; 17]dan foydalanildi. O‘zbek va ingliz diplomatik terminlari tarjimasi bo‘yicha yangi tadqiqotlar diplomatik ifodalarning xushmuomalalik strategiyasi, evfemistiklik va bilvosita nutqiy aktlar bilan chambarchas bog‘liqligini ko‘rsatadi [18; 19]. Biroq mavjud ishlarda terminlarning aynan rasmiy uslubdagi vazifaviy iyerarxiyasi to‘liq yoritilmagan; mazkur maqola shu bo‘shliqni to‘ldirishga qaratilgan.

Metodlar. Tadqiqot materiali sifatida 2020–2025-yillarga oid ingliz va o‘zbek tillaridagi diplomatik yozishmalar (diplomatic correspondence), diplomatik notalar (diplomatic notes), nota verbale (Note Verbale), xalqaro shartnomalar (international treaties), memorandumlar (memoranda), qo‘shma bayonotlar (joint statements), qo‘shma kommyunikelar (joint

communiqués), shuningdek O‘zbekiston Respublikasi Tashqi ishlar vazirligi, Birlashgan Millatlar Tashkiloti (United Nations), Lex.uz va xorijiy hukumat portallarida e’lon qilingan namunaviy hujjatlardan tuzilgan kichik korpus (corpus) olindi. Korpus 120 ta matndan iborat bo‘lib, shundan 60 tasi inglizcha, 60 tasi o‘zbekcha yoki o‘zbek tilida rasmiylashtirilgan hujjatlardir. Umumiy hajm 72,4 ming so‘zni tashkil etdi. Inglizcha qismda note verbale, joint statement, treaty, memorandum of understanding, credentials, accession, ratification kabi birliklar, o‘zbekcha qismda esa nota, qo‘shma bayonot, shartnoma, o‘zaro anglashuv memorandumi, ishonch yorliqlari, qo‘shilish, ratifikatsiya, denonsatsiya kabi birliklar ajratib olindi.

Tahlilda besh asosiy usul qo‘llandi. Qiyosiy-stilistik tahlil (comparative-stylistic analysis) ingliz va o‘zbek terminlarining rasmiy uslubdagi shakliy, semantik va sintaktik xususiyatlarini solishtirish imkonini berdi. Nutqiy aktlar nazariyasi (speech act theory) performativ fe’llarning — ratify, accede, denounce, declare kabi birliklarning — huquqiy harakatni bajarish xususiyatini aniqlashda qo‘llandi [7; 8]. Pragmatik-funksional tahlil (pragmatic-functional analysis) terminlarning adresatga ta’siri, xushmuomalalik darajasi, ehtiyotkorlik va yumshatish mexanizmlarini o‘rganishga xizmat qildi [9; 15]. Diskursiv tahlil (discourse analysis) diplomatik matnning institutsional konteksti, mualliflik maqomi, adresat va hujjat janri bilan bog‘liq jihatlarni ochib berdi. Kontekstual semantik tahlil (contextual semantic analysis) esa bir terminning turli hujjatlarda qanday semantik chegaraga ega bo‘lishini aniqlash uchun qo‘llandi.

Terminlar uch bosqichda kodlandi. Birinchi bosqichda hujjatlardagi diplomatik terminlar qo‘lda ajratildi. Ikkinchi bosqichda ular vazifalar bo‘yicha guruhlandi: protokol-marosimiy, performativ, yuridik aniqlik beruvchi, xushmuomalalik-yumshatish, rasmiy neytrallik-ob’ektivlik va nominativ-klassifikatsion vazifalar. Uchinchi bosqichda inglizcha terminlarning o‘zbek tilidagi ekvivalentlari bevosita tarjima, kalkalashuv, o‘zlashma, semantik torayish va tavsifiy tarjima kabi moslashuv turlariga ajratildi. Chastota ko‘rsatkichlari har bir terminning hujjatlardagi takrorlanish soniga asoslandi; ular mutlaq son va foiz ko‘rinishida berildi.

Natijalar. Tahlil shuni ko‘rsatdiki, diplomatik terminlar rasmiy uslubda faqat nomlash vazifasini bajarmaydi; ular hujjatning yuridik maqomini, muloqotdagi iyerarxik masofani, siyosiy ehtiyotkorlikni va xalqaro protokolga moslikni ta’minlaydi. Korpusda aniqlangan 1397 ta terminologik qo‘llanishning eng katta qismi protokol-marosimiy va yuridik-aniqlashtiruvchi vazifalarga to‘g‘ri keldi.

1-jadval. Ingliz va o‘zbek diplomatik terminlarining vazifalar bo‘yicha taqsimoti

Vazifa turi	Namunaviy birliklar	Inglizcha qo‘llanish	O‘zbekcha qo‘llanish	Jami ulush
Protokol va marosimiy vazifa	Note Verbale, Credentials, Plenipotentiary; ishonch yorliqlari, muxtor vakil	188	171	25,7%
Performativ vazifa	ratify, accede, denounce, declare; ratifikatsiya qilmoq, qo‘shilmoq	112	124	16,9%
Aniq ma’no va yuridik kuch berish	treaty, party, depositary, full powers; shartnoma, tomon, depozitariy	142	130	19,5%

Xushmuomalalik va yumshatish	have the honour to, with reference to, inform; sharafga muyassar bo‘lmoq, murojaat etmoq	95	83	12,7%
Rasmiy neytrallik va ob’ektivlik	it is agreed, the parties shall; kelishib olindi, tomonlar majburiyat oladilar	119	107	16,2%
Nominativ-klassifikatsion vazifa	embassy, consulate, attaché; elchixona, konsullik, attashe	68	58	9,0%
Jami		**724**	**673**	**100%**

1-jadvaldan ko‘rinadiki, protokol va marosimiy vazifa diplomatik terminlar tizimida yetakchi o‘rin tutadi. Note Verbale — nota verbale (Note Verbale), credentials — ishonch yorliqlari (credentials), plenipotentiary — muxtor vakil (plenipotentiary), High Contracting Parties — yuksak ahdlashuvchi tomonlar (High Contracting Parties) kabi terminlar hujjatga rasmiy maqom berish, tomonlarning diplomatik mavqeini belgilash va protokol tartibini saqlashga xizmat qiladi. Masalan, ingliz diplomatik yozishmalarida “presents its compliments” va “has the honour to inform” formulalari uchinchi shaxsda beriladi. O‘zbek rasmiy uslubida bular “o‘z ehtiromini izhor etadi”, “ma’lum qilish sharafiga muyassar” yoki “xabar berish sharafiga muyassar” shaklida ifodalanadi. Bu birliklar informatsion mazmundan tashqari, kommunikativ hurmat va institutsional masofani ham bildiradi.

Performativ vazifa ratifikatsiya qilmoq (ratify), qo‘shilmoq (accede), denonsatsiya qilmoq (denounce), deklaratsiya qilmoq (declare), tasdiqlamoq (approve), qabul qilmoq (accept) kabi fe’llarda yaqqol namoyon bo‘ladi. Nutqiy aktlar nazariyasi nuqtayi nazaridan bunday terminlar faqat harakatni tasvirlamaydi, balki vakolatli subyekt tomonidan rasmiy kontekstda qo‘llanganda huquqiy natija yaratadi [7; 8]. Masalan, “State X accedes to the Convention” gapida accedes fe’li shartnomaga taraf bo‘lish harakatini bildiradi. O‘zbek tilidagi “davlat Konvensiyaga qo‘shiladi” birikmasi kundalik “qo‘shilish”dan farqli ravishda xalqaro-huquqiy aktni anglatadi. Xuddi shuningdek, denonsatsiya qilmoq (denounce) termini shartnomadan oddiy chiqishni emas, belgilangan tartibda uning amal qilishini tugatish yoki undan voz kechish jarayonini bildiradi [4; 5].

Aniq ma’no va yuridik kuch berish vazifasi terminlarning ko‘p ma’nolilikka yo‘l qo‘ymasligida ko‘rinadi. Treaty — shartnoma (treaty), agreement — bitim/kelishuv (agreement), convention — konvensiya (convention), protocol — protokol (protocol), declaration — deklaratsiya/bayonot (declaration), memorandum of understanding — o‘zaro anglashuv memorandumi (memorandum of understanding) kabi birliklar o‘zaro yaqin bo‘lsa-da, har birining hujjatdagi huquqiy og‘irligi bir xil emas. Masalan, treaty odatda majburiy xalqaro huquqiy hujjatni bildirsa, memorandum of understanding ayrim kontekstlarda siyosiy kelishuv yoki kelgusidagi hamkorlik asoslarini ifodalaydi. Shu bois o‘zbek tarjimasida “memorandum”ni har doim “shartnoma” bilan almashtirish huquqiy aniqlikka zarar yetkazadi.

Xushmuomalalik va yumshatish vazifasi diplomatik diskursning muhim pragmatik qatlamidir. Have the honour to — sharafga muyassar bo‘lmoq (have the honour to), with reference to — murojaat/ishora qilgan holda (with reference to), demarche — demarsh (demarche), inform — xabar bermoq/ma’lum qilmoq (inform), request — iltimos qilmoq/so‘ramoq (request) kabi

birliklar keskin talab yoki e’tirozni yumshoq shaklda ifodalashga xizmat qiladi. Masalan, demarche xalqaro amaliyotda hukumatning rasmiy pozitsiyasini yetkazuvchi diplomatik chiqish bo‘lsa-da, matnda ko‘pincha neytral “murojaat”, “bayon etilgan pozitsiya” yoki “rasmiy bildirish” orqali yumshatiladi. Bu Brown va Levinson ta’riflagan “yuzni saqlash” strategiyalari bilan mos keladi [9].

Rasmiy neytrallik va ob’ektivlik vazifasi shaxssiz yoki tomonlarga teng masofa saqlovchi konstruksiyalar orqali yuzaga chiqadi. Ingliz matnlaridagi it is agreed — kelishib olindi (it is agreed), it is understood — shunday tushuniladiki (it is understood), the parties shall — tomonlar majburiyat oladilar/lozim (the parties shall), have agreed as follows — quyidagilar haqida kelishib oldilar (have agreed as follows) kabi formulalar subyektiv bahoni cheklaydi. O‘zbek tilida “kelishib olindi”, “belgilab qo‘yildi”, “nazarda tutiladi”, “amalga oshiriladi” kabi majhul va shaxssiz konstruksiyalar rasmiylikni kuchaytiradi. Natijada hujjat muallifning shaxsiy munosabati emas, institutsional iroda mahsuli sifatida qabul qilinadi.

Nominativ-klassifikatsion vazifa diplomatik sohaning predmet va subyektlarini nomlashda ko‘rinadi: embassy — elchixona (embassy), consulate — konsullik (consulate), consulate general — bosh konsullik (consulate general), attaché — attashe (attaché), chargé d’affaires — muvaqqat ishlar vakili (chargé d’affaires), permanent mission — doimiy vakolatxona (permanent mission), ministry of foreign affairs — tashqi ishlar vazirligi (ministry of foreign affairs), protocol department — protokol departamenti (protocol department). Bu birliklar hujjatda kim, qaysi maqomda, qaysi vakolat doirasida ishtirok etayotganini ko‘rsatadi. Xususan, attaché va chargé d’affaires kabi terminlar oddiy lavozim nomi emas, balki diplomatik iyerarxiyadagi aniq pog‘onani bildiradi.

2-jadval. Ingliz diplomatik terminlarining o‘zbek tiliga moslashuv turlari

Moslashuv turi	**Misollar**	**Terminlar soni**	**Ulush**
Bevosita ekvivalent	embassy — elchixona; consulate — konsullik	67	31,3%
Kalkalashuv	High Contracting Parties — yuksak ahdlashuvchi tomonlar; memorandum of understanding — o‘zaro anglashuv memorandumi	58	27,1%
O‘zlashma	ratification — ratifikatsiya; communiqué — kommyunike; demarche — demarsh	49	22,9%
Semantik torayish	note — nota; protocol — protokol; credentials — ishonch yorliqlari	30	14,0%
Tavsifiy tarjima	full powers — to‘liq vakolatlar; exchange of notes — notalar almashinuvi	10	4,7%
Jami		**214**	**100%**

2-jadvalga ko‘ra, o‘zbek diplomatik terminologiyasida bevosita ekvivalent va kalkalashuv yetakchi o‘rin tutadi. Bevosita ekvivalentlar asosan lavozim, muassasa va hujjat turlarida kuzatiladi. Kalkalashuv esa xalqaro shartnomaviy iboralarda kuchli: High Contracting Parties

iborasining yuksak ahdlashuvchi tomonlar shaklida berilishi inglizcha va fransuzcha diplomatik an’ananing izini saqlaydi. O‘zlashmalar ko‘proq xalqaro huquq, shartnoma amaliyoti va protokol sohasida uchraydi: ratifikatsiya, denonsatsiya, kommyunike, memorandum, demarsh, attashe. Semantik torayish note, protocol, credentials kabi terminlarda ko‘rinadi: ular umumtil ma’nosidan ajralib, diplomatik-huquqiy ma’noga ega bo‘ladi.

1-diagramma tavsifi sifatida aytish mumkinki, agar vazifalar ustunli diagrammada tasvirlansa, eng baland ustun protokol-marosimiy vazifaga, undan keyingi ustun yuridik aniqlik berish vazifasiga to‘g‘ri keladi. Eng past ko‘rsatkich nominativ-klassifikatsion vazifada qayd etiladi, chunki bunday terminlar son jihatidan kamroq bo‘lsa-da, hujjatning institutsional skeletini tashkil qiladi.

Muhokama. Natijalar ingliz va o‘zbek diplomatik terminlari o‘rtasida kuchli funksional o‘xshashlik mavjudligini ko‘rsatadi. Har ikki tilda diplomatik terminlar rasmiy uslubning standartlashuv, aniqlik, neytrallik va institutsional masofa kabi asosiy xususiyatlarini ta’minlaydi. Ingliz diplomatik an’anasida uchinchi shaxsdagi muomala, barqaror etiket formulalari, shall modal fe’li orqali majburiyat yuklash va note verbale kabi janrlarning qat’iy shakli ustuvor. O‘zbek diplomatik uslubida esa rasmiy-huquqiy uslubning milliy me’yorlari, hurmat kategoriyasi va rus tili orqali shakllangan ayrim hujjatchilik an’analari inglizcha xalqaro formulalar bilan qo‘shilib ketgan.

Farqlardan biri shundaki, ingliz tilida termin va formula ko‘pincha tarixan shakllangan barqaror ibora sifatida saqlanadi: have the honour to, presents its compliments, avails itself of this opportunity kabi birliklar xushmuomalalikning institutsional modelini yaratadi. O‘zbek tilida esa ularning bir necha muqobili mavjud: “ma’lum qilish sharafiga muyassar”, “xabar berish sharafiga muyassar”, “o‘z ehtiromini izhor etadi”, “ushbu fursatdan foydalanib, yuksak hurmatini bildiradi”. Bu xilma-xillik stilistik moslashuv imkonini kengaytiradi, biroq terminologik barqarorlikni pasaytirishi ham mumkin.

Ikkinchi farq performativ terminlar tarjimasida ko‘rinadi. Ingliz tilidagi accede, ratify, approve, accept, denounce, withdraw kabi fe’llar xalqaro huquqda aniq chegaralangan. O‘zbek tilida esa qo‘shilmoq, tasdiqlamoq, qabul qilmoq, chiqmoq kabi fe’llar umumtil ma’nosiga ham ega bo‘lgani uchun rasmiy kontekstda ularni termin sifatida aniqlashtirish zarur. Masalan, “Konvensiyaga qo‘shilish” terminologik jihatdan “xalqaro shartnomaga taraf bo‘lish”ni anglatadi; oddiy “tashkilotga a’zo bo‘lish” yoki “fikrga qo‘shilish” bilan almashtirilmasligi kerak. Bu holat Cao ta’kidlagan huquqiy tarjimada semantik aniqlik tamoyiliga mos keladi [20].

Uchinchi muhim jihat — xalqaro diplomatik diskursning o‘zbek tiliga ta’siri. O‘zbek rasmiy uslubida memorandum, kommyunike, demarsh, ratifikatsiya, denonsatsiya, depozitariy kabi o‘zlashmalar faol ishlatiladi. Ularning saqlanishi xalqaro terminologik uyg‘unlikni ta’minlaydi, ammo talaffuz, imlo va morfologik moslashuvda izchillik talab qiladi. Masalan, communiqué termini o‘zbekcha matnlarda “kommyunike”, ba’zan “kommyunikee” yoki “kommunike” shakllarida uchrashi mumkin; rasmiy me’yor sifatida bitta shaklni mustahkamlash zarur. Xuddi shuningdek, attaché termini uchun “attashe” shakli barqaror bo‘lsa-da, ayrim matnlarda fransuzcha imloga yaqin “attache” ishlatiladi.

Natijalar mavjud ilmiy qarashlarni tasdiqlaydi va ayrim jihatdan kengaytiradi. Austin va Searle nazariyasida nutqiy birliklar muayyan sharoitda harakatni bajarishi mumkinligi ta’kidlanadi [7; 8]. Diplomatik terminlar, ayniqsa ratify, accede, denounce, declare kabi fe’llar, bu nazariyaning xalqaro-huquqiy matndagi aniq ko‘rinishidir. Brown va Levinsonning xushmuomalalik nazariyasi diplomatik yozishmalardagi have the honour to va with reference to kabi yumshatuvchi

formulalarda o‘z tasdig‘ini topadi [9]. Yapparova, Ageeva va Pavol diplomatik xushmuomalalik rasmiy ish uslubining standartlashuv, me’yoriylik, emotsionallikdan xolilik va neytrallik xususiyatlari bilan bog‘liqligini ko‘rsatgan [15]; bizning tahlil ham ayni xulosani ingliz–o‘zbek materiali asosida tasdiqlaydi.

So‘nggi korpus tadqiqotlari diplomatik diskursda janrlararo farq, tarjima matnlarida yuqori formallik va axborot zichligi kuchli ekanini ko‘rsatmoqda [16; 17]. Mazkur tadqiqotda ham o‘zbek diplomatik matnlari, ayniqsa tarjima yoki xalqaro shablonlarga tayangan hujjatlar, yuqori darajada formulaviy va terminologik zich tuzilishga ega ekani aniqlandi. Allanazarova ingliz diplomatik terminlari strukturaviy bilvositalikka, o‘zbek tilidagi muqobillar esa milliy xushmuomalalik me’yorlariga ko‘proq tayanishini qayd etadi [18]. Ushbu maqoladagi tahlil bu fikrni kengaytirib, bunday farq faqat xushmuomalalikda emas, balki performativlik, shaxssizlik va yuridik aniqlik vazifalarida ham namoyon bo‘lishini ko‘rsatadi.

O‘zbek rasmiy uslubida terminologik yetarlilik bo‘yicha bir nechta muammo mavjud. Birinchidan, ayrim terminlar uchun bir necha variant ishlatiladi: joint statement — qo‘shma bayonot, joint declaration — qo‘shma deklaratsiya, joint communiqué — qo‘shma kommyunike. Ular semantik jihatdan yaqin bo‘lsa-da, hujjat maqomi va siyosiy-huquqiy kuchi bir xil emas. Ikkinchidan, inglizcha shall konstruksiyasini tarjima qilishda “lozim”, “shart”, “majburiyat oladi”, “amalga oshiradi” variantlari kontekstga ko‘ra farqlanishi kerak. Uchinchidan, credentials va full powers kabi terminlar noto‘g‘ri aralashtirilishi mumkin: credentials — diplomatik vakilning ishonch yorliqlari, full powers esa shartnomani imzolash yoki muzokara olib borish uchun berilgan to‘liq vakolatdir.

Tavsiyalar quyidagilardan iborat. Avvalo, ingliz–o‘zbek diplomatik terminlarining izohli elektron bazasini yaratish zarur. Bu bazada har bir terminning inglizcha shakli, o‘zbekcha me’yoriy ekvivalenti, ruscha vositachi varianti, huquqiy ta’rifi, janrda qo‘llanishi va namunaviy konteksti berilishi kerak. Ikkinchidan, Tashqi ishlar vazirligi, yuridik oliy ta’lim muassasalari va tilshunoslik markazlari hamkorligida diplomatik yozishmalar bo‘yicha uslubiy qo‘llanma ishlab chiqilishi maqsadga muvofiq. Uchinchidan, o‘zbek diplomatik tarjimasida terminlarni kontekstual tekshirish, ayniqsa performativ fe’llar va hujjat nomlarida, majburiy tahrir bosqichi sifatida belgilanishi kerak. To‘rtinchidan, “nota verbale”, “demarsh”, “o‘zaro anglashuv memorandumi”, “yuksak ahdlashuvchi tomonlar”, “doimiy vakolatxona” kabi birliklar imlo va qo‘llanish jihatidan yagona standartga keltirilishi lozim.

Xulosa. Tadqiqot ingliz va o‘zbek diplomatik terminlari rasmiy uslubda ko‘p qatlamli vazifani bajarishini ko‘rsatdi. Ular bir tomondan diplomatik hujjatning protokol va marosimiy maqomini belgilasa, ikkinchi tomondan xalqaro-huquqiy harakatni amalga oshiruvchi performativ birlik sifatida ishlaydi. Terminlarning qat’iy semantik chegarasi hujjatning yuridik aniqligini ta’minlaydi; xushmuomalalik formulalari esa diplomatik ehtiyotkorlik, murosa va kommunikativ xavfsizlikni yuzaga chiqaradi. Shaxssiz konstruksiyalar va neytral terminlar diplomatik matnni subyektiv bahodan xoli, institutsional iroda ifodasi sifatida shakllantiradi.

Ingliz va o‘zbek tillari o‘rtasida funksional umumiylik kuchli: har ikki tizimda terminlar rasmiylik, aniqlik, protokolga moslik va neytrallikni ta’minlaydi. Biroq o‘zbek tilida inglizcha va xalqaro diplomatik an’ananing ta’siri kalkalashuv, bevosita o‘zlashma, semantik torayish va tavsifiy tarjima orqali namoyon bo‘ladi. Bu jarayon o‘zbek diplomatik terminologiyasini boyitadi, lekin me’yorlashtirish ehtiyojini ham kuchaytiradi.

Amaliy jihatdan o‘zbek diplomatik terminologiyasini takomillashtirish uchun ingliz–o‘zbek izohli diplomatik terminlar lug‘atini yaratish, rasmiy hujjatlar uchun yagona tarjima

standartlarini ishlab chiqish, performativ terminlar bo‘yicha maxsus tahrir mezonlarini belgilash va davlat idoralari matnlarida terminologik izchillikni nazorat qilish zarur. Shunda o‘zbek rasmiy diplomatik uslubi xalqaro kommunikatsiya talablariga mos holda, milliy adabiy til me’yorlarini saqlagan tarzda rivojlanadi.

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ИМАГОЛОГИЯ КАК МЕЖДИСЦИПЛИНАРНАЯ ОБЛАСТЬ ИССЛЕДОВАНИЙ: ИСТОРИЯ, ТЕОРИЯ, МЕТОДОЛОГИЯ

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Аннотация. *В статье рассматривается имагология как междисциплинарная область гуманитарного знания, анализируется её генезис, теоретические основы и методологический аппарат. Особое внимание уделяется различным трактовкам понятия «имагология» в современной научной среде, а также анализу оппозиции образа «свой - чужой» как ключевого концепта имагологических исследований. Рассматриваются исторические этапы развития имагологии, начиная с её формирования в рамках компаративистики и заканчивая современными тенденциями. Особое внимание уделяется вкладу отечественных и зарубежных ученых в становление и развитие имагологических исследований.*

Ключевые слова: *имагология, компаративистика, образ, «свой», «чужой», этностереотип, междисциплинарность, литературоведение, национальный характер, культурные стереотипы, межкультурная коммуникация, идентичность.*

Abstract. *The article examines imagology as an interdisciplinary field of humanitarian knowledge, analyzes its genesis, theoretical foundations, and methodological apparatus. Special attention is paid to various interpretations of the concept of "imagology" in the modern scientific environment, as well as to the analysis of the "friend or foe" image opposition as a key concept in imagological research. The article examines the historical stages of the development of imagology, from its formation within the framework of comparative studies to current trends. Special attention is given to the contributions of Russian and foreign scholars to the formation and development of imagological research.*

Keywords: *imagology, comparative studies, image, "one's own", "foreign", ethnosterotype, interdisciplinarity, literary studies, national character, cultural stereotypes, intercultural communication, and identity.*

В последние годы в отечественной гуманитаристике возрос интерес к имагологии – междисциплинарной области, изучающей образ «другого», чужой страны, народа, культуры. Этот интерес обусловлен растущей глобализацией, интенсификацией межкультурных контактов и необходимостью понимания механизмов формирования представлений о других культурах. Несмотря на растущую популярность, статус имагологии остается дискуссионным, а само понятие – неоднозначным, что требует более глубокого анализа её теоретических и методологических оснований. Цель данной статьи – проанализировать историю развития имагологии, её теоретические и методологические основы, рассмотреть различные подходы к определению этого понятия в современной научной литературе, а также выявить перспективы дальнейшего развития имагологических исследований.

«Имагология как направление литературоведения (от лат. Imago- изображение, образ)» [Папилова,2011,с.31.]. позволяет исследовать национальные и культурные стереотипы, представленные в литературе, и их влияние на формирование образа «чужого». «Область гуманитарного знания, изучающая образы «другого». [Папилова,2011,с.31.]. Однако, такое определение требует уточнения, поскольку понятие «образ» само по себе многозначно и может трактоваться по-разному» [Папилова,2011,с.32.].

Некоторые исследователи рассматривают имагологию как «раздел компаративистики, занимающийся изучением представлений одного народа о другом.» [Ощепков,2010,с.251].

В рамках такого подхода акцент делается на сравнительном анализе литературных текстов и других культурных артефактов, в которых формируются и транслируются образы чужих стран и народов.

Имагология, как научная дисциплина, возникла на стыке различных дисциплин, тем самым это обусловило многообразие подходов к её определению. Наиболее распространённое определение имагологии -это область гуманитарного знания, изучающая образы «чужого». Однако, такое определение требует уточнения, поскольку понятие «образ» само по себе многозначно и может трактоваться по-разному.

Некоторые исследователи рассматривают имагологию как раздел компаративистики, занимающийся изучением представлений одного народа о другом. В рамках такого подхода акцент делается на сравнительном анализе литературных текстов и других культурных артефактов, в которых формируются и транслируются образы чужих стран и народов. Основной задачей имагологии в данном случае является выявление стереотипов, предрассудков и других искажений, возникающих в процессе межкультурной коммуникации. Другие исследователи, напротив, подчёркивают междисциплинарный характер имагологии, указывая на то, что она опирается на достижения таких наук, как история, этнография, психология, социология и культурология. В рамках такого подхода имагология рассматривается как комплексная наука, изучающая широкий спектр явлений, связанных с формированием и функционированием образов «Другого» в различных сферах общественной жизни.

«В «Толковом словаре обществоведческих терминов» имагология определяется как «учение об образах» и «составная часть сравнительно-исторического метода в литературоведении». Однако, это определение представляется слишком общим и не отражает всей сложности и многогранности имагологических исследований»[Яценко,1999,с.123].

«Современные исследователи конкретизируют это определение, обращая внимание на различные аспекты. Например, А.Р. Ощепков понимает имагологию как сферу исследований, изучающую образ «чужого» в общественном, культурном и литературном сознании»[Ощепков, 2010,с.33]. В.А. Хорев отмечает, что «имагология изучает образ другого народа не только в литературе, но и в других «текстах»». [Хорев, 2012,с.34]. Н.П. Михальская считает, что «имагология исследует восприятие и воплощение в литературных произведениях представлений об иной стране, её народе, особенностях национального характера» [Михальская, 1995,с.45].

Можно выделить несколько основных подходов к определению понятия «имагология»:

1. Междисциплинарный подход: имагология-комплексная наука, изучающая широкий спектр явлений, связанных с формированием и функционированием образов «чужого» в различных сферах общественной жизни.

2. Культурологический подход: имагология является областью исследований, изучающих влияние культуры на формирование образов «чужого».

3. Психологический подход: имагология-область исследований, изучающая психологические механизмы формирования образов «чужого».

Имагология как самостоятельное научное направление сформировалось во второй половине XX века. Однако, предпосылки для её возникновения существовали и ранее. Интерес к образам других стран и народов можно найти уже в древней литературе и философии.

Формирование имагологии связано с развитием компаративистики в XX веке. Именно в рамках сравнительного литературоведения были заложены основы для изучения образов «Другого» в литературных текстах.

«Важную роль в становлении имагологии сыграли работы Ж. М. Карре и М. Ф. Гийяра, которые «предложили анализировать не только взаимовлияние литератур, но и то, как в тексте реализуется образ «другого»» [Cerre, 1966; Giyard, 1981,с.45]. Они обратили внимание на то, что литература является важным источником информации о других странах и народах, однако, эта информация часто бывает искаженной и стереотипной.

«Ж.М. Карре и М.Ф. Гийяр предложили новый метод изучения литературы, который заключался в анализе не только содержания текста, но и его контекста. Они считали, что для понимания образа Другого необходимо учитывать исторические, социальные и культурные факторы, которые влияли на его формирование» [Cerre, 1966; Giyard, 1981,с.45].

Румынский исследователь А. Дима призывал «с крайней тщательностью подходить к портрету той или иной страны в литературе, поскольку образы других стран не могут оставаться постоянными, а на их создание влияют совершенно разные факторы, в том числе то, имел ли автор текста опыт пребывания в описываемой им стране.» [Дима, 1977,с.45].

Постепенно имагология выходит за рамки компаративистики и начинает развиваться как междисциплинарная область исследований. Это связано с осознанием того, что образы «чужого» формируются не только в литературе, но и в других сферах общественной жизни: в истории, политике, культуре, искусстве, средствах массовой информации и т.д.

В развитии междисциплинарного подхода к имагологии важную роль сыграли работы отечественных ученых. М.М. Бахтин разработал концепцию «диалога культур», которая предполагает, что взаимодействие с другой культурой способствует лучшему

пониманию собственной культуры. [Бахтин, 1979,с.45]. «Он подчеркивал, что чужая культура полно и глубоко раскрывает себя только в глазах другой культуры» [Бахтин, 1979,с.45].

Существенное влияние на развитие имагологии оказала эпоха Просвещения, популяризовавшая литературный жанр путешествий. «Романтизм, как известно, проявил углубленный интерес к национальному самосознанию народа, его языку и фольклору, самобытности его культуры и литературы, к менталитету и характеру чужой нации, к «экзотике» («нецивилизованным» народам, дикарям)». [Папилова, 2013,с.67].

В эпоху глобализации имагология приобретает особую актуальность. Усиление межкультурных контактов приводит к увеличению взаимодействия между различными культурами. В этих условиях понимание механизмов формирования образов «чужого» становится необходимым для успешной межкультурной коммуникации и предотвращения конфликтов на национальной и религиозной почве.

На сегодняшний день современные имагологические исследования характеризуются междисциплинарным подходом, использованием новых методов и технологий, а также расширением тематики. В частности, большую часть внимания уделяется изучению влияния средств массовой информации на формирование образов «чужого». Так-же исследуются образы различных социальных групп и меньшинств. Анализируются процессы формирования национальной идентичности и межкультурной толерантности.

Необходимо выявить основные тенденции и закономерности, характеризующие образ Другого. Объяснить, почему образ Другого сформировался именно таким образом. Как этот образ влияет на межкультурную коммуникацию и отношения между различными народами и культурами?

«Одним из ключевых понятий имагологии является оппозиция «свой – чужой»».[Степанов, 1997; Хорев, 2012]. «Она определяет противопоставление, пронизывающее культуру и формирующее коллективное мироощущение. Образ «чужого» всегда формируется в сопоставлении с образом «своего»». [Степанов, 1997; Хорев, 2012].

Разграничение «своего – чужого» существовало испокон веков не только как пространственно-территориальная граница, но и как разница в системе верований и культур. Отношение к чужому в каждом исторически конкретном обществе было связано с присущей ему картиной мира, поэтому и оппозиция «свое – чужое» имела в каждую эпоху различное наполнение.

В работе Степанова концепт «свой – чужой» соотнесен с понятием архетипа как первичной схемой образов, воспроизводимой бессознательно и априорно формирующей активность воображения, как «многоуровневой структурой – от элементарных образов отдельных произведений до целых литературных направлений и школ – пронизывающей всю мировую культуру и порой наделенной внутренней антиномичностью» (рай утраченный – рай обретенный). [Степанов, 1997,с.67].

Исследование оппозиции «свой – чужой» позволяет выявить механизмы формирования стереотипов и предрассудков, понять, как формируется национальная идентичность, и как можно способствовать развитию межкультурной толерантности.

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LUG‘AT TURLARI: O‘QUV LUG‘ATLARI

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Annotatsiya. *Mazkur maqolada leksikografiya sohasi va lug‘at turlari tahlil qilingan. Shuningdek, lug‘atshunoslikning zamonaviy yo‘nalishi hisoblanayotgan o‘quv lug‘atlari haqida fikr yuritilgan. Natijalar o‘quv lug‘atlarini yanada takomillashtirish va elektron lug‘atlarni yaratish ona tilini o‘qitishda yanada samarali bo‘lishini ko‘rsatadi.*

Kalit so‘zlar: *leksikografiya, lug‘at turlari, o‘quv lug‘atlari, maktab darsliklari, elektron lug‘atlar.*

Abstract. *This article analyzes the field of lexicography and types of dictionaries. It also discusses educational dictionaries, which are considered a modern direction in lexicology. The results show that further improvement of educational dictionaries and creation of electronic dictionaries in teaching the native language will be more effective.*

Keywords: *lexicography, types of dictionaries, educational dictionaries, school textbooks, electronic dictionaries.*

Kirish

Lug‘atlar lingvistik adabiyotlar ichida tillararo munosabatni ta’minlash, tilning grammatik qurilishini tadqiq qilish, til me’yorlarini belgilash, jamiyat a’zosining milliy tafakkuri, nutq boyligini o‘stirish, ijtimoiy-siyosiy ongini shakllantirishdagi bebaho xizmati bilan alohida ajralib turadi. XX asr boshlariga kelib, lug‘atlarning ta’lim samaradorligini oshirishning muhim omili ekanligi e’tirof etila boshladi [1].

O‘zbek lug‘atchiligi tarixi bundan bir necha yillar avval shakllana boshlagan va nodir namunalar yaratilgan. Masalan, Maxmud Qoshg‘ariyning “Devoni lug‘ati-turk” asari o‘zbek lug‘atchiligining dastlabki namunasi hisoblanadi. Asar alifbo tartibida tuzilgan, ammo ilk namuna bo‘lganligi sababli u bugungi lug‘atlardan farq qilgan. “Muallifning o‘zi asar tuzilishi haqida shunday yozadi: “Men bu kitobni maxsus alifbo tartibida hikmatli so‘zlar, sajlar, maqollar, qo‘shiqlar, rajaz va nasr deb atalgan adabiy parchalar bilan bezadim. Qattiq joylarini yumshatdim, qiyin va qorong‘u joylarini yoritdim” [2]. Ko‘rinib turibdiki, asarni bugungi zamonaviy lug‘atning aynan bir turiga kiritib bo‘lmaydi. Chunki unda imlo, izoh, frazeologizmlar va hikoyalardan ham namunalar kiritilgan.

Adabiyotlar tahlili

Leksikografiya sohasi alohida yo‘nalish sifatida shakllanganidan to bugungi holatiga qadar bir necha asrlar o‘tgan va o‘z takomillashuviga erishgan. Hozirgi lug‘atlar dastlabki

lug‘atlarga qaragandaga ancha mukammallashgan va ma’lum tartib qoidalarga amal qilgan holda tuziladi. Lug‘atning mavzu doisidan kelib chiqib, bir necha turlarga bo‘linadi. Lug‘atning mavzu doirasi deganda quyidagilarni nazarda tutish mumkin:

- lug‘at kimlar uchun mo‘ljallangan;
- lug‘atga qanday birliklar (so‘z, ibora…..)ning kiritiladi;
- muayyan tartibda (alifboli, uyali, mavzuli) joylashtirilgan,
- tavsiflanuvchi birliklar, ularning kelib chiqishi, ma’nolari;
- yozilishi (imlosi), talaffuzi;
- uslubiy mansubligi;
- boshqa tillarga tarjimasi haqida ma’lumotlar.

Lug‘atlar ko‘zlangan maqsadga ko‘ra dastlab ikki tipga bo‘linadi [3]: ensiklopedik (qomusiy) va lisoniy (lingvistik) lug‘atlar.

1. Ensiklopedik lug‘atlarda tabiat va jamiyatdagi narsa-hodisalar, tarixiy voqea-jarayonlar, buyuk shaxslar, ilm-fandagi kashfiyotlar, davlatlar, shahar- lar haqida ma’lumot beriladi. Demak, bu tipdagi lug‘atlarda asosiy e’tibor tildagi so‘zlarga emas, balki shu so‘zlar yoki so‘z birikmalari vositasida.lomlangan hodisalarga qaratiladi.

2. Lisoniy lug‘atlarda so‘z ma’nolari, imlosi, talaffuzi, iboralar (frazemalar), xalq maqollari, xullas, til birliklari va filologik tushunchalarga oid ma’lumotlar beriladi. Lisoniy lug‘atlar ham dastlab ikki turga — umumiy va xususiy (maxsus) lug‘atlarga bo‘linadi. Umumiy lug‘atlarda umumtil birliklari, ularning ma'nolari va qo‘Ilanish xususiyatlari izohlanadi. Bunday lug‘atlar bir tilli, ikki tilli, ko‘p tilli, izohli, izohsiz bo‘lishi mumkin. «O‘zbek tilining izohli lug‘ati» (ikki tomli, 1981), «O‘zbekcha-ruscha lug‘at» (1959), «Ruscha-o‘zbekcha lug‘at» (besh tomli, 1950—1955) va boshqalar shular jumlasidandir.

Xususiy (maxsus) lug‘atlarda tilning lug‘at boyligidagi birliklar ma'lum sohalar bo‘yicha yoki shu tildagi ma’lum mikrosistemalar, guruhlar bo‘yicha tanlab izohlanadi. «Ruscha-o‘zbekcha fizik terminlar lug‘ati» (M.D.Yagudev, R.X.Mallin, 1952), «Ruscha-o‘zbekcha matematik terminlar lug‘ati» (M.Sobirov, 1952), «O‘zbek tili sinonimlarining izohli lug‘ati» (A.Hojiyev, 1974), «Tilshunoslik terminlarining izohli lug‘ati» (A.Hojiyev, 2002), «O‘zbek tilining izohli frazeologik lug‘ati» (Sh.Rahmatullayev, 1978), «Imlo lug‘ati» (Olim Usmon, 1949), «O‘zbek tilining imlo lug‘ati» (S.Ibrohimov, E.Begmatov, A.A.Ahmedov, 1976), «O‘zbek ismlari» (E.Begmatov, 1991), «O‘zbek tili omonimlarining izohli lug‘ati» (Sh.Rahmatullayev, 1984), «O‘zbek tili antonimlarining izohli lug‘ati» (Sh.Rahmatullaev, N.Mamatov, R.Shukurov, 1980), «Ruscha-o‘zbekcha botanika terminlarining qisqacha izohli lug‘ati» (Q.Zokirov, M.M.Nabiyev, O‘.Pratov, H.Jamolxonov, 1963) va boshqalar shular jumlasidandir.

Obyekti va predmetiga ko‘ra ham lug‘atlar xilma-xil bo‘ladi: terminologik, frazeologik, orfografik, orfoepik, antroponimik, toponimik, sinonimlar, chastotali, dialektologik va hokazo. Ushbu sanab o‘tilgn turlar bo‘yicha bugungi kunga qadar yuzlab lug‘atlar tuzilgan.

Shuningdek, lug‘atlarining bugungi kunda o‘quv lug‘atlar turi ham mavjud bo‘lib, istiqlol yillarida A.Nurmonov, H.Ne’matov, A.Madvaliev, M.Mirtojiev, R.Sayfullaeva, Z.Hamidov, E.Qilichev kabi tilshunoslarning ishlarida o‘zbek tilshunosligida leksikografiyaning o‘quv lug‘atchiligi tarmog‘i paydo bo‘lgani ta’kidlanadi. B.Mengliev, S.Karimov, B.Yo‘ldoshev, N.Uluqov kabi tilshunoslarning maqolalarida ona tili – o‘zbek tilini o‘qitish vositalariga yordamchi axborot manbai bo‘lgan zamonaviy lingvodidaktik lug‘atlarni yaratishning nazariy va amaliy masalalari kun tartibiga olib chiqiladi. O‘quv lug‘atlari ta’limiy tamoyil asosida tuzilganligi va ta’lim jarayoni bilan chambarchas bog‘liqligi tufayli ularni xususiy lug‘atlar turiga kiritish

mumkin. O‘zbek tilshunosligida B.Bahriddinova, O.Shukurov, N.Yuldasheva, N. Mahmudov va bir qancha olimlar tomonidan tuzilgan o‘quv lug‘atlari bugungi kunda ham faol qo‘llanib kelinmoqda. Ushbu o‘quv lug‘atlarining kirish qismida esa “maktab o‘quvchilari uchun” yoki “maktab va akademik litsey o‘quvchilari uchun” nomli sarlavhalarni ko‘rish mumkin. Ammo bugungi kunda aynan bir sinf uchun mo‘ljallangan va aynan maktab darsliklariga moslashtirilgan o‘quv lug‘atlari deyarli uchramaydi. 5-sinflar uchun 2024-yilda nashr etilgan ona tili darsliklarida [4] har bir bo‘limda lug‘at bilan ishlashni talab qiluvchi kamida 2-3ta mashqlar keltirilgan. O‘quvchi ushbu mashqni bajarishi uchun unda, albatta, lug‘at (ba’zan izohli, ba’zan imlo) kitobi bo‘lishi kerak. 5-sinf o‘quvchisi uchun 6 tomlik izohli lug‘at yoki imlo lug‘atini olib yurish qiyinchilik tug‘dirishi mumkin.

Metodologiya

Tadqiqotning metodologik asosini qiyosiy-tahliliy, tavsifiy va kuzatuv metodlari tashkil etadi. Ushbu metodlar yordamida ona tili ta’limida o‘quv lug’atlari tuzishning zarurligi o‘rganildi.

Xulosa va takliflar

O‘quvchilarga qulaylik yaratish maqsadida o‘quv lug‘atlarini sinf darsliklariga moslashtirish va ularni alohida holda nashr etish dars davomida mashqlarni qiyinchiliklarsiz bajarishga imkon beradi. Shuningdek, ushbu o‘quv lug‘atlarining elektron ilova ya’ni internet tarmoqlariga ulanmasdan, bir martalik yuklab olish shaklining yaratilishi mashqlarni tayyorlash vaqtini yanada qisqartiradi. Chunki ilovadagi qidiruv tizimiga berilgan so‘rov kitoblardan so‘zni qidirish jarayoniga qaraganda ancha tez topiladi.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

FRANSUZ FOLKLORSHUNOSLIGI TARIXI VA UNDA BOLALAR O'YINLARINING O'RNI

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Annotatsiya. *Maqolada folklorshunoslik janri uning tarixi va taraqqiyot tamoyillari yoritilgan. Folklor janrining kelib chiqishi, evolyutsiyasi, xususiyati va tuzilishiga oid ma'lumotlar aniqlab berilgani asoslangan. Shuningdek, maqolada xalq og'zaki ijodi, folklorshunoslik va xalq orasidan chiqqan yuksak shaxslarning asarlaridan namunalar jamlangan, avlodlarning asriy aloqalarini tushunishga yordam beruvchi ma'lumot va xususiyatlar tahlilga tortilgan. Fransiya folklorshunosligi ham boy tarixiy taraqqiyot bosqichlariga ega ekanligi hamda hozirga qadar boshqa rivojlangan Yevropa davlatlari qatorida Fransiyada ham bu janr tez sur'atlar bilan taraqqiy topib borayotganligi haqida ma'lumotlar keltirilgan. Folklorga xos an'ana, urf-odat, qadriyat va milliylik tushunchalari o'rganilgan hamda ularga nisbatan munosabat ham e'tiborga olingan. Bolalar o'yin folklori namunalaridan manbalar asosida misollar keltirilgan.*

Kalit so'zlar: *badiiy obraz, folklorshunos, xalq og'zaki ijodi, biografik usul, xarakter, urf-odat, tarixiy, etnografiya, vatanparvar, ilmparvar, tarixiy taraqqiyot, an'ana, urf-odat, qadriyat, milliylik, bolalar o'yini, hayotiy, xayoliy hikoya, qo'shiq, o'smirlar o'yinlari, sport mashg'ulotlari, jamoat joylari, qishloq maydonlari, xiyobonlar, hissiy o'yinlar, intellektual o'yinlar, mushak o'yinlari, sakrab o'ynaladigan o'yinlar, arg'imchoqdan sakrash, kurash tushish o'yinlari.*

Abstract. *The article describes the genre of folklore, its history and principles of development. It is based on information about the origin, evolution, features and structure of the folklore genre. The article also contains samples of folklore, folklore and works of dignitaries, analyzes information and characteristics that help to understand the age-old relationships of generations. It is reported that French folklore also has rich historical stages of development and that this genre is booming in France along with other developed European countries. The concepts of traditions, customs, values and nationalities characteristic of folklore were studied, and the attitude towards them was also taken into account.*

Keywords: *artistic image, folklorist, folklore, biographical method, character, Tradition, Historical, ethnography, patriot, scholar, historical development, Tradition,*

Tradition, value, Nationality, Child's play, Life, fantasy story, Song, Teenage games, activities sports, public places, village squares, alleys, sensory games, mind games, muscle games, jumping games, pole vaulting, wrestling games.

Аннотация. *В статье описывается жанр фольклора, его история и принципы развития. В ее основу положены сведения о происхождении, эволюции, особенностях и структуре фольклорного жанра. Также в статье собраны образцы фольклора, фольклористика и произведения высокопоставленных лиц, проанализированы сведения и характеристики, помогающие понять вековые отношения поколений. Сообщается, что французский фольклор также имеет богатые исторические этапы развития и что этот жанр бурно развивается во Франции наряду с другими развитыми европейскими странами. Изучались характерные для фольклора понятия традиции, обычаи, ценности и национальности, а также учитывалось отношение к ним. Приведены примеры детского игрового фольклора по источникам.*

Ключевые слова: *художественный образ, фольклорист, фольклор, биографический метод, персонаж, Традиция, Исторический, этнография, патриот, ученый, историческое развитие, Традиция, Традиция, стоимость, Национальность, Детская игра, Жизнь, фантастическая история, Песня, Подростковые игры, занятия спортом, Публичный места, деревенские площади, аллеи, сенсорные игры, интеллектуальные игры, мышечные игры, прыжковые игры, прыжки с шеста, борцовские игры.*

Kirish

Dunyo xalqlarining ko‘p asrlar davomida qaror topgan umummilliy qadriyatlarini tiklashda folklor eng asosiy vositalardan biri hisoblanadi. Fransuz xalqi orasida urf-odat, qadimiy hayotiy va xayoliy hikoyalar hamda qo‘shiqlarga, shuningdek, bolalar o‘yin folklori namunalariga jamoatchilik qiziqishi juda katta bo’lgan. Folklorga xos an’ana, urf-odat, an’anaviylik tushunchalari ba’zan siyosiy ma’noga ega bo‘lishi mumkinligi inobatga olinib, nafaqat an’anaviy odatlar va urf-odatlar o‘rganilgan, balki an’ana yoki falon an’anaga qarshi bo‘lgan aqliy va siyosiy munosabatni ham anglatishi e’tiborga olingan. An’analar doimiy ravishda o‘sib, o‘zgarib, yillar o‘tib rivojlanib borayotganligi, innovatsiyalar doimo yangiligi, hali belgilangan doirada tasniflanmaganligi bilan unga qarshi bo‘lganligi sababli, bu chalkashlik xavfi o‘qishni istaganlar uchun juda noqulaylik tug‘diradi. Lekin buni folklorga ko‘p jihatdan ta’sir qiladigan, ammo xalq hayotining boshqa elementlarini, masalan, iqtisodiy, demografik, shaharsozlik va boshqalarni o‘rganishni o‘z ichiga olgan regionalizmda ham ko‘rish mumkin.

Folklor fan sifatida o‘z oldiga xalqning hayoti, qadriyati, e’tiqod va urf-odatlarini o‘rganishni maqsad qilib qo‘ygan. U fan sifatida hozirga qadar boshqa rivojlangan Yevropa davlatlari qatorida Fransiyada ham tez sur’atlar bilan taraqqiy topib bormoqda. Jumladan, Fransiya folklorshunosligi ham boy tarixiy taraqqiyot bosqichlariga ega. Xalq og‘zaki ijodi, folklorshunoslik xalq orasidan chiqqan yuksak shaxslarning ideallarini, intelekti hosilalarini birlashtiruvchi, avlodlarning asriy aloqalarini tushunishga yordam beradigan fan. Unda barcha fanlarga xos ma’lumot va xususiyatlar o‘zaro sintezlashgandir. Qolaversa, xalq og‘zaki ijodi faol va qiziqarli fan bo‘lib, u to‘g‘ridan-to‘g‘ri izlanish, san’at va adabiyotni bog‘liqlikda o‘rganishni talab qiladi.

Fransiyada folklorshunoslik taraqqiyotida Pol Sebillotning ikkita asari – Le Folklore de France (Guilmoto) et Le Folklore (Doin), et par celle, récente, d'un petit traité de Baffaele Corso, Folklore (Rome, éditions Leonardo da Vinci), ya’ni Le Folklore de France (Guilmoto) va Le Folklore (Doin) va yaqinda Baffaele Korso tomonidan kichik risolaning nashr etilishi muhim ahamiyatga ega. Ular orqali fransiya folklori haqida ko‘plab qiziqarli ma’lumotlar olish mumkin. Jumladan, ommabop o‘yinlar va fransuz bolalar o‘yinlari va o‘yinchoqlariga oid ma’lumotlarn aytib o’tish joij. Ularni o‘rganish ancha uzoq davrga boshlab boradi. Keltirilgan ma’lumotlar orqali mumtoz antik davrda ham, nisbatan ibtidoiy bo‘lmagan Yevropa aholisi orasida ham bu borada muayyan o‘xshashliklar borligi ayonlashadi.

Etnograflar uzoq vaqt davomida Yevropadagi ko‘plab qishloq o‘yinlari tarixini, uning taraqqiyot tamoyillarini, rivojlanishini o’rganishdi va bular eski marosimlarning qoldiqlari ekanligini ko‘rsatishdi. Lekin bularni har biri alohida holatda hal qilinishi kerak bo‘lgan murakkab muammoning faqat bitta jihati ekanligi aniqlandi. Bundan tashqari, o‘yinlarga “sport” degan aristokratik nom ostida har doim insoniyatning o‘zini “qolipda” ushlab turishi uchun vosita bo‘lib kelgan faoliyatning butun toifasi uchun boshlang‘ich nuqta sifatida qarash o‘rinlidir. Biologlar esa buni reproduktiv instinkt ekanligini isbotladilar. Kart Groosning “Hayvonlar o‘yinlari” va “Inson o‘yinlari” bo‘yicha ishi faqat bir nechta shaxslar yoki ba’zan sezilarli guruhlar tomonidan bajariladigan ko‘proq yoki kamroq zo‘ravonlik bilan shug‘ullanadigan ritmik mashqlarning biologik ahamiyatini aniq ko‘rsatib berdi.

Bolalar va o‘smirlar o‘yinlari sport mashg‘ulotlaridan oldingi mashg‘ulot, ya’ni kamolot davrida amaliy yoki fiziologik foydali faoliyatga o‘rgatish ekanligi o‘z-o‘zidan ravshan. Avvaldan kelayotgan an’anaviy bolalar o‘yinlarining ko‘pgina elementlari sport mashg‘ulotlariga ham ko‘chirilgan. Ayrim o‘yinlar uzluksiz va progressiv zamonaviy sport turlari bo‘lib davom etib kelmoqda. Masalan, futbol va kriketning ajdodi bo‘lgan mashhur Normandiya soule o‘yini haqida shunday deyish mumkin. Yoki qadimgi Fransiyada juda urf bo‘lgan va Shimoliy Amerika hindulariga ham ma’lum bo‘lgan ot ustidagi ma’lum bir tennis o‘yini “polo” nomi ham shu jihatdan e’tiborni tortadi. Hozirgacha ko‘p o‘yinlar juda qisqargan holda yetib kelgan. Ularda qatnashadigan o‘yinchi va kuzatuvchilar uchun odatiy tafsilotlar saqlanmagan.

Metodologiya. Kattalarning ko‘pgina o‘yinlari XIX asrda bolalar o‘yinlari darajasiga tushib qolgan, ammo ularning ba’zilari o‘ziga xos xususiyatini saqlab qolgan. Masalan, bunday o‘yinlar jamoat joylarida, qishloq maydonlarida, xiyobonlarda, kofe maydonlarida o‘ynashga ruxsat berilmagan. Kattalar uchun mo‘ljallangan o‘yinlarda o‘g‘il bolalar faqat o‘n besh yoki o‘n olti yoshdan boshlab ishtirok etishi mumkin hisoblangan. Ayollar ham, qizlar ham u yerda o‘ynash uchun an’anaviy huquqqa ega bo‘lmagan. Bu esa jinsiy taqiqning bolalar o‘yinlariga ham xosligini bildiradi.

Fransuz o‘yinlari hissiy o‘yinlar va intellektual o‘yinlarga bo‘linadi. Ular yana umumiy yo‘nalishlar bo‘yicha quyidagicha tasniflanishi mumkin:

birinchisi – ko‘rish bilan bog‘liq o‘yinlar (yashinmachoq);

ikkinchisi – eshitish bilan bog‘liq o‘yinlar (jumboq, topishmoqlar aytishuvi);

uchinchisi – mushak o‘yinlari;

to‘rtinchisi – sakrab o‘ynaladigan o‘yinlar (arg‘imchoqdan sakrash);

beshinchisi – kurash tushish o‘yinlari;

oltinchisi – sud qilish o‘yinlari;

yettinchisi – qal’ani himoya qilish o‘yini a h.k.

Bular orasida qal’ani himoya qilish o‘yini ancha mashhur bo‘lib, unda bir bola yog‘och qo‘g‘irchoqqa (ko‘pincha yog‘och toyga) minib, boshqa bolaning ko‘kragi o‘rtasiga yog‘och nayza bilan urishi lozim. Bu xatti-harakat esa olijanob turnirlarning degeneratsiyasi bo‘lgan. Turenda Karre de Busserol (Usages singuliers de la Touraine, Tours, 1884) tomonidan o‘rganilgan bu o‘yin faqat daryoda o‘tkazilgan bo‘lib, uni o‘ynash uchun tegirmonchilar, qayiqchilar va baliqchilar majbur qilingan. Agar ular o‘yin qoidasini buzishsa, jarimaga tortilgan. Bu nizom uzoq vaqtlar Turenning barcha lordliklarida amal qilib kelgan. Bu lordlar tomonidan o‘z fuqarolarini o‘yin-kulgi bilan masxara qilish edi. O‘yin ba’zi joylarda Hosil bayrami kuni, boshqalarida Uchbirlik kuni tashkil qilingan.

Suv o‘yinlari, xususan, Italiya va Okeaniya orollarida haligacha ko‘p keng tarqalgan. Suv ustidagi qadimgi o‘yinlar ham davom etib kelmoqda.

Bolalar ko‘pincha kattalar o‘yinlarini buzib yoki taqlid qilib o‘ynashadi. Masalan, o‘g‘il bolalarning to‘p o‘yinlari yigitlar va jangchilar uchun palma o‘yinlarining qolgan qismi deb hisoblangan, lekin sakrash, ayiq o‘yini (bugun deyarli yo‘q bo‘lib ketgan), kuchli zarbalar berish kabilarda va boshqalarda kattalarga xos bolalarcha o‘yinlarning belgilari yaqqol ko‘rinib turadi. Ammo ular XVIII asrda ham kattalar o‘yini deb hisoblangan.

Bolalar o‘yinlari, asosan, davraga moslangan. Masalan, “Minora” o‘yinida dialog va qo‘shiq sahnalari mavjud. Bolalar minora ostidan o‘tkazib turiladi, oxirgisi o‘sha yerda qoladi. Unda kattalarning sevgi qo‘shiqlaridan kuylanadi. Shu qo‘shiqlar orqali bolalar bir-birini masxara qilishadi.

O‘yinchoqlar haqida gap ketganda, bolalar yarmarkadan sotib oladigan va yil bo‘yi o‘ynaydigan qo‘g‘irchoqlar e’tiborni tortadi. Ularning aksariyati cherkov qo‘ng‘iroqlari tovushini ifodalovchi shovqin soladigan qo‘ng‘iroq o‘yinchoqlardir.

Qizlarning qo‘g‘irchoqlari dastlab go‘yo turli xudolarning vakillari bo‘lgan. Marokashda qo‘g‘irchoqlar hali ham Yomg‘irni ifodalaydi va qurg‘oqchilik paytida ular tantanali ravishda olib ketiladi. Shuning uchun ular ko‘chma muqaddas haykalchalar bo‘lib hisoblangan. Bular deyarli uch-to‘rt asr oldin barcha qizlar uchun umumiy o‘yinchoq bo‘lib hisoblangan. Bu esa qo‘g‘irchoqlar kichkina qizlar uchun har doim ham “chaqaloq” bo‘lmagan degani emas, chunki ona rolini o‘ynash uchun biologik jihatdan xuddi oldindan onalik mashqini qilish lozim sanalgan. Xuddi shuningdek, hassa bilan tasvirlangan ot dunyoning barcha xalqlarida o‘g‘il bolalarning chavandozlikni egallashdan oldingi mashqi bo‘lgan.

Neolit qabrlaridan loydan yasalgan hayvonlar nusxalari topilgan. Ular o‘yinchoqlarmi yoki hayvonlarni xudolar deb tasavvur qilishganmi, qanday bo‘lmasin, kulollar yasagan hayvonlar haykallari bugungi kunda ko‘plab qishloq joylarida o‘yinchoq bo‘lib qolmoqda.

Kulolchilik hayvonlari orasida hushtak chalayotgan qushlarning qiziq tasviri ham bor. Bunda dastlab hushtak chalayotgan qushlar ma’lum agrar marosimlarda ishlatiladigan narsalar bo‘lgan. Ba’zilari ichi bo‘sh, suv solib qo‘yiladigan idish shaklida yasalgan. Ular tabarruk qushlar kabi juda qadimiy tushunchalar asossida ardoqlangan. Ko‘pchiligi bulbulning ovoziga taqlid qilish uchun tayyorlangan. Bunday qushchalar shaklidagi hushtaklar hozirga qadar saqlanib qolgan va bolalar uchun ishlab chiqarilayapti.

Shimoliy Fransiya bolalari tomonidan ko‘tarilgan va Belgiyada hanuzgacha “ziyorat bayroqlari” ko‘rinishidagi o‘yinda eski ma’noga ega bo‘lgan kichik bayroqlar muqaddas bo‘lib hisoblanadi. Bir so‘z bilan aytganda, o‘yinchoqlar nafaqat qiziqarli, balki o‘zining foydaliligi uchun kerak bo‘lgan mavzudir. Ulardan ko‘plab har qanday qadimiy va ibtidoiy odat va

e’tiqodlarni uyg‘otadigan ma’lumotlarni topish mumkin. Bolalar o‘yinlarining barchasida milliy va qadimiy narsalar borki, shuning uchun ularni unutmasligimiz kerak.

XVII asrga oid qo‘g‘irchoqlar, pierrotlar, arlekinlar va kolumbinlar, bugungi kunda adabiyotshunoslikda “zoologik roman” deb ataladi, chunki ko‘p o‘yinlarning qahramonlari hayvonlar bo‘lgan. Kipling, Pergaud, Kolett ertaklari va La Fonten masallari juda qiziq bo‘lib, ular bolalarning tasavvurlarini orttiradi va, albatta, ularni hayajonga soladi.

Tahlil va natijalar. Adabiyot tarixiga, shuningdek, so‘nggi yillarda sezilarli yutuqlarga erishgan bolalar psixologiyasiga ham to‘xtalib o‘tish joiz. Negaki, tasodifiy o‘yinlardan bir nechtasi bolalar doirasiga tushib qolgan. Masalan, karta, tosh va suyaklar bilan bog‘liq o‘yinlar rimliklar orasida (hali ham ko‘p joylarda) davom etib kelmoqda. Ular aslida fol ochish asboblari sifatida o‘zlarining asosiy ma’nosini yo‘qotgan. Baronlar orasida faqat sehrgarlar suyakchalar bilan o‘ynashishgan. Ular haqiqiy folbinlik shartlari asosida birlashadilar. Ba’zan marmar o‘yinlari ham folbinlik xususiyatiga ega bo‘lgan. Bunda marmarga tanlangan toshlar, yong‘oqlar va boshqalarni almashtirishgan, lekin hozirgi davrda bu sehrli o‘yinlar juda zaiflashgan hamda yo‘qolib borayapti.

Xulosa. Fransua Rabela XVII asrdagi o‘yinlarning ijtimoiy hayotdagi ahamiyati va o‘rnini juda aniq ochib bergan hamda ularni juda e’tirof etgan folklorshunoslardan. U o‘z davrida qo‘llanilgan o‘yinlar katalogini tuzgan. Ular o‘quvchilar uchun tarbiyaviy ahamiyatga egaligini bayon qilgan. Rabela sanab o‘tgan o‘yinlarning ko‘p qismi boshqa viloyatlarga qaraganda Elzasda ko‘proq saqlanib qolganligi haqida ma’lumotlar keltirgan.

Galliya tarixchisi Kamil Jullian Mishelning tarixiy asarini tarannum etar ekan, shunday degan edi: “Men undan oldin folklor so‘zini talaffuz qilish mumkin bo‘lgan tarixchi bo‘lganiga ishonmayman. Bizning olimlarimiz bu yo‘lga endigina kirisha boshladilar, xalqlar hayotida xurofotlar yoki olomonning gaplari bilan o‘ynagan, endigina boshlanayotgan butun bir fan mavjud. U poygada g‘alaba qozongan...”.

Shunday qilib, yuqorida nomi tilga olingan ko‘plab olimlar bu yo‘lni tanlaganlar. Haqiqatan ham, folklor “jamoat foydasini e’tirof etish” musobaqasida g‘alaba qozonadi. Agar qadim folklorshunoslar bergan ko‘rsatmalarga ishonilsa, zamonaviy fransuz folkloriga jadal kirib borish va uni anglash oson bo‘ladi.

Shahar va qishloqlarda uzluksiz turli o‘yinlarni tashkil etish hamon davom etib kelmoqda. Ularda turli xil xalq qahramonlarining fe’l-atvorlari bolalarning fe’l-atvoridan ko‘ra ochiqroq holda ko‘rsatilgan. Jajji odamlar–bolalar o‘z qishlog‘iga xos intellektual tembrni o‘yinlar vositasida hanuzgacha saqlab qolishgan.

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13.00.00 – PEDAGOGICAL SCIENCES

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13.00.00 - PEDAGOGIKA FANLARI

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13.00.00 - ПЕДАГОГИЧЕСКИЕ НАУКИ

"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

ПРОБЛЕМЫ СООТВЕТСТВИЯ ВЫСШЕГО ОБРАЗОВАНИЯ ТРЕБОВАНИЯМ СОВРЕМЕННОГО РЫНКА ТРУДА

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Аннотация. *В данной статье рассматриваются актуальные вопросы, связанные с трансформацией современной системы образования в контексте цифровизации, стремительного технологического развития и меняющихся требований рынка труда. Исследование выявляет причины снижения интереса студентов к традиционным формам обучения и обосновывает необходимость внедрения современных образовательных моделей, основанных на интерактивности, гибкости и технологической интеграции. Особое внимание уделяется изменению роли преподавателя, который в современной образовательной среде выступает не только как источник знаний, но и как наставник, консультант и координатор познавательной деятельности студентов. В статье также анализируется проблема несоответствия между подготовкой выпускников вузов и современными профессиональными ожиданиями работодателей. Подчеркивается важность развития не только профессиональных знаний и навыков, но и «мягких» навыков, обеспечивающих успешную адаптацию к профессиональной деятельности.*

Ключевые слова: *система образования, цифровизация, качество образования, высшее образование, рынок труда, учитель, студент, профессиональная подготовка, профессиональные навыки, навыки межличностного общения, смешанное обучение, образовательные технологии.*

Annotatsiya. *Maqolada jamiyatning raqamlashtirilishi, texnologik taraqqiyotning jadallashuvi hamda mehnat bozori talablarining o‘zgarishi sharoitida zamonaviy ta’lim tizimini transformatsiya qilishning dolzarb masalalari ko‘rib chiqilgan. An’anaviy o‘qitish shakllarining ta’lim oluvchilar uchun qiziqarsiz bo‘lib borish sabablari yoritilib, interfaollik, moslashuvchanlik va texnologik integratsiyaga asoslangan zamonaviy ta’lim modellarini joriy etish zarurati asoslab berilgan. Zamonaviy ta’lim muhitida o‘qituvchining roli o‘zgarib borayotgani, u endilikda nafaqat bilim manbai, balki ta’lim oluvchining bilish faoliyatini yo‘naltiruvchi murabbiy, maslahatchi va hamkor sifatida namoyon bo‘lishi ta’kidlangan. Shuningdek, oliy ta’lim muassasalari bitiruvchilarining tayyorgarlik darajasi bilan ish beruvchilarning amaldagi kasbiy talablari o‘rtasidagi nomuvofiqlik muammosi tahlil qilingan.*

Ta’lim jarayonida nafaqat kasbiy bilim va ko‘nikmalarni, balki mutaxassisning professional faoliyatda muvaffaqiyatli moslashuvini ta’minlaydigan moslashuvchan ko‘nikmalarni ham shakllantirish muhim ekani asoslangan. Xulosa sifatida ta’lim mazmuni, o‘qitish metodlari, baholash mexanizmlari hamda ta’lim muassasalaridagi boshqaruv yondashuvlarini tizimli yangilash zarurligi qayd etilgan.

Kalit so‘zlar: *ta’lim tizimi, raqamlashtirish, ta’lim sifati, oliy ta’lim, mehnat bozori, o‘qituvchi, ta’lim oluvchi, kasbiy tayyorgarlik, hard skills, soft skills, aralash ta’lim, ta’lim texnologiyalari.*

Введение. Изменения, происходящие в современной системе образования, неизбежно сопровождаются трансформацией целей, функций, содержания, методов контроля и оценивания результатов обучения. При этом следует подчеркнуть, что осмысленное обновление самой идеологии оценки качества образования способно оказывать существенное влияние не только на процедуры контроля, но и на общее направление развития образовательной системы в целом. Иными словами, оценивание в современных условиях выступает не просто инструментом фиксации учебных достижений, а важным механизмом регулирования качества образования, стимулирования познавательной активности обучающихся и совершенствования педагогической практики.

Одной из актуальных проблем современного образования является снижение устойчивого интереса обучающихся к учебному процессу. Это явление во многом обусловлено тем, что традиционные методы преподавания, основанные преимущественно на односторонней передаче готовых знаний от преподавателя к учащемуся, в значительной степени утратили свою эффективность. Для современных школьников и студентов уже недостаточно пассивного восприятия учебной информации в рамках привычной объяснительно-иллюстративной модели. Сегодня образовательный процесс требует использования более гибких, интерактивных и технологически насыщенных форм организации обучения, обеспечивающих активное взаимодействие между педагогом и обучающимся.

В этой связи особую значимость приобретает внедрение современных образовательных моделей, ориентированных на интеграцию различных форм и средств обучения. Одной из таких моделей является blended learning, или смешанное обучение, которое предполагает рациональное сочетание традиционного аудиторного обучения с цифровыми, дистанционными и интерактивными образовательными технологиями. Данная модель позволяет объединять возможности очного взаимодействия, интернет-ресурсов, компьютерных программ, электронных платформ и самостоятельной работы обучающихся. В результате создаются условия для более индивидуализированного, мобильного и мотивирующего образовательного процесса.

Следует отметить, что современный обучающийся уже не ограничен пространством учебной аудитории или классной комнаты. Благодаря развитию цифровых технологий, интернет-коммуникаций и мобильных устройств ученик или студент получает возможность обучаться практически в любом месте и в любое время. Образовательное пространство в этих условиях существенно расширяется: источники знаний становятся более доступными, а сам процесс обучения приобретает открытый, динамичный и глобальный характер. Использование современных информационных технологий позволяет обучающемуся не только получать знания, но и самостоятельно исследовать

окружающий мир, выстраивать индивидуальную образовательную траекторию и активно включаться в процессы поиска, анализа и интерпретации информации.

Для того чтобы учащиеся посещали школу или вуз с интересом и внутренней мотивацией, необходимо повышать привлекательность образовательной среды, формировать положительное отношение к обучению и развивать устойчивый познавательный интерес. В современных условиях школа и университет должны рассматриваться не только как место передачи знаний, но и как пространство личностного развития, сотрудничества, творчества и самореализации. Это требует пересмотра традиционных подходов к организации учебного процесса, обновления форм педагогического взаимодействия и создания такой образовательной среды, которая будет соответствовать интересам и потребностям нового поколения.

В эпоху стремительного научно-технического прогресса существенно меняется и сама природа доступа к информации. Если ранее педагог выступал преимущественно как основной источник знаний, то в настоящее время значительная часть информации находится в открытом цифровом доступе. Практически любой обучающийся может получить необходимые сведения с помощью смартфона, планшета или компьютера. Современное молодое поколение свободно ориентируется в цифровой среде, активно использует гаджеты, владеет навыками поиска информации, взаимодействует с интернет-ресурсами, социальными сетями и различными онлайн-платформами. В связи с этим задача педагога уже не сводится исключительно к передаче информации. Гораздо более важным становится формирование у обучающихся способности критически осмысливать получаемые сведения, отбирать достоверные источники, анализировать информацию, применять её на практике и использовать для решения учебных и жизненных задач.

Аналогичные процессы наблюдаются и в системе высшего образования, где всё более отчётливо проявляется несоответствие между результатами профессиональной подготовки выпускников и реальными требованиями современного рынка труда. Работодатели нередко отмечают, что молодые специалисты, завершившие обучение в высших учебных заведениях, приходят на рабочие места недостаточно подготовленными к выполнению профессиональных обязанностей. Речь идёт не только о дефиците практических умений, но и о недостаточной сформированности профессиональных компетенций, необходимых для эффективной деятельности в конкретной сфере. Вследствие этого организациям приходится фактически заново адаптировать и обучать выпускников, развивая у них те прикладные навыки, которые должны были быть сформированы ещё в процессе вузовской подготовки.

Данная проблема во многом обусловлена высокой динамикой изменений, происходящих в экономике, технологиях и профессиональной структуре общества. Во многих случаях высшие учебные заведения открывают новые образовательные направления, ориентируясь на актуальные запросы рынка труда. Однако за период обучения студента профессиональная сфера может существенно измениться: трансформируются трудовые функции, обновляются технологические инструменты, меняются требования к квалификации специалиста. В результате возникает ситуация, при которой выпускник осваивает профессию или специализацию в её прежнем виде, тогда как к моменту окончания вуза работодателю уже необходим специалист с иным набором знаний, умений и компетенций. Это свидетельствует о необходимости повышения гибкости

образовательных программ, их прогностической направленности и более тесной связи высшей школы с реальным сектором экономики.

В этих условиях существенно меняется и профессиональная роль современного преподавателя. Если в традиционной образовательной модели педагог выступал главным образом как носитель и транслятор знаний, то в современных условиях его функция становится значительно более многогранной. Сегодня преподаватель всё в большей степени выступает в роли наставника, консультанта, координатора и помощника в процессе познания. Его задача состоит не столько в прямой передаче готовой информации, сколько в педагогически грамотном сопровождении обучающегося, в ненавязчивом направлении его познавательной активности, в формировании у него способности самостоятельно искать, анализировать, критически осмысливать и применять знания.

Особую актуальность данная функция приобретает в условиях активного использования цифровых технологий в образовании. Современные обучающиеся получают значительную часть информации из онлайн-источников, образовательных платформ, поисковых систем, цифровых сервисов и нейросетевых инструментов. В этой связи неэффективным представляется путь запрета или искусственного ограничения использования технологий в учебном процессе. Напротив, педагог должен интегрировать современные цифровые средства в образовательную практику, обучая студентов грамотной работе с информацией, развитию медиаграмотности, критического мышления и навыков отбора достоверных данных. Таким образом, преподаватель становится проводником в информационном пространстве, помогая обучающимся ориентироваться в большом объёме сведений и преобразовывать информацию в осмысленное знание.

Не менее важная ответственность в процессе модернизации образования возлагается на руководителей образовательных организаций и лиц, принимающих управленческие решения в данной сфере. Эффективные изменения становятся возможными лишь при условии осознания необходимости трансформации существующей практики, а также формирования внутренней готовности к обновлению. Управление качеством образования требует системного подхода, основанного на постоянной диагностике состояния образовательного процесса, выявлении проблемных зон и анализе причин их возникновения. Только при наличии объективной информации о реальном положении дел можно вырабатывать обоснованные меры по совершенствованию деятельности образовательного учреждения.

При этом преобразования в системе образования должны носить продуманный, поэтапный и управляемый характер. Для минимизации рисков и обеспечения большей эффективности целесообразно внедрять нововведения не одномоментно, а поэтапно, начиная с отдельных подразделений, направлений или структурных блоков образовательной организации. Такой подход позволяет апробировать новые управленческие и педагогические решения в ограниченном масштабе, оценивать их результативность, выявлять возможные затруднения и в случае необходимости вносить своевременные коррективы. Подобная стратегия является более безопасной и рациональной формой управления изменениями по сравнению с резкими и масштабными реформами.

Следует отметить, что инновационные процессы в образовательных учреждениях нередко развиваются недостаточно быстро, что отрицательно сказывается на качестве образования и снижает его способность своевременно отвечать на вызовы времени.

Медленное внедрение новаций приводит к сохранению устаревших форм и методов работы, тогда как общество и рынок труда предъявляют всё новые требования к содержанию и результатам подготовки обучающихся. В связи с этим ускорение инновационных процессов в образовании становится важнейшим условием его конкурентоспособности и социальной эффективности.

С точки зрения профессиональной подготовки принципиально важно учитывать, что между осуществляемой деятельностью и её результатом всегда находится навык как ключевой механизм практической реализации знаний. Независимо от профессиональной области – будь то педагогическая деятельность, инженерия, управление или бизнес – успешность специалиста определяется уровнем сформированности у него определённого комплекса навыков. В современной научной и практической литературе принято выделять две основные группы навыков: hard skills и soft skills.

К hard skills относятся специализированные, профессионально ориентированные умения и знания, непосредственно связанные с конкретной сферой деятельности. Это может быть владение математическими методами, техническими средствами, химическими технологиями, иностранными языками, программным обеспечением и иными инструментами профессиональной работы. Данные навыки, как правило, поддаются более чёткому измерению, стандартизации и контролю.

В свою очередь, soft skills представляют собой универсальные гибкие навыки, имеющие межпрофессиональный характер и обеспечивающие успешность человека в самых разных сферах деятельности. К ним относятся коммуникативные способности, умение взаимодействовать в коллективе, мотивация, стрессоустойчивость, способность к самоорганизации, умение ставить цели и достигать их, навыки разрешения конфликтов, системное и критическое мышление, а также умение эффективно работать с информацией. Именно сочетание профессионально-специализированных и гибких навыков обеспечивает высокую результативность специалиста, его адаптивность, конкурентоспособность и способность к профессиональному развитию в условиях быстро меняющегося мира.

Современная высшая школа должна быть ориентирована не только на передачу теоретических знаний, но и на формирование у будущих специалистов практических умений, профессиональных компетенций, гибких навыков и готовности к непрерывному обучению. Только при таком подходе возможно обеспечить качественную подготовку выпускников, способных успешно адаптироваться к изменениям профессиональной среды и эффективно реализовывать себя в избранной деятельности.

В современном мире научно-технического бума, обучение должно быть направлено именно на развитие Soft skills. При огромном потоке информации специалист должен уметь адаптироваться к разным ситуациям в профессии и социуме.

Не важно сколько и что мы знаем, важно умеем ли применять свои знания на практике?

Качество образования - комплексная характеристика образовательной деятельности и подготовки обучающегося, выражающая степень их соответствия государственным образовательным стандартам, образовательным стандартам, государственным требованиям или потребностям физического или юридического лица.

Качество обучающегося можно охарактеризовать с помощью следующих показателей: знания, полученные ранее по профильным для обучающегося учебным дисциплинам; знание IT технологий; владение иностранными языками; желание учиться;

интеллект; духовность; одаренность; память; дисциплинированность; настойчивость; работоспособность

Качество образования раскрывается в таких понятиях, как – качество преподавания, качество педагогических кадров, качество образовательных программ, качество материально-технической базы, информационно-образовательной среды, качество обучающихся, качество управления образованием и т.д.

Вопрос высокого качества в образовании привлекает большое внимание и интерес не только со стороны делового сектора, но и значительный интерес к пониманию качества среди академических вузов и исследований внешних органов, таких как, аккредитационные агентства. Причина такого интереса в росте глобализации и экономики, основанной на знаниях, где качественные выпускники проявляют свой вклад в ее развитие.

Повышение качества образования в вузах проблема актуальная, социально и экономически значимая. Реформирование и модернизация системы образования в нашей стране идет медленно потому, что высокий общественный спрос на образование позволяет многим учебным заведениям придерживаться старой стратегии и, несмотря на изменения в экономике и обществе, при определеных результатах обучения по прежнему ориентируются на спрос населения.

В Указе Президента Республики Узбекистан, от 08.10.2019 г. за № УП-5847 в главе 3. Стратегические цели и приоритетные направления развития системы высшего образования, чётко обозначены приоритеты и стратегические цели по повышению качества высшего образования – Стратегическими целями развития системы высшего образования являются: повышение качества подготовки высококвалифицированных кадров, развитие человеческого капитала на основе требований рынка труда для модернизации и стабильного социально-экономического развития страны;

создание необходимых условий для повышения уровня охвата высшим образованием, подготовки высококвалифицированных, креативно и системно мыслящих кадров на основе международных стандартов, способных самостоятельно принимать решения для реализации их интеллектуальных способностей и формирования в качестве духовно развитой личности.

Стратегическая цель государственной политики в области образования – охват и повышение доступности качественного образования, соответствующего требованиям инновационного развития экономики, современным потребностям общества и каждого гражданина.

Образовательные организации в настоящее время находятся в поисках нового подхода к управлению качеством образования. Данный поиск невозможен без изучения классических концепций управления для определения их актуальности на сегодняшний день. Задачи исследования: выделить и проанализировать ведущие классические концепции управления качеством образования; определить их место и роль в современной системе управления качеством образования.

Увеличение бюджетных вливаний в образование можно объяснить увеличением значимости человеческого потенциала для экономической и социальной сфер.

Отношения между людьми сами по себе стали более сложными, поэтому требуются новые подходы, постоянное повышение квалификации людей, которые работают в сфере образования.

На данный момент в промышленном производстве количество мест снижается из-за новых технологий, которые заменяют работу людей. Потребность в специалистах на рынке труда представляет собой нестабильную и трудно прогнозируемую переменную, поскольку является величиной не постоянной, изменяющейся в зависимости от спроса на каждую отдельную профессию на разных этапах экономического развития страны.

Потребителями образовательных услуг выступают обучающиеся и работодатели, каждый из которых, оценивает качество образования по своим критериям. К примеру, если для выпускника достаточно быть конкурентоспособным специалистом, получить высокооплачиваемую работу по профилю подготовки и успешно строить свою карьеру в будущем, то работодатель в первую очередь заинтересован в молодых специалистах с высоким уровнем профессиональных знаний, способных нести ответственность за результаты, решать нестандартные задачи и ориентироваться в производственной обстановке.

Каждое образовательное учреждение использует различные средства и инструменты для изучения уровня удовлетворённости потребителей образовательных услуг в виде опроса, анкетирования, интервью, дискуссий, мониторинга и тд.

В связи с вышеизложенным, мы посчитали целесообразным проанализировать систему оценки качества образования вузов в нашей стране и сформулировать предложения по повышению ее эффективности с учетом современных тенденций развития системы образования.

Нами был проведен онлайн-опрос среди студентов вузов нашей страны. Опросник состоял из 17ти вопросов, в котором приняли участие 13 тысяч 155 студентов из вузов республики.

На основании результатов опроса выявляется ясная картина того, что примерно в 40% вузах, несмотря на то, что основной задачей студента является учеба, большое количество различных мероприятий, проводимых в вузах отнимает у студента много времени.

Почти в 25% вузов руководство используя старые методы, пытаясь контролировать студентов не поощрительными, а принудительными методами. Психологическая атмосфера внутри вузов оставляет желать лучшего, процветает групповщина, протежирование и предвзятость (это отметили 8,5 % респондентов).

Разделение высших учебных заведений на базовые и обычные вузы, открытие и сохранение образовательных направлений без потенциальных рабочих мест в целях погони за количеством студентов, проведение слишком много различных духовно-просветительских мероприятий и встреч в вузах для PR не учитывая потребности студентов, вмешательство родителей и общественности в вопросах отчисления и восстановления студентов, не освоивших курс, регулярное изменение критериев перевода и восстановления студентов, отрицательно сказывается на качественной и своевременной успеваемости обучающихся.

Все вышеуказанные проблемы негативно влияют на качественное и своевременное выполнение задач, поставленных перед высшим образованием главой нашего государства и общества.

В связи с этим необходимо пересмотреть приоритеты в образовании и исходя из этого предпринимать модернизацию школ и университетов.

Проблемам качества образования и его оценке посвящены многочисленные теоретические исследования многих учёных, однако единого мнения в научном сообществе по данным вопросам пока не выработано.

Проанализировав работы учёных теоретиков по вопросам качества образования, мы выделили следующие подходы:

- качество образования оценивается по материально-технической базе, учебно-методическому обеспечению и уровню квалификации профессорско-преподавательского состава образовательного учреждения;

-соответствие требованиям потребителей образовательных услуг, работодателей;

-привлечение работодателей на все уровни образовательной программы (от разработки образовательной программы до итогов аттестационной комиссии);

- реализация многоуровневого непрерывного образования (дошкольное, начальное, общее среднее, профессиональное, две степени высшего образования, докторантура).

Именно материально-техническая база, учебно-методическое обеспечение, уровень квалификации профессорско-преподавательского состава, полное ресурсное обеспечение образовательных программ, и высокие результирующие показатели деятельности вузов являются ядром вуза, определяющим качество образования.

Образование, передача знаний должна перестать быть «технической», пришло время научиться формировать компетенции будущих специалистов, то чем должны обладать выпускники вузов.

Потребности общества меняются ежечасно, прогнозировать на 5-10 лет наперёд крайне сложно, мы не знаем какие профессии будут востребованы и какую работу придётся выполнять нашим детям, поэтому образование обязано подстраиваться под вызовы времени и учиться использовать современные технологии.

Использование современных технологий даёт возможность сосредоточиться на определённом ученике, учитывать его индивидуальные возможности и таланты, ведь если один силён в математике, то у другого может быть великолепный музыкальный слух, значит задача образования раскрыть потенциал обучающегося.

Благодаря современным технологиям, детей можно обучить образу действий в постоянно меняющемся мире, получить информацию из любой точки планеты и для современной молодёжи считается нормальным учиться посредством роликов из YouTube, мгновенно находить ответы на любые вопросы из Википедии и тд.

Исходя из вышесказанного, обучение будущего должно строиться вокруг серьезных проблем, которые обучающиеся будут решать сами. Задача преподавателей - построить комфортную среду для студентов, предоставить контекст и обеспечить связь с сообществами, которые помогут получать доступ к необходимой информации.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

OLIY TA'LIM MUASSASASIDA INNOVATSION TA'LIM MUHITI TUSHUNCHASI, MOHIYATI VA TUZILMASI

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Annotatsiya. *Maqolada oliy ta'lim muassasasidagi innovatsion ta'lim muhiti tushunchasi, mohiyati va tuzilmasi yoritiladi. Tadqiqot mavzusi bilan bog'liq asosiy tushunchalar, jumladan, "innovatsiya", "ta'lim muhiti", "innovatsion ta'lim muhiti", "oliy ta'lim muassasasi", "raqamli transformatsiya", "talaba markazli ta'lim", "pedagogik dizayn" mazmuni aniqlashtiriladi. Innovatsion ta'lim muhiti universitetdagi alohida yangiliklar yig'indisi emas, balki qadriyat-maqsadli, mazmuniy-metodik, texnologik, kommunikativ, tashkiliy-boshqaruv va shaxsiy-rivojlantiruvchi komponentlarni birlashtiruvchi yaxlit va dinamik rivojlanuvchi pedagogik tizim ekani asoslanadi. Uning shakllanishi oliy ta'limning moslashuvchan o'qitish modellariga o'tishi, talabaning subyekt sifatidagi roli kuchayishi, o'qituvchi funksiyalarining kengayishi hamda raqamli resurslarning pedagogik jihatdan asoslangan ta'lim jarayoniga integratsiyalashuvi bilan bog'liqligi ko'rsatiladi. Xulosa sifatida, innovatsion ta'lim muhitining samaradorligi faqat universitetning texnologik jihozlanganligi bilan emas, balki pedagogik loyihalash sifati, innovatsiyalarni institutsional qo'llab-quvvatlash va ta'lim jarayonining XXI asr kompetensiyalarini rivojlantirishga yo'naltirilganligi bilan ham belgilanadi.*

Kalit so'zlar: *innovatsiya, ta'lim muhiti, innovatsion ta'lim muhiti, oliy ta'lim muassasasi, universitet, raqamli transformatsiya, talaba markazli ta'lim, pedagogik dizayn, XXI asr kompetensiyalari, oliy ta'lim sifati.*

Abstract. *The article examines the concept, essence, and structure of an innovative educational environment in a higher education institution. The content of the key concepts related to the topic is clarified, including "innovation," "educational environment," "innovative educational environment," "higher education institution," "digital transformation," "student-centred learning," and "pedagogical design." It is argued that the innovative educational environment of a university is not a set of isolated innovations, but an integral and dynamically developing pedagogical system that includes value-target, content-methodological, technological, communicative, organizational-managerial, and personal-development components. The article shows that its formation is associated with the transition of higher education toward flexible learning models, the strengthening of student agency, the*

expansion of teachers’ functions, and the integration of digital resources into a pedagogically justified learning process. It is concluded that the effectiveness of an innovative educational environment depends not only on the university’s technological infrastructure, but also on the quality of pedagogical design, institutional support for innovation, and the orientation of the educational process toward the development of twenty-first-century competencies.

Keywords: *innovation, educational environment, innovative educational environment, higher education institution, university, digital transformation, student-centred learning, pedagogical design, twenty-first-century competencies, quality of higher education..*

Аннотация. *В статье раскрываются понятие, сущность и структура инновационной образовательной среды в высшем учебном заведении. Уточняется содержание базовых понятий, связанных с темой исследования: «инновация», «образовательная среда», «инновационная образовательная среда», «высшее учебное заведение», «цифровая трансформация», «студентоцентрированное обучение», «педагогический дизайн». Обосновывается, что инновационная образовательная среда вуза представляет собой не совокупность отдельных новшеств, а целостную, открыто развивающуюся педагогическую систему, включающую ценностно-целевой, содержательно-методический, технологический, коммуникативный, организационно-управленческий и личностно-развивающий компоненты. Показано, что её формирование связано с переходом высшей школы к гибким моделям обучения, усилением субъектной роли студента, расширением функций преподавателя и интеграцией цифровых ресурсов в педагогически обоснованный образовательный процесс. Сделан вывод о том, что эффективность инновационной образовательной среды определяется не только уровнем технологической оснащённости университета, но и качеством педагогического проектирования, институциональной поддержкой инноваций и направленностью образовательного процесса на развитие компетенций XXI века.*

Ключевые слова: *инновация, образовательная среда, инновационная образовательная среда, высшее учебное заведение, университет, цифровая трансформация, студентоцентрированное обучение, педагогический дизайн, компетенции XXI века, качество высшего образования.*

Kirish. Zamonaviy oliy ta'lim tizimi raqamlashtirishning tezlashishi, universitetlarning global raqobati, rivojlanayotgan professional standartlar, akademik mobillikning o‘sishi va bitiruvchilarni tayyorlash sifatiga tobora ortib borayotgan talablar sharoitida rivojlanmoqda. Shu nuqtai nazardan, nafaqat o‘qitish mazmuni va texnologiyalari, balki universitetning ta'lim muhiti ham o‘zgarmoqda. Bu tobora ko‘proq ta'lim natijalari sifatini, o‘quv o‘zaro ta'sirining tabiatini, akademik motivatsiyani, tadqiqot faoliyatini va talabalarning kasbiy rivojlanishini belgilovchi omil sifatida qaralmoqda.

Innovatsion ta'lim muhiti masalasi, asosan tayyor bilimlarni uzatishga qaratilgan an'anaviy oliy ta'lim modeli zamonaviy bilim jamiyati sharoitlariga tobora mos kelmayotganini hisobga olsak, ayniqsa dolzarb bo‘lib bormoqda. Universitetdan nafaqat axborot uzatish, balki talabalarning faol o‘rganish sub'ektlariga aylanishi, mustaqil ravishda axborot qidirish va talqin qilish, loyiha va tadqiqot faoliyatida ishtirok etish, jamoalarda ishlash, qarorlar qabul qilish va o‘z kompetensiyalarini doimiy ravishda yangilab turishi uchun sharoit yaratish kutilmoqda [1; 5].

Biroq, ilmiy pedagogik adabiyotlarda innovatsion ta'lim muhiti tushunchasi ko‘pincha noaniq ma'noda qo‘llaniladi. Ba'zi tadqiqotchilar uni asosan raqamli infratuzilma bilan, ba'zilari yangi pedagogik texnologiyalar bilan, ba'zilari esa universitetning tashkiliy madaniyati va sub'ekt-sub'ekt o‘zaro ta'siri bilan bog‘laydi. Yondashuvlarning bu xilma-xilligi kontseptual asosni, mohiyatini aniqlashtirish va innovatsion ta'lim muhitining tarkibiy qismlarini, xususan, oliy ta'lim muassasasi kontekstida aniqlashni taqozo etadi [1-3].

Keng ilmiy ma'noda "innovatsiya" atamasi ma'lum bir tizimga yangi yoki sifat jihatidan yangilangan elementni kiritishni, uning rivojlanishini ta'minlashni, samaradorligini oshirishni yoki uning ishlash xususiyatini o‘zgartirishni anglatadi. Ta'lim sohasida innovatsiya biron bir yangilik bilan cheklanib qolmaydi. U sifat jihatidan yangi o‘rganish va rivojlanish natijalariga olib keladigan ta'lim maqsadlari, mazmuni, usullari, texnologiyalari, tashkil etish shakllari yoki boshqaruvidagi o‘zgarishlarni anglatadi [1; 2]. Shu sababli pedagogik innovatsiya shunchaki yangi texnologiya yoki alohida usulni qo‘llash emas, balki ta'lim jarayoniga integratsiyalashgan va uning mantig‘ini, mazmunini yoki tashkil etilishini o‘zgartiradigan mazmunli innovatsiyadir. Oliy ta'lim sharoitida innovatsiya talabalarda akademik mustaqillik, tanqidiy fikrlash, tadqiqot madaniyati va kasbiy tayyorgarlikni rivojlantirishga yordam berganda muhim ahamiyatga ega.

Pedagogik fanlarda ta'lim muhiti odatda shaxsning o‘rganishi, ta'lim olishi, rivojlanishi va ijtimoiylashuvi sodir bo‘ladigan sharoitlar, omillar, munosabatlar, resurslar va imkoniyatlarning umumiyligi sifatida tushuniladi. Zamonaviy ma'noda, bu nafaqat moddiy va fazoviy muhit, balki talabaning ta'lim tajribasiga ta'sir qiluvchi pedagogik, kommunikativ, mazmunli, tashkiliy va qadriyatlarga asoslangan xususiyatlar tizimidir [1; 2]. Ta'lim muhiti ta'lim sub'ektlari o‘rtasidagi o‘zaro ta'sir maydoni bo‘lib xizmat qiladi, bu yerda motivatsiya, o‘rganish xulq-atvori, fikrlash usullari, akademik muloqot normalari va kasbiy rivojlanish modellari shakllanadi. Shuning uchun, oliy ta'limda bu kelajakdagi mutaxassislarni tayyorlash sifatidagi muhim omil deb hisoblanishi kerak.

Innovatsion ta'lim muhit - bu pedagogik, tashkiliy va texnologik yangiliklar asosida yangilash, moslashish va rivojlantirish imkoniyatiga ega bo‘lgan muhitdir. Uning an'anaviy muhitdan tub farqi shundaki, u bilim uzatishning barqaror naqshlarini qayta tiklashga emas, balki faol, izlanishga asoslangan, moslashuvchan va fanga asoslangan o‘rganish uchun sharoit yaratishga qaratilgan [1; 2; 6]. Boshqacha qilib aytganda, innovatsion ta'lim muhiti individual innovatsiyalarning yig‘indisi emas, balki yangi texnologiyalar, usullar, boshqaruv qarorlari va o‘zaro ta'sir shakllari yagona pedagogik maqsadga bo‘ysundirilgan yaxlit tizimdir: ta'limning yuqori sifatini ta'minlash va talabaning kognitiv va kasbiy faoliyat sub'ekti sifatida rivojlanishi.

Oliy ta'lim muassasasi yoki keng ma'noda universitet - bu oliy ta'lim dasturlarini amalga oshiradigan va mutaxassislar, bakalavrlar, magistrlar va tadqiqotchilar uchun o‘quv dasturlarini taqdim etadigan ta'lim tashkiloti. Biroq, zamonaviy universitet nafaqat ta'lim funktsiyalarini, balki ilmiy, madaniy, innovatsion va ijtimoiy funktsiyalarni ham bajaradi. Shuning uchun universitetning ta'lim muhiti nafaqat fan bo‘yicha bilimlarni egallashni, balki talabaning akademik hamjamiyatga, tadqiqot madaniyatiga, professional muloqotga va umrbod o‘rganish amaliyotiga qo‘shilishini ham ta'minlashi kerak [4; 5].

Ta'limning raqamli transformatsiyasi shunchaki ta'lim jarayoniga raqamli vositalarni joriy etish emas, balki raqamli texnologiyalarga asoslangan o‘qitish, o‘rganish, muloqot, baholash va boshqaruvda keng qamrovli o‘zgarishdir. YUNESKO raqamli transformatsiyaga texnik bazani mexanik kengaytirish emas, balki tizimli jarayon sifatida qarash kerakligini ta'kidlaydi [3].

Talabaga yo‘naltirilgan ta'lim - bu o‘quvchiga ta'lim jarayonining faol sub'ekti sifatida qaraladigan va o‘qishni tashkil etish uning kognitiv faolligi, individual xususiyatlari, tajribasi, ta'lim maqsadlari va o‘z ta'limi uchun mas'uliyatini hisobga olgan holda quriladigan yondashuv [1; 2].

Pedagogik dizayn - bu maqsadlar, mazmun, usullar, shakllar, resurslar va baholash usullarini o‘z ichiga olgan ta'lim jarayonining ilmiy va metodologik jihatdan asoslangan dizayni. Innovatsion ta'lim muhitida o‘qitish dizayni texnologik imkoniyatlar va real ta'lim natijalari o‘rtasidagi bog‘lovchi bo‘g‘in vazifasini bajaradi [2; 6].

Universitetning innovatsion ta'lim muhitining mohiyati uning funktsional maqsadi, tizimli tabiati va rivojlanish salohiyati orqali namoyon bo‘ladi. Eng avvalo, u universitet hayotining barcha elementlari - kurs mazmuni, o‘qitish texnologiyalari, raqamli resurslar, o‘zaro ta'sir shakllari, tadqiqot amaliyotlari, boshqaruv tizimlari va akademik qadriyatlar - ta'limni sifat jihatidan yangilash maqsadiga bo‘ysundirilgan ta'lim makonining tashkil etilishini anglatadi [1; 2].

Mazmun jihatidan innovatsion ta'lim muhiti talabalarning bilimni passiv ravishda o‘zlashtirishiga emas, balki uni mustaqil ravishda egallashiga, tanqidiy mulohaza yuritishiga, yangi vaziyatlarda qo‘llay olishiga va kasbiy faoliyatga integratsiyalashuviga qaratilganligi bilan ajralib turadi. U oldindan belgilangan materialni o‘zlashtirish sifatida o‘rganishdan muammolarni hal qilish, tadqiqot, loyihalash va o‘zaro ta'sirda faol ishtirok etish sifatida o‘rganishga o‘tish uchun shart-sharoitlarni yaratadi.

Pedagogik nuqtai nazardan, bunday muhitning mohiyati o‘quvchining sub'ektiv pozitsiyasini mustahkamlashda namoyon bo‘ladi. Innovatsion ta'lim muhitida o‘quvchilar shunchaki ta'sir obyekti emas, balki ta'lim jarayonining to‘laqonli ishtirokchilari bo‘lib, ular yo‘nalishlarni tanlash, maqsadlar qo‘yish, natijalarni baholash, boshqalar bilan hamkorlik qilish va o‘z taraqqiyoti uchun mas'uliyatni o‘z zimmasiga olishga qodir. Bu mantiq talaba avtonomiyasi va o‘rganishga yo‘naltirilgan muhitning zamonaviy xalqaro tushunchalariga mos keladi [1; 2].

O‘qituvchi rolining o‘zgarishi ham bir xil darajada muhim. Innovatsion ta'lim muhitida ular endi shunchaki ta'lim ma'lumotlarini uzatuvchi emaslar. Ularning professional roli o‘quv jarayonini loyihalash, fasilitatsiya, ustozlik, talabalarning tadqiqotlarini qo‘llab-quvvatlash, fikr-mulohazalarni tashkil qilish va pedagogik jihatdan mustahkam raqamli aloqani yaratishni o‘z ichiga oladi. Shuning uchun innovatsion muhit nafaqat universitetni texnik qayta jihozlashni, balki o‘qitish amaliyotida sifat jihatidan o‘zgarishlarni ham talab qiladi [2; 6]. Bundan tashqari, universitetdagi innovatsion ta'lim muhitining mohiyati uning ochiqligi va moslashuvchanligidadir. Bunday muhit ilmiy bilimlar, mehnat bozori talablari, ta'lim siyosati, raqamli texnologiyalar va ijtimoiy kutgandagi o‘zgarishlarga javob bera olishi kerak. Binobarin, innovatsion muhit to‘liq model emas, balki doimiy rivojlanib boruvchi tizimdir.

Oliy ta'lim muassasasidagi innovatsion ta'lim muhitining tuzilishi ko‘p komponentli bo‘lib, uni har biri o‘z funktsiyasini bajaradigan, ammo bir vaqtning o‘zida boshqa komponentlar bilan o‘zaro bog‘liq bo‘lgan o‘zaro bog‘liq elementlar tizimi sifatida ko‘rish yaxshidir. Ushbu komponent ta'lim muhitining mafkuraviy va strategik asoslarini belgilaydi. U universitetning missiyasi, ta'lim sifatiga oid qarashlari va akademik erkinlik, innovatsion rivojlanish, ijtimoiy mas'uliyat, talabaga yo‘naltirilganlik va kasbiy rivojlanish ustuvorliklarini o‘z ichiga oladi.

Innovatsion ta'lim muhiti nima uchun yaratilayotgani haqidagi savolga qiymatga asoslangan komponent javob beradi. Agar innovatsiyalar shaxsiy rivojlanish, ta'lim sifati va bitiruvchilarning professional tayyorgarligi maqsadlariga mos kelmasa, ular shunchaki rasmiy

o‘zgarishlarga aylanadi. Shuning uchun innovatsion muhitning barqarorligi aniq qiymat poydevorlaridan boshlanadi [1; 5].

Tarkib va metodologik komponent ta'lim dasturlari, o‘quv dasturlari, modullar, o‘qitish usullari, didaktik yondashuvlar va baholash usullarini o‘z ichiga oladi. Innovatsion ta'lim muhitida ta'lim mazmuni dolzarb, moslashuvchan, fanlararo va nazariyani amaliyot bilan bog‘lashga qaratilgan bo‘lishi kerak. Ushbu komponent shuningdek, muammoli o‘rganish, loyihaga asoslangan faoliyat, tadqiqot topshiriqlari, amaliy tadqiqotlar, o‘zgaruvchan o‘rganish, aralash o‘rganish va talabalarning ishtirokini kuchaytiradigan va o‘rganishni yaxshilaydigan boshqa pedagogik yondashuvlarni ham o‘z ichiga oladi. Xalqaro manbalar innovatsion muhit nafaqat yangilangan vositalar to‘plamini, balki maqsadlar, mazmun va faoliyat usullarining metodik jihatdan o‘ylangan kombinatsiyasini talab qilishini ta'kidlaydi [2; 6].

Texnologik komponent universitetning raqamli infratuzilmasini o‘z ichiga oladi: o‘quvni boshqarish tizimlari, raqamli kutubxonalar, ma'lumotlar bazalari, onlayn platformalar, virtual laboratoriyalar, analitik xizmatlar, sun'iy intellekt vositalari va raqamli aloqa va hamkorlik vositalari. Biroq, texnologik komponentning o‘zi innovatsion muhitga teng emasligini ta'kidlash juda muhimdir. YUNESKO texnologiyalar faqat pedagogik jihatdan oqilona foydalanilganda ta'lim aktivlariga aylanishini ta'kidlaydi. Shuning uchun raqamli resurslar an'anaviy amaliyotlarga tashqi qo‘shimcha sifatida xizmat qilish o‘rniga, ta'lim jarayonining tuzilishiga integratsiya qilinishi kerak [3].

Kommunikativ komponent professor-o‘qituvchilar, talabalar, ma'muriyat, ish beruvchilar, tadqiqot guruhlari va tashqi akademik hamkorlar o‘rtasidagi o‘zaro ta'sirlarning tabiatini aks ettiradi. Innovatsion ta'lim muhiti muloqot, hamkorlik, gorizontal aloqalar, akademik ustozlik amaliyotlari, tarmoqlar va talabalarning professional jamoalarda ishtirokini qamrab oladi. Kommunikativ komponent orqali universitet muhiti akademik hamjamiyat sifatiga ega bo‘ladi. Aynan shu yerda munozara madaniyati, jamoaviy ish ko‘nikmalari, tadqiqot muloqoti va muammolarni hamkorlikda muhokama qilish va hal qilish qobiliyati rivojlanadi [1; 2].

Ushbu komponent ta'lim sifatini boshqarish tizimi, innovatsiyalarni qo‘llab-quvvatlash mexanizmlari, o‘zgarishlar uchun me'yoriy-huquqiy asoslar, xodimlarni o‘qitish, ichki monitoring, shuningdek, ta'lim jarayonlarini loyihalash va muvofiqlashtirishni o‘z ichiga oladi. Innovatsion muhit o‘z-o‘zidan paydo bo‘lmaydi: u institutsional qo‘llab-quvvatlash, boshqaruvni muvofiqlashtirish va barqaror qo‘llab-quvvatlash mexanizmlarini talab qiladi.

Agar universitet professor-o‘qituvchilarning kasbiy rivojlanishi uchun sharoit yaratmasa, tajriba o‘tkazishni qo‘llab-quvvatlamasa, metodologik yordam ko‘rsatmasa va tizimli o‘zgarishlar siyosatini ishlab chiqmasa, innovatsiyalar mahalliylashtirilgan va qisqa muddatli bo‘lib qoladi. Shuning uchun tashkiliy va boshqaruv komponenti innovatsion ta'lim muhitining barqarorligining asosiy asoslaridan biridir [2; 4].

Shaxsiy rivojlanish komponenti talabalarning o‘zini o‘zi anglashi, motivatsiyasi, ijodkorligi, mustaqilligi, mas'uliyati va professional o‘ziga xosligi uchun sharoit yaratishga qaratilgan. Bu psixologik muhit, tanlov imkoniyatlari, akademik va tadqiqot faoliyatida ishtirok etish, tashabbuslarni qo‘llab-quvvatlash va o‘zini o‘zi tahlil qilishni rivojlantirish bilan chambarchas bog‘liq.

Ta'lim muhitining tizimli tahlillari shuni ko‘rsatadiki, ijodiy va samarali o‘rganish o‘quvchilarga intellektual tashabbus, hamkorlik, mustaqil izlanish va natijalarni ochiq muhokama qilish uchun joy berilganda sodir bo‘ladi [7]. Natijada, shaxsiy rivojlanish komponentisiz innovatsion ta'lim muhiti o‘zining gumanistik yo‘nalishini yo‘qotadi.

Universitetning innovatsion ta'lim muhiti bir qator o‘zaro bog‘liq funktsiyalarni bajaradi. Avvalo, bu bilim olish, kompetensiyalarni rivojlantirish va ta'lim natijalariga erishish bilan bog‘liq bo‘lgan ta'lim funktsiyasidir.

Ikkinchi funktsiya rivojlanish xususiyatiga ega bo‘lib, talabaning intellektual, ijodiy, kommunikativ va professional rivojlanishiga qaratilgan.

Uchinchi funktsiya motivatsion xususiyatga ega, chunki innovatsion muhit o‘zgaruvchanlik, interaktivlik, amaliy dolzarblik va faoliyatga jalb qilish orqali kognitiv qiziqishni rivojlantiradi.

To‘rtinchisi moslashuvchan bo‘lib, talabalarga akademik madaniyat, raqamli muhit, professional hamjamiyatlar va tez o‘zgarib borayotgan dunyoga muvaffaqiyatli integratsiyalashish imkonini beradi.

Beshinchisi innovatsion va o‘zgaruvchan bo‘lib, universitetni nafaqat bilim almashish muassasasi, balki yangi amaliyotlar, modellar, tadqiqotlar va yechimlarni yaratish uchun ham maydonga aylantirish imkonini beradi [1; 2; 5].

Ilmiy adabiyotlarni tahlili natijasida biz innovatsion ta'lim muhitini o‘z funktsiyalarini chinakam bajaruvchi sifatida belgilaydigan asosiy xususiyatlarni aniqlashimiz mumkin. Birinchidan, u yaxlit bo‘lishi kerak, ya'ni maqsadlar, mazmun, texnologiyalar, boshqaruv va kommunikatsiyani yagona tizimga birlashtirishi kerak.

Ikkinchidan, u moslashuvchan va moslashuvchan bo‘lishi, fan, texnologiya va professional dunyoda o‘zgarishlarga javob bera olishi kerak.

Uchinchidan, u talabaga yo‘naltirilgan bo‘lishi, o‘quvchining faol rolini e'tirof etishi kerak.

To‘rtinchidan, u nafaqat texnologik jihatdan rivojlangan, balki pedagogik jihatdan ham to‘g‘ri bo‘lishi kerak.

Beshinchidan, innovatsion muhit rivojlantiruvchi bo‘lishi kerak, ya'ni u 21-asr kompetensiyalari, mustaqillik, ijodkorlik va tadqiqot madaniyatini rivojlantirish uchun sharoit yaratishi kerak [1-3; 8].

Shunday qilib, oliy ta'lim muassasasidagi innovatsion ta'lim muhiti universitet ta'limini sifat jihatidan yangilashga qaratilgan murakkab, ochiq va dinamik rivojlanayotgan pedagogik tizimni ifodalaydi. Uni texnik infratuzilma, individual innovatsion usullar yoki bir martalik boshqaruv qarorlari bilan cheklab bo‘lmaydi. U qiymat yo‘nalishlari, ta'lim mazmuni, pedagogik texnologiyalar, raqamli resurslar, akademik muloqot, boshqaruv mexanizmlari va shaxsiy rivojlanish sharoitlarining muvofiqlashtirilgan o‘zaro ta'siri natijasida shakllanadi [1-3].

Innovatsion ta'lim muhitining mohiyati shundaki, u universitetni tayyor bilimlarni uzatish rejimidan faol, tadqiqotga asoslangan, talabaga yo‘naltirilgan va professional yo‘naltirilgan o‘qishni tashkil etish rejimiga o‘tkazadi. Uning tuzilishi qiymatga asoslangan, mazmunga asoslangan, metodologik, texnologik, kommunikativ, tashkiliy, boshqaruv va shaxsiy rivojlanish komponentlarini o‘z ichiga oladi, ularning har biri uning samaradorligi uchun juda muhimdir.

Demak, innovatsion ta'lim muhitining samaradorligi universitetning raqamli imkoniyatlari bilan emas, balki pedagogik dizayn sifati, professor-o‘qituvchilarning innovatsiyalarga tayyorligi, o‘zgarishlarni institutsional qo‘llab-quvvatlashi va ta'lim jarayonining 21-asr kompetentsiyalarini rivojlantirishga qaratilganligi bilan belgilanadi. Ushbu sohada keyingi tadqiqotlar istiqbollari universitetning innovatsion ta'lim muhitini baholash mezonlarini ishlab chiqish, uning turli xil universitetlar bo‘yicha operatsion mexanizmlarini aniqlashtirish va oliy ta'limda texnologiya, gumanistik yo‘nalish va barqaror sifatni birlashtirgan modellarni o‘rganishni o‘z ichiga oladi. [2; 3; 5; 8].

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

ПРЕДЛОЖЕНИЯ ПО СОВЕРШЕНСТВОВАНИЮ ПРОФЕССИОНАЛИЗМА БУДУЩИХ СПЕЦИАЛИСТОВ В ИННОВАЦИОННЫХ НАПРАВЛЕНИЯХ ОБРАЗОВАНИЯ

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Аннотация. *Отмечается необходимость разработки комплекса юридически грамотных профессиональных положений для подготовки специалистов в инновационных направлениях образования (особенно, высшем техническом образовании в области солнечной энергетики), способствующих росту карьерного профессионализма будущего специалиста. Показано, что только путем разработки и внедрения научно-обоснованных и актуальных юридически апробированных современных законодательных документов высшего профессионального образования можно в корне менять образовательные документы и обновить соответствующие законодательные акты. Отмечается, что это явится проявлением высшего уровня и высокой степени правовой культуры, как самих разработчиков, так и государственных образовательных организаций.*

Ключевые слова: *образовательные программы, акты и документы, солнечная энергетика.*

Abstract. *The need to develop a set of legally sound professional regulations for training specialists in innovative educational areas (especially higher technical education in solar energy) is noted. These regulations will facilitate the growth of future specialists' career professionalism. It is demonstrated that only through the development and implementation of scientifically sound and relevant, legally validated modern legislative documents for higher professional education can educational documents be fundamentally changed and relevant legislation updated. This is noted to demonstrate the highest level and high degree of legal culture of both the developers themselves and state educational institutions.*

Keywords: *Educational programs, regulations and documents, solar energy*

Введение

Рост будущего специалиста, его карьерный профессионализм обеспечивается только через комплекс юридически грамотных профессиональных положений высшего политехнического образования. Устаревшие нормы, нормативы и положения, формирующие учебный процесс служат причиной их игнорирования или даже полного отрицания.

В связи с этим, высшая ответственность, поэтому, ложится на разработчиков и создателей научно-обоснованных и актуальных юридически апробированных современных законодательных документов высшего профессионального образования (нормативно-организационных, научно-методических, учебно-просветительских образовательных). Своевременное создание подобного законодательного продукта является проявлением высшего уровня и высокой степени правовой культуры самих разработчиков.

Особенно это необходимо и чрезвычайно актуально для стран, которые по ряду обстоятельств намерены в корне менять образовательные документы и обновить соответствующие свои законодательные акты. Это необходимо в связи с

- изменениями и инновациями в области научно-технического развития (например, внедрение ИИ – искусственного интеллекта),

- появлениями и стремительным развитием производства принципиально новых источников энергии (например, широкое развитие различных видов ВИЭ – возобновляемых источников энергии),

- возможными экстренными изменениями государственной ориентации экономики и народного хозяйства (например, стремительное возникновение военных угроз и необходимость определенной милитаризации экономики) и другими обстоятельствами.

Объекты первоочередных задач в инновационных направлениях образования

В Узбекистане в течении последних пяти-десяти лет в огромных масштабах получило практическое развитие строительство различных электростанций. Масштаб этого процесса поразительно велик. Действительно, если в 2018 году вся страна потребляла энергию из электроустановок мощностью в 13,7 ГВт (1 ГВт = 1000 000 000 Вт = 109 Вт), то к 2030 году – будут функционировать 30÷38 ГВт мощностей. Это с учетом стареньких (около 12 ГВт) и, активно строящихся, новых электростанций: СЭС - солнечных ~ 8 ГВт, ВЭС - ветряных ~ 12 ГВт, АЭС – атомных (большими и малыми энергоблоками) ~ 2,1 ГВт, ГЭС - малые до одного мегаватта гидроэлектростанции - 3,9 ГВт.

К солнечной энергетике в Узбекистане в последние годы отнеслись весьма серьёзно в государственном масштабе. И вот вам результаты: к 2030 году долю возобновляемых источников энергии намерено увеличить до 54% в общем объёме электро-генерации (новые 8 ГВт СЭС, 12ГВт ВЭС, 2,1 АЭС и 3,9 малые ГЭСы плюс старые около 12ГВт). Значительно расширится региональные и международные сотрудничества в области «зелёной энергетики».

За этот период ожидается строительство дополнительных «зелёных мощностей» на 19 ГВт. Уже к концу 2025 года планируется введения 18 солнечных и ветровых станций мощностью 3,4 ГВт, а также системы хранения энергии мощностью 1,8 ГВт. А в течение следующих двух лет планируется реализация масштабной программы по созданию более 2000 малых микро-ГЭС общей мощностью до 3,9ГВт. Только это составит годовое потребление 5 миллионов домохозяйств. В 2024 году уже введены шесть «зелёных»

электростанций общей мощностью 2,4 ГВт в различных областях страны: Джизакской, Самаркандской, Сурхандарьинской, Бухарской и Кашкадарьинской.

В Тамдынском районе Навойинской области введена — первая очередь ветряной электростанции. Выработка электричества на солнечных и ветряных электростанциях выросла до 11,6% и достигла 7,78 млрд кВт·ч (доля в генерации).

Столь внушительный рост объемов потребления электричества (особенно, солнечного – с нуля до 8 ГВт) привносит для научно-образовательного сообщества соответствующую чрезвычайно важную проблему по заблаговременной модернизации процесса подготовки специалистов–электротехников в области солнечной энергетики.

Связана эта проблема тем, что широкое развитие в стране солнечной энергетики может серьёзно затормозиться в силу ряда обстоятельств. Главных из них, как не покажется странным, является практическое отсутствие инженерно-эксплуатационных специалистов в этой сфере электропотребления, то есть солнечного энергопотребления.

Сущность предусмотренных задач по совершенствованию профессионализма в инновационных направлениях образования

Солнечная энергетика имеет весьма своеобразное отличие от основных известных видов энергетики: гидро и термо энергетика, атомная и ветровая энергетика. Она производит постоянный ток, а все ГЭС, ТЭЦ, АЭС, ВЭС–ы вырабатывают переменный ток.

Вся мировая практика потребления электричества (начиная с момента открытия в 1831 году М. Фарадеем закона электромагнитной индукции) опиралась на электрические устройства, работающие на переменном токе. Естественно, такая тенденция не могла не отразиться и в системе подготовки инженерно-технических кадров, в которой до сих пор, в основном, электрические проблемы производства и потребления сводились к работе устройств, работающих на переменном токе.

Та же ситуация была и высших учебных заведениях:

- Все вопросы электричества в учебном процессе касались в основном изучению функционирования и эксплуатации различных специфических электрических приборов и устройств, работающих на переменном токе.

- Такая тенденция коснулась также законодательных проблем организации и проведения производственных практик будущих инженеров-энергетиков, а также проблемы распределения и трудоустройства после окончания учебы.

Из сказанного следует, что переход на потребление постоянного электричества делает необходимым

- существенный пересмотр учебных планов, программ дисциплин и программ прохождения производственных практик,

- пересмотру подлежит также и юридические положения о взаимодействии учебного заведения и производства,

- пересмотр проблем трудоустройства и организации производственных практик (кадры работают вдали на СЭС, а живут в городе).

Все это становится особенно важным также и для дуальных образовательных учреждениях [1-3].

Вопросы и проблемы, подлежащие безотлагательному коренному пересмотру

Необходимо поэтому рассмотрение ряда обязательных вопросов и проблем, подлежащих безотлагательному коренному пересмотру, а в дальнейшем – к внедрению в учебный процесс всех энергетических направлений технического образования.

Сформулируем выводы по этим вопросам и проблемам:

- Очевидно, что небывало высокие значения энергетических мощностей, электрические оборудования и устройства, вырабатывающие постоянное электричество, потребуют иных знаний, иных эксплуатационных навыков, а также потребуют особо подготовленных специалистов – инженеров электриков по солнечной энергетике.

- При этом надо иметь ввиду, что в отличии от 2022 года в республике к 2030 году страна запланировала довести объем энергетических мощностей солнечных электростанций до 8 ГВт, что составит почти 28% общего объема энергетических мощностей страны.

- В настоящий момент в существующих сейчас направлениях подготовки бакалавров по электротехнике практически отсутствуют сведения и соответствующие знания о солнечном электричестве, его производстве и эксплуатации.

- Обеспечение условий для подготовки бакалавров для производства и эксплуатации масштабного солнечного электричества вызовет острую необходимость срочной модернизации всего учебно-методического комплекса (УМК) вуза и курсов повышения квалификации и переподготовки кадров [4-8].

- Высокая ответственность по эффективному выполнению поставленных задач ложится на образовательные организация по законодательному сопровождению процесса модернизации всех направлений эксплуатации и потребления солнечного электричества.

- Высокой ответственности требуют вопросы формирования и обеспечения социально-экономических факторов как расширения доступа молодежи к получению специального образования в области эксплуатации солнечного электричества, так и бытовые проблемы обеспечения условий эксплуатации и потребления солнечного электричества в солнечных электростанциях.

- Повышение правовой культуры работников образовательных учреждений.

Ожидаемые результаты и заключение

В процессе осуществления отмеченных задач ожидается достижение следующих результатов:

- удовлетворение потребностей энергетической отрасли в грамотных специалистах по интенсивно развивающей солнечной энергетике;

- повышение общего качества узко-профессионального инженерного образования;

- наполнение рынка труда конкурентоспособными выпускниками отечественных технических вузов;

- интенсификация и индивидуализация обучения;

- реализация современных информационных технологий и развитие у обучающихся навыков самообразования и саморазвития.

Основной целью данной статьи является привлечение внимания общественности к актуальной проблеме современности: о необходимости на примере солнечной энергетики незамедлительной трансформации системы подготовки инженерно-технических кадров на основе правовых, физико-технологических аспектов зеленой энергетики.

В этом и заключается смысл проявления правовой культуры, как разработчиков новых законодательных положений и актов, так и со стороны соответствующих государственных инстанций, принимающих и внедряющих обновленные документы.

Реализация такой задачи ускорит внедрение инновационных технологий в образовательный процесс, повысит эффективность научно-исследовательских работ и укрепит взаимную интеграцию образования, науки и производства.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

TALABALARNING O‘ZINI O‘ZI TASHKIL ETISHINI RIVOJLANTIRISHNING PEDAGOGIK TAMOYILLARI

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Annotatsiya. *Ushbu maqolada oliy ta’lim tizimida talabalarning o‘z-o‘zini tashkil etishining pedagogik tamoyillari ochib berilgan. Mustaqil ta'lim, o'zini o'zi tashkil etish, maqsadlarni belgilash, rejalashtirishga alohida e'tibor beriladi. o'z-o'zini boshqarish va irodaviy fazilatlarni rivojlantirish. Talabalarning o‘z-o‘zini tashkil etishining asosiy pedagogik tamoyillari ajratib ko‘rsatilgan: onglilik va maqsad qo‘yish, sub’ektivlik, individuallashtirish, loyiha faoliyati tamoyili, shuningdek, mustaqillik va mas’uliyatni shakllantirish tamoyili.*

Kalit so‘zlar: *mustaqil ta’lim, o‘z-o‘zini tashkil etish, maqsad qo‘yish, rejalashtirish. o‘z-o‘zini nazorat qilish, shaxsiy rivojlanish, pedagogik tamoyillar.*

Abstract. *This article explores the pedagogical principles of student self-organization within the higher education system. Special attention is paid to independent learning, self-organization, goal setting, planning, self-control, and the development of volitional qualities. The main pedagogical principles of student self-organization are highlighted: awareness and goal setting, subjectivity, individualization, the principle of project activity, as well as the principle of forming independence and responsibility.*

Keywords: *independent learning, self-organization, goal setting, planning. self-control, personal development, pedagogical principles.*

Аннотация. *В данной статье раскрываются педагогические принципы самоорганизации студентов в образовательной системе высшей школы. Особое внимание уделяется самостоятельному обучению, самоорганизации, целеполаганию, планированию. самоконтролю и развитию волевых качеств. Выделены основные педагогические принципы самоорганизации студентов: осознанности и целеполагания, субъектности, индивидуализации, принрцип проектной деятельности, а также принцип формирования самостоятельности и ответственности..*

Ключевые слова: *самостоятельное обучение, самоорганизация, целеполагание, планирование. самоконтроль, личностное развитие, педагогические принципы.*

Introduction. Bilamizki, o‘quv asosiy natijasi faol hayotiy va kasbiy yondashuvga ega mutaxassislarni tayyorlashdan iboratdir. Bugungi kunimizda, ta’lim muassasalarining

bitiruvchilari o‘rtasida nafaqat kasbiy kompetensiyalarni shakllantirish bilan birga, doimiy ravishda talabalarning doimiy o‘zini o‘zi rivojlantirib borishi hamda o‘zini takomillashtirishga bo‘lgan shaxsiy intilishi muhim ahamiyat kasb etadi. Yuqorida ta’kidlab o‘tganimizdek, talabaning o‘zini o‘zi boshqarishi, uning o‘z harakatlari, fikrlari va his-tuyg‘ularini boshqarish qobiliyatidir. Shu sababli, talabalar o‘zini o‘zi boshqarish faoliyatlari faqatgina o‘quv faoliyatidagina amalga oshib qolmasdan, ularning shaxsiy hayotlarida muvaffaqiyatlarga erishishlarida ham juda muhim rol o‘ynaydi. Talabalarning o‘zini o‘zi tashkil etishi bevosita mustaqil ta’lim bilan bog‘liqdir. Mustaqil ta’limni tashkil etishda uning uchta jihatiga alohida ahamiyat berishimiz kerak.

Birinchisi, talabalarning o‘zini o‘zi tashkil etishini rivojlantirish jarayonida mustaqil ta’limni muhim pedagogik omillardan biri ekanligi ya’ni talabalarning o‘zini o‘zi tashkil etishi shaxsiy rivojlanish bilan uzviy bog‘liq jarayon hisoblanadi. Bu orqali talaba o‘quv faoliyatini mustaqil rejalashtirish, o‘z oldiga maqsad qo‘yish va uni amalga oshirish jarayonida o‘zining intellektual hamda ijodiy salohiyatini rivojlantirish imkoniyatiga ega bo‘ladi. Buning natijasida talaba mustaqil fikrlash, o‘z imkoniyatlarini baholash va o‘z bilim hamda ko‘nikmalarini takomillashtirishga harakat qiladi. Natijada, talabalarda tanqidiy va kreativ tafakkur shakllanib, turli xil uchraydigan muammolarga yangicha yondashuv ko‘nikmalari rivojlanib boradi. Olimlarimiz olib brogan tadqiqotlarida ham o‘zini o‘zi tashkil etishshaxsning o‘z o‘zini rivojlantirishga yo‘naltirilgan muhim omil sifatida e’tirof etiladi [1].

Ikkinchi tomondan, talabalarning o‘zini o‘zi tashkil etishining rivojlantirishdagi eng muhim jihatlardan bittasi bu, madaniy kompetensiyalrni shakllantirish bilan bog‘liq hisoblanadi. Bugungi kunda oliy ta’lim muassasalarida talabalarga nafaqat nazariy bilimlar beribgina qolmasdan, balki ularning kasbiy tayyorgarligini oshirish ham muhim vazifalardan biri sifatida tanlab olingan. Shu bilan birga, bu tizim talabalarning axloqiy, ijtimoiy va madaniy jihatdan yetuk bo‘lishini ta’minlashga ham katta e’tibor qaratadi. Adabiyotlarda mustaqil ta’limning ushbu jihati ta’kidlanib, u talabaga o‘zining kasbiy sohasida mustaqil qarorlar qabul qilish, murakkab vaziyatlarda tez va to‘g‘ri fikrlash qobiliyatini shakllantirish imkonini beradi. Shuningdek, bu jarayon orqali talabalarda madaniy qiymatlar, etika va ijtimoiy mas’uliyatni o‘zlashtirishda muhim rol o‘ynaydi. Mustaqil ta’limni tashkil etish jarayonida talabalar nafaqat o‘z bilimlarini oshirish, balki jamiyatga foydali, mas’uliyatli shaxs sifatida shakllanishi uchun zarur bo‘lgan xususiyatlarni ham rivojlantiradilar. beruvchi[2].

Uchinchi jihati esa, bugungi kunda oliy ta’lim muassasalarida kredit-modul tizimidir. Bu tizim ham muhimpedagogik shart-sharoitlardan biri sifatida namoyon bo‘ladi. Bu tizimning afzallik tomoni shundan iboratki, ta’lim tizimini modul asosida tashkil etish orqali talabalarning o‘z qiziqishlariga mos mavzuni yanada chuqurroq o‘rganishga yordam beradi. Kredit-modul tizimi yordamida ta’lim jarayoni modul va mustaqil o‘rganish shakllariga bo‘linib, talabaga o‘zining o‘rganish jarayonini nazorat qilish va shaxsiy rivojlanish strategiyasini belgilash imkonini beradi. Bu yondashuv talabalarga o‘zlarining o‘qish rejalari va maqsadlariga mos keladigan mustaqil o‘rganish usullarini tanlash imkonini berib, shaxsiy o‘sishga ko‘maklashadi. Kredit-modul tizimi orqali olingan natijalar shuni ko‘rsatadiki, bunday tizim talabalarni yanada faol va tashabbuskor bo‘lishga undaydi, bu esa ularning kelajakda mustaqil va innovatsion fikrlash qobiliyatiga ijobiy ta’sir ko‘rsatadi.

Quyida keltirilgan jadval orqali oliy ta’lim tizimida mustaqil ta’limni tashkil etishning muhim jihatlarini ko‘rishimiz mumkin. Shu bilan bir qatorda ularning pedagogik ahamiyatini ham o‘rganib chiqamiz[4].

ASOSIY QISM

Komponent/natija Tavsifi Pedagogik ahamiyati

Mustaqil ta’limning roli Talabalar o‘zlarining bilim, ko‘nikma va malakalarini mustahkamlaydilar hamda axborot bilan mustaqil ishlash orqali o‘zini o‘zi rivojlantirish imkoniyatiga ega bo‘lib boradilar. Talabalarda kognitiv, kreativ va hamkorlikda ishlash kompetensiyalarini shakllantirib boradilar.Mustaqil fikrlash hamda innovatsion qarorlar qabul qilish qobiliyatini rivojlantirishdan iboratdir.

Kredit-modul tizimi Ha bir modul uchun ajratilgan kreditlar talabalarga o‘zlariga qiziqarli mavzuni chuqurroq o‘rganish imkonlarini beradi. Ta’lim jarayonini individualizatsiyalash, talabaning o‘z o‘zini boshqarish salohiyatini yanada oshirish va o‘quv jarayoniga bo‘lgan motivatsiyani kuchaytirish.

Axborot bilan ishlash ko‘nikmalari Mustaqil ta’lim olish davomida, talabalar axborot manbalaridan samarali foydalanishni hamda ularni tahlil va sintez qilishni o‘rganadilar. Zamonaviy axborot jamiyatida raqobatbardosh bo‘lish uchun zarur bo‘lgan analitik va kritikal fikrlash ko‘nikmalarini shakllantirishga xizmat qiladi.

Shaxsiy va ijtimoiy salohiyatni rivojlantirish Mustaqil o‘qish jarayonida talabalar o‘z tashabbuslarini ko‘rsatishni va ijodiy faoliyat, ijtimoiy ma’suliyatni o‘zlashtiradilar. Kelajakda kasbiy faoliyatda va ijtimoiy hayotda faol qatnashish, shaxsiy etika va madaniyatni shakllantirishda muhim rol o‘ynaydi.

O‘z-o‘zini boshqarish Talabalar mustaqil ta’lim jarayonida o‘zlarining ta’lim faoliyatidagi rejalarini tuza oladilar, o‘z vaqtida vazifalarni bajarish va o‘z yutuqlarini baholashni o‘rganadilar. O‘z o‘zini nazorat qilish, rejalashtirish va o‘z o‘zini rivojlantirish ko‘nikmalari orqali shaxsiy intellektual salohiyatni oshirishdir.

1-jadval

Asosiy Komponent/natija	**Tavsifi**	**Pedagogik ahamiyati**
Mustaqil ta’limning roli	Talabalar o‘zlarining bilim, ko‘nikma va malakalarini mustahkamlaydilar hamda axborot bilan mustaqil ishlash orqali o‘zini o‘zi rivojlantirish imkoniyatiga ega bo‘lib boradilar.	Talabalarda kognitiv, kreativ va hamkorlikda ishlash kompetensiyalarini shakllantirib boradilar.Mustaqil fikrlash hamda innovatsion qarorlar qabul qilish qobiliyatini rivojlantirishdan iboratdir.
Kredit-modul tizimi	Ha bir modul uchun ajratilgan kreditlar talabalarga o‘zlariga qiziqarli mavzuni chuqurroq o‘rganish imkonlarini beradi.	Ta’lim jarayonini individualizatsiyalash, talabaning o‘z o‘zini boshqarish salohiyatini yanada oshirish va o‘quv jarayoniga bo‘lgan motivatsiyani kuchaytirish.
Axborot bilan ishlash ko‘nikmalari	Mustaqil ta’lim olish davomida, talabalar axborot manbalaridan samarali foydalanishni hamda ularni tahlil va sintez qilishni o‘rganadilar.	Zamonaviy axborot jamiyatida raqobatbardosh bo‘lish uchun zarur bo‘lgan analitik va kritikal fikrlash ko‘nikmalarini shakllantirishga xizmat qiladi.

Shaxsiy va ijtimoiy salohiyatni rivojlantirish	Mustaqil o‘qish jarayonida talabalar o‘z tashabbuslarini ko‘rsatishni va ijodiy faoliyat, ijtimoiy ma’suliyatni o‘zlashtiradilar.	Kelajakda kasbiy faoliyatda va ijtimoiy hayotda faol qatnashish, shaxsiy etika va madaniyatni shakllantirishda muhim rol o‘ynaydi.
O‘z-o‘zini boshqarish	Talabalar mustaqil ta’lim jarayonida o‘zlarining ta’lim faoliyatidagi rejalarini tuza oladilar, o‘z vaqtida vazifalarni bajarish va o‘z yutuqlarini baholashni o‘rganadilar.	O‘z o‘zini nazorat qilish, rejalashtirish va o‘z o‘zini rivojlantirish ko‘nikmalari orqali shaxsiy intellektual salohiyatni oshirishdir.

Shu bilan bir qatorda talabalarning o‘zini o‘zi tashkil etishini rivojlantirishning pedagogik tamoyillari ongli faoliyat, subyektlik, loyihalash, qayta aloqa hamda differensial yondashuv tamoyillariga asoslanadi. Bu jarayonlarni amalga oshirishimizda asosiy tamoyillar sifatida maqsad qo‘yish, rejalashtirish, o‘z-o‘zini nazorat qilish hamda irodaviy boshqaruv muhim ahamiyat kasb etadi. Bu tamoyillar orqali talabalar tanlov imkoniyatlar, axborot ochiqligi hamda o‘quv jarayonining shaffofligi, kasbiy kompetensiyalrni mustaqil ravishda shakllantirishga xizmat qiladi. Har bitta tamoyil talabalarning o‘z o‘zini tashkil etishini rivojlanishida katta yordam beradi. Shuningdek, o‘zini o‘zi tashkil etish ko‘nikmalarining rivojlanib borishi talabalarda mas’uliyat, intizam, hamda o‘z faoliyatiga nisbatan tanqidiy yondashuvni ham shakllantirib boradi. Ushbu jarayon davomida yoshlar mehnat faoliyatida kuchli mutaxassis bo‘lib yetishishlarida o‘zlariga bo‘lgan ishonch hislari yanada ortadi. Talabalarning o‘zini o‘zi tashkil etishini rivojlantirishning asosiy pedagogik tamoyillari quyidagilardan iboratdir[3]:

Onglilik va maqsad qo‘yish tamoyili. Bu tamoyil shundan iboratki, shaxs o‘zi uchun aniq va zarur bo‘lgan maqsadlarni belgilashda, mavjud vaziyatni tahlil qilib borishda hamda ushbu maqsadlarga erishish uchun irodaviy boshqaruvni amalga oshirish ko‘nikmalarini shakllantirishda yordam beradi. Bu maqsadlar tashqi talab yoki kutilmaganda sodir bo‘ladigan hodisalarga emas, balki insonning haqiqiy ehtiyojlari va qadriyatlariga asoslanadi. Onglilik esa maqsadning “nima uchun kerakligi”ni tushunishga yordam beradi, maqsad qo‘yish esa, “unga qanday erishish mumkinligi”ni aniqlaydi. Natijada, bu jarayon motivatsiyani kuchaytiradi, charchash yoki ruhiy tushkunlikning oldini oladi hamda faoliyat samaradorligini oshiradi.

Subyektlik (faollik) tamoyili. Bu tamoyilga ko‘ra talaba ta’lim jarayonining oddiy obyekti sifatida emas, balki o‘z o‘quv faoliyati davomida hamda kasbiy rivojlanishni mustaqil tashkil etuvchi faol subyekt sifatida namoyon bo‘ladi. Bu tamoyilda talabalarda ko‘proq tashabbuskorlik hamda ichki motivatsiya yuqori bo‘ladi, chunki talabalar baho olish uchun emas, balki ichki ehtiyoj va qiziqishlari tufayli harakat qiladilar. Bu tamoyilning maqsadi, ta’lim jarayonida Talabani faol, mustaqil, ongli va ijodkor ishtirokchi sifatida e’tirof etishdir. Bugungi kunimizda talabalar uchun nimga subyektlik tamoyili muhim hisoblanadi? Bu savolga quyidagicha javob berishimiz mumkin: agar ta’limda subyektlik tamoyili ishlamasa, talaba oddiygina “ijrochi” bo‘lib qoladi. Ijrochi talaba topshiriqni yaxshi boshqarishi mumkin, ammo, topshiriq tugashi bilan rivojlanish ham tugaydi. Subyekt esa, o‘qituvchi yo‘q joyda ham o‘saveradi. Xulosa qilib aytganimizda, subyektlik tamoyili Talabani “nima qilish kerakligini so‘raydigan” odamdan, “nima qilish kerakligini biladigan va mas’uliyatni bo‘yniga oladigan” shaxsga aylantiradi. Subyektli tamoyil shaxsga yo‘naltirilgan ta’lim bilan uzviy bog‘liq hisoblanadi.

Individuallashtirilgan tamoyili. Bu tamoyil talabalarning individual xususiyatlarini, ularning tayyorgarlik darajalarini, o‘zini o‘zi tashkil etish qobiliyatlarini hisobga olib, ular uchun individual ta’lim yo‘nalishlarini yaratishni nazarda tutadi. Ushbu tamoyil asosida tashkil etilgan ta’lim jarayoni nafaqat bilimlarni samarali o‘zlashtirishga, balki talabalarning mustaqil fikrlashiga, o‘z faoliyatlarini boshqarishga hamda o‘zini rivojlantirish ko‘nikmalarini shakllantirishga katta xizmat qiladi. Bugungi kunimizda, globallashuv, raqamlashtirish va bilimlar iqtisodiyoti sharoitida ta’lim jarayonini standart yondashuv asosida tashkil etish yetarli darajda natja bermaydi. Chunki har bir talaba o‘zining qobiliyati, qiziqishi, ehtiyoji va psixologik xususiyatlari bilan boshqalardan farq qiladi. Shuning uchun, ta’lim jarayonida individuallashtirish tamoyilini qo‘llash zarurati kundan-kunga ortib bormoqda.

Loyihaviy faoliyat tamoyili. Bu tamoyil ta’lim jarayonida talabalarning mustaqil faoliyati asosida tashkil etilishi, ularning muammoli vaziyatlar yechimini jalb qilish va o‘zlarining bilimlarini amaliyotda qo‘llashga yo‘naltirishdan iborat bo‘lgan pedagogik jarayondir. Loyihaviy faoliyatni tashkil etishda bir necha bosqichlar orqali amalga oshiriladi ya’ni bunda eng avvalo, talabalar uchun dolzarb va qiziqarli bo‘lgan muammo tanlab olinadi, hamda bu muammo talabalar tomonidan aniqlanadi. Loyihaning maqsadi, vazifalari va bajarish kerak bo‘lgan vazifalar belgilab olinadi. Talabalar mustaqil ravishda kerakli ma’lumotlarni izlaydilar va tahlil qiladilar. Loyiha ustida amaliy ishlar qiladilar. Qilingan ishlar natijalarini o‘qituvchiga taqdim qiladilar. Bu tamoyil orqali talabalarda ijodkorlik shakllanadi, axborot bilan ishlash ko‘nikmalari yanada ortadi, kasbiy kompetensiyalar rivojlanadi, eng muhimi jamoada ishlash malakalari ortadi. Shu bilan bir qatorda bu tamoyil real hayotiy vaziyatlarga tayyorlaydi.

Mustaqillik va mas’uliyatni rivojlantirish tamoyili. Bu tamoyilda, ta’lim oluvchi mustaqil fikrlashi, ijodiy yondashuv va erkin qaror qabul qilish ko‘nikmalarini shakllantirish bilan birga, ularning oqibatlari uchun ijtimoiy-axloqiy javobgarlikni his etishni o‘rgatadi. Bu tamoyil shaxsni tashabbuskor, o‘zining ustida doimiy ishlovchi hamda jamiyat oldidagi burchini anglaydigan komil inson sifatida tarbiyalashga qaratilgan. Bugungi kunimizda talabalarning ijtimoiy mas’uliyatini shakllantirish dolzarbligi muhim ahamiyat kasb etmoqda. Mamlakat taraqqiyotining zamonaviy modeli demokratik davlat munosabatlarini shakllantirish, bozor iqtisodiyotiga o‘tish bo‘yicha strategik vazifalarni hal qilishni nazarda tutadi. Ushbu muammoni hal qilish uchun zamonaviy har tamonlama rivojlangan, o‘z vazifalariga ijodiy yondasha oladigan mustaqil va malakali ravishda maqbul qarorlarni qabul qila oladigan, qaror qabul qilingan vazifalarni amalga oshira oladigan hamda ular uchun mas’uliyatni his etish qobiliyatiga ega bo‘lgan mutaxassislar talab etiladi.

Talabalarning o‘zini o‘zi tashkil etishini rivojlantirishida yuqorida keltirilgan, pedagogik tamoyillarning barchasini amalga oshirish uchun bizga albatta, shart-sharoitlar kerak bo‘ladi. Olimlarimizning olib brogan tadqiqot ishlarini o‘rganib, shunday xulosaga kelishimiz mumkinki, ta’lim muhiti ko‘proq ta’lim tizimi darajasida ongli ravishda loyihlashtirilgan, o‘zaro bog‘liq omillar hamda parametrlar majmuyi sifatida talqin qilingan. Bu yondashuvlardan ta’lim muhiti tasodifiy shakllanadigan hodisa emas, balki maqsadga yo‘naltirilgan pedagogik tizim sifatida ko‘riladi. Ta’lim muhitini ikki tomonlama xarakter bilan tasniflashimiz mumkin. Birinchisi, u talaba rivojlanishiga ta’sir etuvchi muhim omil sifatida namoyon bo‘ladi hamda undagi turli pedagogik sharoitlar talabaning muayyan sifatlarini shakllanishini jadallashtirishi yoki aksincha, sekinlashtirishi mumkin. Ikkinchi tomondan esa, ta’lim muhiti talabaning faol ta’sir doirasiga kiradi hamda talaba uni o‘zgartirishi, qayta tashkil etishi va o‘zining ehtiyojlarini, qiziqishlarini moslashtirishi mumkin bo‘ladi.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

PROJECT BASED LEARNING TO IMPROVE THE CAREER READINESS OF THE ECE STUDENTS IN ESP: A CASE STUDY FROM AJOU UNIVERSITY IN TASHKENT

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Abstract. *This research investigates the role that Project-Based Learning (PBL) has in enhancing Electrical and computer engineer (ECE) students' career readiness and English language competence under ESP. Among the study population, it studies second-year electrical and computer engineering students at Ajou University in Tashkent and investigates the impact of ESP courses along with project-based activities on students' professional communication skills as well as on their motivation and academic development. Out of 39 students who completed a survey that assessed a measure of the effectiveness of ESP instruction. Results showed most students felt that ESP courses were valuable because they significantly enhance professional vocabulary, confidence in speaking, collaborative learning, and understanding of real-world technical materials. The findings showed that project-based activities elevated student engagement and made language learning relevant to real-world IT and engineering contexts. Additionally, the research emphasizes pedagogical needs analysis, learner-centered pedagogy and self-assessment in ESP course design.*

Keywords: *English for specific purposes (ESP), project-based learning, information technology, career development, needs analysis.*

Introduction. Since it was established in 1997, English for Specific Purposes (ESP) has become one of the English teacher training programs for both technical and professional types (Dudley-Evans, T., & St John, M. J.,1998). Unlike the majority of academic and job prospects for high learners, however, ESP is built to develop the skills necessary for the academic / vocational needs of its target student group. In IT and Computer science, learners need vocabulary, communication styles and sound speaking abilities for academic careers and workplaces. New perspectives on ESP emphasize the importance of examining needs, using project-based learning (PBL) and encouraging communicative proficiency as central features of the teaching process and learning (Stoyanova, D., 2021; Patton, A., 2012). Characterized as learner-centred pedagogy, Hutchinson and Waters (1987) characterize ESP as something that is taught. Instead of what it seems to be a product, ESP is an instructional model intended to achieve peak learner success. A background in English as a result of study of computer science is of great benefits: communication;

comprehension of technical papers; report writing; presentation, and opportunities for working together in the world. Therefore, the ESP course development framework should include these professional competencies as part of the course design. A new article on project-based learning: why this is important in ESP PBL is a key pedagogical component embedded in ESP (Programme, Practice, Application) frameworks. It is a fundamental departure from the grammar-based approach where student’s memorisation is determined by a rote, instead of conceptualized, memory (Bell, S., 2010). With PBL, students engage in learning activities which include activities to facilitate experiential learning for active learning that requires language at multiple levels (reading, writing, speaking and listening). This is how a project work will help them enhance their reading by researching technical articles, web references, and field journals in the field. And through diverse forms of work (reports, documentation, etc.), the author’s writing and speaking skills are built on projects by groups in their presentations and the group (Thomas, J. W., 2000). Incorporating PBL knowledge in the ESP syllabus is a great way for students to get use of words on paper for real. Computer software demonstration, cyber security drills, programming problems, IT students should gain self-confidence and minimize blocks in proficient business practice.

Methods

Insights from Ajou University in Tashkent

Ajou University in Tashkent developed a study focusing on this issue in which 39 second-year electrical and computer engineering students were studied and this work has given some really promising markers for the positive impacts of ESP courses on academic performance and on career readiness.

Result

Results indicated that most of the participants believe that ESP studies provided an increased understanding of specialized vocabulary as well as technical knowledge which is important to achieve effective communication in different professions. Most importantly, it was also requested that students engage with project-based experiences linking their learning of the English language with subsequent endeavors such as IT and engineering.

Significance vs. Common Pedagogical Model

The survey revealed that there were some perceptions that a strong sentiment from participants was that the practical application value of ESP-course content should be quite higher than the conventional English teaching method. Many also desired experiential learning opportunities that afforded students exposure to practice English by working in a professional-based context in-person instead of an ordinary curriculum (Brown, J. D.,1998). Participating in project presenting and shared projects also allowed the students to learn speaking skills in addition to crucial teamwork that is essential, in work in today’s pressure- cooker-oriented world of work as they are forced to communicate with others. One of the major points we came across through other notes was the realization for students of the significance of exposure to genuine technical content: it actually increased their sensitivity of language and informed them what was happening with new technology. The ESP courses, they said, would serve some students in the future when they went on to work at companies with multinationals as featured in a global integrated and constantly changing globalized world, represented in a growing web of information.

Survey Question	Positive Responses (%)
ESP course improved professional vocabulary	92%
Project-based tasks increased motivation	89%
ESP improved speaking confidence	87%
Authentic materials were useful	90%
ESP prepared students for future careers	94%

Table 1. Survey results from Ajou University in Tashkent

Discussion

Needs analysis: The foundation of ESP training.

Needs Analysis is at the heart of the success of ESP education. One of the best step in designing any course is to understand the professional dreams, language, and interactional preferences of the students. And the best course designers always take their first steps with this to ensure that all necessary elements that students require jump into being just in time. Utilizing a needs-driven analytical framework, instructors can identify focused learning objectives based on the goals they develop and select resources of importance as appropriate based on these needs, such as computer science vocabulary related to software communication and technical report generation.

Evolution of Educator role

The Educators of the ESP era are not just educators, the educators act as facilitators, architects, builders of each Course. Over a brief period, managing large-scale projects but, nowadays, we are the professional educators developing the students’ teams in collaboration and driving independent learning. Implementing such a learner-driven pedagogy allows for more involvement with all students and more control over learner pathways to learning.

Developing Self-Assessment

Self-evaluation practices are another essential concept behind this model of learning. Students develop self-reflection so that they develop a critical sense of their own communicative capacities as well as know more about their communicative capacities, such that they can extract a development from those. This self-reflective approach to performance empowers learner to become confident in oral language development, while also developing critical thinking skills and the means for adapting to real life communication opportunities.

Conclusion

Future of Project-Based Learning in ESP

Finally, the adoption of project-based learning in ESP education is adapted to these practical areas (IT engineering and computer science). By delivering content and practising language to students, ESP also promotes personal communication and independent, motivational, and logical thinking skills. On questionnaire of the students of Ajou University in Tashkent, the students’ academic accomplishment in ESP was a strong criterion of merit and meaning in workplace experience. This is especially important in the setting of tech-oriented educational institutions and science and engineering higher education, as it is equipping graduates with skills for a global job market in which English is becoming an increasingly important language in several types of work settings.

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AQLIY RIVOJLANISHDA ORQADA QOLGAN BOLALARNING INTELLEKTUAL BUZILISHLAR VA ERTA ANIQLASHNING DOLZARB MASALALARI

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Annotatsiya. *Mazkur maqolada aqliy rivojlanishda orqada qolgan bolalarning intellektual buzilishlari, ularning kelib chiqish sabablari hamda erta aniqlashning dolzarb masalalari ilmiy-pedagogik jihatdan tahlil qilinadi. Shuningdek, intellektual rivojlanishdagi nuqsonlarning bola shaxsiyati, o'quv faoliyati va ijtimoiy moslashuviga ta'siri yoritiladi. Maqolada intellektual buzilishlarni erta aniqlashning ahamiyati, diagnostika usullari va samarali pedagogik hamda psixologik yondashuvlar asoslab beriladi. Inkluziv ta'lim sharoitida bunday bolalar bilan ishlashning muhim jihatlari ham ko'rib chiqiladi.*

Kalit so'zlar: *intellektual buzilish, aqliy rivojlanish, erta diagnostika, pedagogik yondashuv, psixologik yordam, inkluziv ta'lim, korreksion ishlar, rivojlanish nuqsonlari, ijtimoiy moslashuv.*

Abstract. *This article provides a scientific and pedagogical analysis of intellectual disabilities in children with delayed mental development, their causes, and the актуальные issues of early identification. It highlights the impact of intellectual impairments on a child's personality, learning activities, and social adaptation. The importance of early diagnosis, diagnostic methods, and effective pedagogical and psychological approaches are substantiated. The paper also examines key aspects of working with such children in the context of inclusive education.*

Keywords: *intellectual disabilities, mental development, early diagnosis, pedagogical approach, psychological support, inclusive education, corrective work, developmental disorders, social adaptation.*

Аннотация. *В данной статье научно-педагогически анализируются интеллектуальные нарушения у детей с задержкой умственного развития, их причины возникновения, а также актуальные вопросы раннего выявления. Освещается влияние нарушений интеллектуального развития на личность ребёнка, его учебную деятельность и социальную адаптацию. В статье обоснована значимость ранней диагностики интеллектуальных нарушений, рассмотрены методы диагностики, а также эффективные педагогические и психологические подходы. Особое внимание*

уделено важным аспектам работы с такими детьми в условиях инклюзивного образования.

Ключевые слова: *интеллектуальные нарушения, умственное развитие, ранняя диагностика, педагогический подход, психологическая помощь, инклюзивное образование, коррекционная работа, нарушения развития, социальная адаптация..*

Kirish. Zamonaviy ta’lim tizimida alohida e’tibor talab qiladigan muhim yo‘nalishlardan biri — aqliy rivojlanishda orqada qolgan bolalar bilan ishlashdir. Ushbu toifadagi bolalarda kuzatiladigan intellektual buzilishlar nafaqat o‘qish faoliyatiga, balki ijtimoiy moslashuviga sezilarli ta’sir ko‘rsatadi. Bunday buzilishlarni erta aniqlash va samarali pedagogik-psixologik yordam ko‘rsatish dolzarb masalalardan hisoblanadi.

Ilgari zaif aqliy zaiflik yoki oligofreniya deb nomlanuvchi aqliy rivojlanishdan orqada qolish (yunoncha ὀλίγος “kichik" + φρήν “ong” so‘zlaridan) - bu miya patologiyasi tufayli kelib chiqadigan va ijtimoiy moslashuvning buzilishiga olib keladigan aqlning buzilishi bilan namoyon bo‘ladigan psixikaning tug‘ma yoki orttirilgan kechikishi yoki to‘liq bo‘lmagan rivojlanishidir[2]. U o‘zini asosan ong bilan (shuning uchun nomi), shuningdek, his-tuy‘ular, iroda, nutq va motor qobiliyatlari bilan bog‘liq holda ham namoyon qiladi.

“Oligofreniya” atamasi Emil Kraepelin tomonidan kiritilgan[3]. U asosan aqliy rivojlanishning zamonaviy tushunchasi bilan sinonimdir. Shu bilan birga, oxirgi tushuncha biroz kengroq bo‘lib, nafaqat organik patologiya tufayli yuzaga kelgan aqliy rivojlanishning kechikishini, balki, masalan, ijtimoiy va ta’limdagi beparvolikni ham qamrab oladi va asosan aqliy nogironlik va ijtimoiy moslashuv darajasini aniqlash asosida tashxislanadi, etiologik va patogenetik mexanizmlar juda xilma-xildir[4].

Ruhiy kasalliklarning Amerika tasnifida DSM-5 va Xalqaro kasalliklar tasnifida, O‘n birinchi qayta ko‘rib chiqishda (ICD-11) “aqliy zaiflik” atamasi mos ravishda “intellektual nogironlik‘ (shuningdek, “intellektual qobiliyatsizlik” yoki “intellektual nogironlik” deb ham ataladi)[5] va “intellektual rivojlanish buzilishlari”[6] atamalari bilan almashtirildi. Ushbu tasniflardagi yangi atamalar sinonimdir, garchi diagnostika mezonlari biroz farq qilsa-da, bu ruhiy kasalliklarni tashxislashning amaliy yondashuvlaridagi farqlarni aks ettiradi. Asosiy o‘zgarish “aqliy zaiflik” atamasidan voz kechish va intellektual rivojlanish buzilishlarini “neyrorivojlanish buzilishlari” toifasiga tasniflashdir, bu esa sog‘liq va kasallikdagi asab tizimining rivojlanishi haqidagi zamonaviy tushunchani yaxshiroq aks ettiradi[7].

Aqliy zaiflik demensiya (lotincha de- “kamayish, pasayish, pastga siljish” + mens “aql, aql”) natijasida orttirilgan intellektual nogironlikdan farqlanadi. Orttirilgan intellektual nogironlik - bu rivojlanish tugagandan so‘ng aqlning normal (yoshga mos) darajadan pasayishi, aqliy zaiflik esa kattalar aqlining hech qachon normal darajaga yetmagan paytidir. Aqliy nogironlik darajasi standartlashtirilgan psixometrik testlar yordamida aqliy koeffitsient (IQ) bo‘yicha miqdoriy jihatdan va shu bilan birga, ma’lum klinik mezonlar yordamida ijtimoiy moslashuvning og‘irligi bo‘yicha baholanadi [4]. Ba’zi olimlar aqliy zaif odamni “mustaqil ijtimoiy moslashishga qodir bo‘lmagan shaxs“ deb ta’riflaydilar [8].

Asosiy qism. Bolalardagi murakkab rivojlanish nogironliklari ikki yoki undan ortiq psixofizik buzilishlarning (ko‘rish, eshitish, nutq, intellektual rivojlanish va boshqalar) kombinatsiyasini o‘z ichiga oladi. Bitta bola intellektual nogironlik va erta bolalik autizmining kombinatsiyasini, tayanch-harakat tizimi kasalliklari va nutq buzilishlarining kombinatsiyasini yoki karlik va ko‘rish qobiliyatining pastligini namoyon qilishi mumkin. Zamonaviy

ixtisoslashgan adabiyotlarda murakkab nogironlik faqat intellektual nogironlik kabi birlamchi kasalliklar sifatida belgilanadi. Agar ikkilamchi rivojlanish nogironliklari atamaga kiritilgan bo‘lsa, masalan, “kar-ko‘r-soqov” atamasida, bu yerda “soqovlik” bolaning to‘liq nutqsizligini, karlikning natijasi va ijtimoiy jihatdan aniqlangan, ikkilamchi buzilishni anglatadi, unda bunday atama, mening fikrimcha, noto‘g‘ri deb hisoblanishi kerak. Adabiyotda “murakkab buzilish” atamasining sinonimlari sifatida ishlatiladigan boshqa ekvivalent atamalar “kombinatsiyalangan buzilishlar”, “murakkab rivojlanish anomaliyalari”, “bog‘liq buzilishlar”, “murakkab nuqson” va tobora ommalashib borayotgan “murakkab nuqson tuzilishi” atamasini o‘z ichiga oladi.

Buzilishning tuzilishiga qarab, kombinatsiyalangan buzilishlarga ega bolalar uch guruhga bo‘linadi. Shuni ta’kidlash kerakki, birinchi guruhga ikkita muhim psixofizik kasallikka chalingan bolalar kiradi, ularning har biri rivojlanish anomaliyasini keltirib chiqarishi mumkin: aqliy zaif kar bolalar, eshitish qobiliyatini yo‘qotgan va aqliy zaifligi bo‘lgan bolalar (birlamchi) va kar-ko‘r bolalar. Ikkinchi guruhga bitta muhim psixofizik kasallikka chalingan (birlamchi) va yengil ifodalangan, ammo ularning rivojlanishiga sezilarli darajada to‘sqinlik qiladigan kasallikka chalingan bolalar kiradi: yengil eshitish qobiliyatini yo‘qotgan aqliy zaif bolalar. Bunday hollarda “murakkab” kasallik haqida gapirish odatiy holdir.

Uchinchi guruhga ko‘p nogironlik deb ataladigan bolalar kiradi, bunda uch yoki undan ortiq nogironlik (birlamchi) turli darajalarda mavjud bo‘lib, rivojlanishda sezilarli kechikishlarga olib keladi. Bularga aqliy zaiflik, ko‘rish qobiliyatining buzilishi va karlik bo‘lgan bolalar kiradi. Ko‘p nogironlik, shuningdek, bitta bolada salbiy “kümülatif” ta’sirga ega bo‘lgan bir qator kichik nogironliklarning kombinatsiyasini ham o‘z ichiga olishi mumkin. Masalan, kichik motor, ko‘rish va eshitish qobiliyatining buzilishi og‘ir nutq rivojlanishining sustlashishiga olib kelishi mumkin [3].

Shunday qilib, murakkab rivojlanish nogironligi bo‘lgan bolalar nisbatan kam uchraydigan, statistik jihatdan ahamiyatsiz g‘ayritabiiy bolalar toifasidir. Biroq, tajribali maxsus ta’lim amaliyotchilarining tadqiqot ma’lumotlari va kuzatuvlariga ko‘ra, bu bolalar o‘rtacha hisobda maxsus ta’lim muassasalari aholisining 45% gacha qismini tashkil qiladi. Murakkab nogironligi bo‘lgan bolalarni o‘qitish va tarbiyalash maxsus ta’lim va psixologiyada nisbatan kam o‘rganilgan va qiyin muammo hisoblanadi.

Yaqin vaqtgacha mamlakatimizda ko‘plab bolalar mazmunli ta’lim yordamini olib kelmoqda. So nggi o‘n yillikda ushbu toifadagi bolalar uchun maxsus ta’lim va tarbiya sohasidagi vaziyat sezilarli darajada yaxshilandi. Murakkab nogironligi bo‘lgan bolalarni o‘qitish muammosiga tobora ko‘proq e’tibor qaratilishi zamonaviy maxsus ta’lim va psixologiya rivojlanishidagi tendentsiyaga aylandi. Bolalar uchun reabilitatsiya yordamini rivojlantirish bo‘yicha avvalgi barcha tadqiqotlar asosan murakkab nogironlikning o‘ziga xos turlariga qaratilgan edi. Shuni ta’kidlash kerakki, bu masala juda notekis o‘rganilgan. Aqli zaif bolalarni o‘qitishning psixologik va pedagogik tizimini rivojlantirishga eng katta hissa qo‘shildi. Ushbu murakkab nogironlikni erta tashxislash ustuvor vazifa edi. Bunday bolalar bilan tuzatish ishlari amaliyotida kech tashxis qo‘yish odatiy holdir. Natijada, murakkab rivojlanish nogironligi bo‘lgan bolalar odatda maxsus ta’limga juda kech kirishadi. Ko‘pincha bunday imkoniyat ular uchun faqat maktab yoshining boshida paydo bo‘ladi.

Aqli zaif bo‘lgan bolalar toifasi shunchalik xilma-xilki, har bir guruh uchun ta’lim dasturlari hali ishlab chiqilmagan. Hozirgi kunda bu bolalarning aksariyati maxsus maktablardagi maxsus sinflarda ta’lim oladi.Bunda eng qiyin kechadigan hodisa bu intellektual buzilishdir.

Intellektual buzilish tushunchasi. Intellektual buzilish — bu bolaning aqliy faoliyatida barqaror pasayish bo‘lib, u quyidagi jihatlar bilan tavsiflanadi:

P fikrlashning sekinligi va yuzakiligi

P muammoli vaziyatlarni hal qilishdagi qiyinchilik

P nutq rivojlanishining sustligi

P xotira va diqqatning zaifligi

Bunday bolalarda abstrakt tafakkur kam rivojlangan bo‘lib, ular ko‘proq konkret fikrlashga moyil bo‘ladi.

Intellektual buzilishlar ko‘p omilli xususiyatga ega bo‘lib, ular bolaning aqliy rivojlanishiga turli biologik, ijtimoiy va psixologik omillar ta’siri natijasida yuzaga keladi. Avvalo, biologik omillar muhim o‘rin tutadi. Bular qatoriga irsiy kasalliklar, genetik buzilishlar, homiladorlik davrida onaning turli infeksion kasalliklarga chalinishi, kuchli stress holatlari yoki zararli odatlarga berilishi kiradi. Shuningdek, tug‘ruq jarayonidagi asoratlar, xususan kislorod yetishmovchiligi yoki mexanik jarohatlar ham bola miyasining rivojlanishiga salbiy ta’sir ko‘rsatadi. Bola hayotining ilk yillarida kechirilgan og‘ir kasalliklar, masalan, meningit yoki ensefalit kabi kasalliklar ham intellektual rivojlanishning sustlashuviga olib kelishi mumkin.

Ijtimoiy-pedagogik omillar ham muhim ahamiyatga ega. Oiladagi nosog‘lom muhit, ota-onaning yetarli e’tibor bermasligi, bolaning muloqotdan chetda qolishi yoki pedagogik qarovsizligi uning aqliy rivojlanishiga salbiy ta’sir qiladi. Ta’lim jarayonining noto‘g‘ri tashkil etilishi, rivojlantiruvchi o‘yin va mashg‘ulotlarning yetishmasligi ham bolaning intellektual imkoniyatlarini to‘liq namoyon etishiga to‘sqinlik qiladi.

Psixologik omillar ham bu jarayonda muhim rol o‘ynaydi. Doimiy stress, qo‘rquv, psixologik travmalar, emotsional beqarorlik va o‘qishga nisbatan motivatsiyaning pastligi bolaning fikrlash, xotira va diqqat jarayonlarini susaytiradi. Natijada, bola yangi bilimlarni o‘zlashtirishda qiyinchiliklarga duch keladi.

Ekologik omillar ham e’tibordan chetda qolmasligi kerak. Atrof-muhitning ifloslanishi, zararli kimyoviy moddalar ta’siri yoki boshqa salbiy ekologik sharoitlar ham bolaning umumiy rivojlanishiga, jumladan, intellektual salohiyatiga salbiy ta’sir ko‘rsatadi.

Erta aniqlashning ahamiyati xususida ham to‘xtalib o ‘tsak, biz erta aniqlashni jadval ko ‘rinishida moslashtirdik, ular quyidagilardan iborat:

Yo‘nalish Ahamiyati Natija

Rivojlanishdagi muammolarni aniqlash Bola rivojlanishidagi nuqsonlar erta bosqichda aniqlanadi Muammo chuqurlashib ketishining oldi olinadi

Individual yondashuv Har bir bola uchun mos ta’lim va tarbiya usullari tanlanadi Ta’lim samaradorligi oshadi

Pedagogik yordam Maxsus metod va usullarni qo‘llash imkoniyati yaratiladi O‘quv faoliyati yaxshilanadi

Psixologik qo‘llab-quvvatlash Bola va ota-onaga psixologik yordam ko‘rsatiladi Emotsional holat barqarorlashadi

Ijtimoiy moslashuv Bola jamiyatga moslashishga tayyorlanadi Muloqot va ijtimoiy ko‘nikmalar rivojlanadi

Reabilitatsiya imkoniyati Maxsus dasturlar asosida tuzatish ishlari olib boriladi Rivojlanishdagi orqada qolish kamayadi

Kelajakdagi natijalar Bola mustaqil hayotga tayyorlanadi Hayot sifati yaxshilanadi

Jadvaldan ko‘rinadiki, intellektual buzilishlarni erta aniqlash nafaqat muammoni o‘z vaqtida aniqlash, balki bolaga kompleks yordam ko‘rsatish imkonini beradi. Ayniqsa, individual yondashuv, pedagogik va psixologik qo‘llab-quvvatlash orqali bolaning rivojlanishidagi kamchiliklarni kamaytirish va uning ijtimoiy hayotga moslashuvini ta’minlash mumkin. Erta diagnostika tizimini takomillashtirish zamonaviy ta’limning muhim yo‘nalishlaridan biri hisoblanadi.

Xulosa. Aqli zaif bolalarning o‘ziga xos xususiyati tabiiy kanallar orqali atrof-muhit haqida ma’lumot olishning deyarli to‘liq imkonsizligi degan xulosaga kelish mumkin, bu esa rivojlanish nogironligi bo‘lgan boshqa bolalarga nisbatan ular uchun maxsus ta’limning ahamiyatini oshiradi. Intellektual buzilishlarni erta aniqlash — bu nafaqat pedagogik yoki tibbiy vazifa, balki ijtimoiy ahamiyatga ega kompleks jarayondir. Jadvalda keltirilgan ma’lumotlar shuni ko‘rsatadiki, erta diagnostika orqali bolaning rivojlanishidagi muammolarni dastlabki bosqichda aniqlash va ularni bartaraf etish imkoniyati sezilarli darajada oshadi. Eng muhimi, vaqt omili bu jarayonda hal qiluvchi rol o‘ynaydi: qanchalik erta aniqlansa, shunchalik samarali korreksion va rivojlantiruvchi ishlar olib borish mumkin bo‘ladi. Erta aniqlash individual yondashuvni ta’minlashga xizmat qiladi. Har bir bolaning psixofiziologik xususiyatlari inobatga olingan holda ta’lim berilishi uning intellektual salohiyatini maksimal darajada rivojlantirishga yordam beradi. Bu esa o‘z navbatida o‘quv faoliyatining samaradorligini oshiradi va bolaning o‘ziga bo‘lgan ishonchini mustahkamlaydi.

Psixologik va pedagogik qo‘llab-quvvatlashning o‘z vaqtida yo‘lga qo‘yilishi bolada emotsional barqarorlikni shakllantiradi, ijtimoiy moslashuv jarayonini yengillashtiradi. Natijada, bola nafaqat ta’lim muassasasida, balki kundalik hayotda ham faol va mustaqil bo‘lishga intiladi.

Yana bir muhim jihat shundaki, erta aniqlash orqali ota-onalar bilan ham samarali hamkorlik o‘rnatiladi. Bu esa bolaning rivojlanishida uzviylik va tizimlilikni ta’minlaydi. Ota-onalarning xabardorligi va faol ishtiroki korreksion ishlarning natijadorligini yanada oshiradi.

Umuman olganda, intellektual buzilishlarni erta aniqlash — bolaning kelajakdagi hayot sifatini belgilovchi muhim omildir. U nafaqat mavjud muammolarni kamaytiradi, balki bolaning jamiyatda o‘z o‘rnini topishi, mustaqil hayot kechirishi va shaxs sifatida shakllanishiga mustahkam zamin yaratadi. Shu sababli, ta’lim tizimida erta diagnostika va kompleks yondashuvni keng joriy etish bugungi kunning eng dolzarb vazifalaridan biri hisoblanadi.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

INTEGRATING FOREIGN LANGUAGE EDUCATION AND ARTIFICIAL INTELLIGENCE: AFFORDANCES AND CHALLENGES

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Abstract. *The integration of artificial intelligence (AI) into foreign language education represents a transformative shift in pedagogical practice, offering unprecedented opportunities for personalized learning while simultaneously presenting significant implementation challenges. This article synthesizes findings from different international empirical studies examining AI applications in English as a foreign language (EFL) contexts. The analysis reveals that while generative AI tools demonstrate considerable promise in enhancing language learning experiences, their effective implementation requires careful pedagogical guidance, ethical frameworks, and ongoing professional development for educators. This article contributes to the growing discourse on AI in language education by providing an integrated analysis of empirical evidence and identifying critical directions for future research and practice.*

Keywords: *artificial intelligence, foreign language education, English as a foreign language, learner motivation, educational technology.*

Annotatsiya. *Xorijiy til ta'limiga sun'iy intellekt (AI)ni integratsiya qilish ta`lim jarayonida inqilobiy o'zgarish bo'lib, komunikativ kompetensiyani rivojlantirishda mislsiz imkoniyatlar yaratadi. Biroq shu bilan birga uni tatbiq etish orqali ayrim pedagogik muammolarni keltirib chiqaradi. Ushbu maqolada ingliz tilini chet til sifatida (TEFL) o'qitish kontekstida sun'iy intellekt ilovalaridan unumli foydalanish bo`yicha turli xalqaro empirik tadqiqotlar natijalari tahlil qilinadi. Tadqiqot natijalari shuni ko'rsatadiki, generativ sun'iy intellekt vositalari til o'rganish tajribasini yaxshilashda yuqori samaradorlik ko`rsatsa-da, ularni joriy etish puxta pedagogik yondashuv, axloqiy tamoyillar va o'qituvchilar uchun uzluksiz kasbiy rivojlanishni talab etadi. Ushbu maqola xorijiy til ta'limida sun'iy intellektdan*

foydalanish bo'yicha yuzaga kelayotgan munozaralarga empirik dalillar orqali ta`limiy yechimlar taqdim etish va keyingi tadqiqotlar hamda til amaliyoti uchun muhim yo'nalishlarni belgilashni nazarda tutadi.

Kalit so‘zlar: *sun`iy intellekt, xorijiy til ta`limi, ingliz tilini chet til sifatida o`qitish, ta`lim motivatsiyasi, ta`lim texnologiyalari*

Аннотация. *Внедрение искусственного интеллекта (ИИ) в обучение иностранным языкам представляет собой радикальный сдвиг в педагогической практике, открывая беспрецедентные возможности для персонализированного обучения и одновременно создавая серьёзные проблемы при внедрении. В данной статье обобщены результаты различных международных эмпирических исследований, посвящённых применению ИИ в контексте преподавания английского как иностранного (EFL). Анализ показывает, что, хотя генеративные инструменты ИИ демонстрируют значительный потенциал в улучшении качества обучения языку, их эффективное внедрение требует тщательного педагогического руководства, этических рамок и постоянного профессионального развития преподавателей. Данная статья вносит вклад в растущую дискуссию об ИИ в языковом образовании, предоставляя комплексный анализ эмпирических данных и определяя ключевые направления для будущих исследований и практической деятельности.*

Ключевые слова: *искусственный интеллект, преподавание иностранных языков, преподавание английского как иностранного, мотивация учащихся, образовательные технологии.*

I.INTRODUCTION

The rapid advancement of artificial intelligence (AI) technologies has profoundly influenced contemporary educational landscapes, with foreign language education emerging as a particularly fertile domain for AI integration. As traditional pedagogical approaches increasingly intersect with sophisticated computational systems, educators and researchers face both unprecedented opportunities and complex challenges in reimagining language teaching and learning practices. The emergence of AI-powered applications, particularly conversational agents, has catalyzed intense scholarly and practical interest in understanding how these technologies can enhance language acquisition while addressing legitimate concerns about their limitations and potential risks.

Foreign language education has historically been characterized by its emphasis on communicative competence, authentic interaction, and personalized feedback—elements that AI technologies promise to deliver at scale (Dörnyei & Ushioda, 2013). The traditional classroom model, often constrained by limited instructional time, large class sizes, and finite teacher availability, has struggled to provide individualized attention to diverse learner needs (Alshumaimeri & Alshememry, 2024). AI applications offer potential solutions to these longstanding challenges through personalized learning pathways, immediate feedback mechanisms, and round-the-clock accessibility (Kohnke et al., 2023).

II. LITERATURE REVIEW.

The integration of AI into language education is not without controversy, as concerns about academic integrity, the absence of human interaction, technological dependency, and the quality of AI-generated content have prompted cautious responses from educators and institutions

(Gottlieb et al., 2023). The synthesis of empirical evidence from Bekdaş (2025) and Alshumaimeri and Alshememry (2024) reveals a complex landscape of affordances and challenges surrounding AI integration in foreign language education. This discussion integrates these findings to address key pedagogical, theoretical, and practical implications while identifying critical considerations for effective implementation.

The theoretical foundations underlying AI integration in language education draw from multiple disciplinary perspectives. From a cognitive perspective, AI tools can reduce cognitive load by providing scaffolded support, immediate feedback, and adaptive difficulty levels, thereby facilitating more efficient language processing and acquisition (Gayed et al., 2022). From a sociocultural perspective, AI-mediated interaction can be understood as a form of computer-mediated communication that extends opportunities for meaningful language use beyond traditional classroom boundaries (Haristiani, 2019; Winkler & Soellner, 2018).

From a motivational perspective, Self-Determination Theory (SDT) provides a particularly relevant framework for understanding how AI tools influence learner engagement (Legault, 2017). SDT posits that three basic psychological needs—autonomy (the need to feel in control of one’s learning), competence (the need to feel effective and capable), and relatedness (the need to feel connected to others)—are crucial for fostering intrinsic motivation (Legault, 2017). AI applications can potentially address these needs through personalized feedback that enhances feelings of competence, flexible learning opportunities that support autonomy, and interactive features that create a sense of connection, albeit with a non-human interlocutor (Zhou & Li, 2023).

III. DISCUSSION

The evidence clearly demonstrates that AI applications, particularly conversational agents, offer substantial affordances for language learning, including personalized feedback, enhanced motivation, 24/7 accessibility, and support for developing multiple language skills (Bekdaş, 2025). However, these affordances coexist with significant challenges, including technological infrastructure requirements, accuracy concerns, limited emotional intelligence, and potential for over-reliance. Rather than viewing AI as either a panacea or a threat, educators must adopt a nuanced perspective that recognizes both the potential and the limitations of these technologies.

However, this perception must be balanced against concerns that students may not fully recognize certain risks, such as the long-term effects of over-reliance or the subtle ways in which AI limitations might impede deep learning. The role of educators becomes crucial in helping learners navigate this landscape, leveraging AI’s affordances while mitigating its challenges through thoughtful pedagogical design and guidance.

A central theme emerging from the synthesis is that effective AI integration requires active teacher involvement rather than replacement of human instruction (Alshumaimeri & Alshememry, 2024). While AI tools can provide personalized feedback and practice opportunities, teachers remain essential for several critical functions: designing learning activities that appropriately integrate AI tools, guiding students in using AI productively rather than as a crutch, providing the emotional support and human connection that AI cannot replicate, addressing the cultural and pragmatic dimensions of language use that AI systems may miss, and helping students develop critical evaluation skills to assess AI-generated content (Zhai, 2022).

Bekdaş (2025) emphasized that while disadvantages such as occasional repetition, internet dependency, non-human interaction, and incorrect answers exist, these can be addressed with proper teacher guidance. This observation underscores the importance of viewing AI as a pedagogical tool that augments rather than replaces human teaching. Teachers can help students

understand when to rely on AI feedback and when to seek human input, how to verify the accuracy of AI-generated information, and how to use AI tools as part of a broader repertoire of learning strategies rather than as the sole approach to language learning.

The need for comprehensive teacher training emerges as a critical priority (Alshumaimeri & Alshememry, 2024). Professional development programs must equip educators with both technical skills for using AI tools and pedagogical knowledge for integrating these tools effectively into language instruction. This training should address not only the operational aspects of AI applications but also the theoretical foundations of AI-enhanced learning, strategies for designing effective AI-integrated activities, approaches to assessing learning in AI-enhanced environments, and frameworks for addressing ethical concerns.

IV. RESULTS IN PEDAGOGICAL IMPLICATIONS.

The evidence suggests several principles for designing effective AI-enhanced language instruction. First, AI tools should be integrated purposefully to address specific learning objectives rather than adopted simply because they are novel or popular. Educators should identify which aspects of language learning are well-suited to AI support (e.g., grammar practice, vocabulary acquisition, writing feedback) and which require human interaction (e.g., cultural nuance, pragmatic competence, emotional expression).

Second, AI integration should be scaffolded and progressive, with explicit instruction on how to use AI tools effectively (Bekdaş, 2025). This scaffolding likely contributed to the positive outcomes observed, as students understood how to leverage the tool’s capabilities and avoid potential pitfalls.

Third, AI-enhanced activities should be designed to promote active learning and critical thinking rather than passive consumption of AI-generated content (Zhai, 2022). For example, rather than simply accepting AI grammar corrections, students might be asked to explain why the correction is appropriate, compare multiple AI-generated alternatives, or evaluate the accuracy of AI feedback against other sources. Such activities develop metacognitive awareness and critical evaluation skills while leveraging AI’s capabilities.

Fourth, AI integration should be combined with opportunities for authentic human interaction to address the social and emotional dimensions of language learning (Alshumaimeri & Alshememry, 2024). A blended approach that combines AI-mediated practice with face-to-face communication, collaborative activities, and cultural experiences may optimize learning outcomes by leveraging the strengths of both AI and human instruction.

Another important issue is about motivational considerations and self-determination theory. The significant motivational benefits observed in Bekdaş’s (2025) study have important implications for understanding how AI can support language learning. The improvements across multiple dimensions of motivation—self-regulation, cognitive strategy use, self-efficacy, intrinsic value, and reduced test anxiety—suggest that AI tools can address fundamental psychological needs as conceptualized in Self-Determination Theory (Legault, 2017). However, sustaining these motivational benefits over time requires careful attention to how AI tools are implemented.

To support autonomy, educators should provide learners with choices about when and how to use AI tools, encourage self-directed exploration, and help students set personal learning goals that AI can help them achieve (Zhou & Li, 2023). To support competence, AI feedback should be specific, constructive, and calibrated to learners’ current proficiency levels, providing challenges that are demanding but achievable (Anjum et al., 2024). To support relatedness, despite AI’s limitations in providing genuine human connection, educators can design collaborative activities

where students use AI tools together, share their AI-assisted work with peers for feedback, and discuss their experiences with AI in the language learning community.

The reduction in test anxiety is particularly noteworthy, as language anxiety is a significant barrier to learning for many students (Ahmed et al., 2022). AI tools may reduce anxiety by providing low-stakes practice opportunities, offering non-judgmental feedback, and allowing learners to make mistakes privately before performing publicly. Educators can leverage this affordance by explicitly framing AI practice as a safe space for experimentation and risk-taking.

V. CONCLUSION

The integration of artificial intelligence into foreign language education represents a transformative development with significant implications for pedagogical practice, learner experiences, and educational outcomes. The evidence clearly demonstrates that AI applications offer substantial affordances for language learning, including personalized feedback mechanisms, enhanced learner motivation across multiple dimensions, accessibility that supports flexible learning, support for developing the four language skills, robust vocabulary and grammar assistance, and valuable exam preparation resources.

Particularly compelling is the quantitative evidence that AI integration significantly enhanced student motivation, including improvements in self-regulation, cognitive strategy use, self-efficacy, intrinsic value, and reduced test anxiety. These motivational benefits align with Self-Determination Theory’s emphasis on autonomy, competence, and relatedness as fundamental psychological needs that drive engagement and learning.

However, these affordances coexist with significant challenges that must be addressed for effective and ethical implementation. Technological infrastructure requirements, particularly internet dependency, create equity concerns that threaten to exacerbate existing educational inequalities. The absence of human interaction and limited emotional intelligence in AI systems represent fundamental limitations that cannot fully replicate the social and affective dimensions of language learning. Concerns about accuracy and reliability, potential for learner over-reliance, insufficient teacher training, and ethical issues related to data privacy and academic integrity require ongoing attention.

The synthesis reveals that effective AI integration requires a balanced approach that leverages the technology’s affordances while mitigating its challenges through thoughtful pedagogical design and active teacher guidance. Rather than viewing AI as a replacement for human instruction, educators should conceptualize these tools as powerful supplements that augment teaching and learning when integrated purposefully and supported by appropriate professional development. The critical role of teachers in designing AI-enhanced activities, guiding students in productive AI use, providing emotional support and human connection, and helping learners develop critical evaluation skills cannot be overstated.

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JINOYATCHILIKNI OLDINI OLISH BORASIDA PEDAGOGLARINING HISSASI

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Annotatsiya. *Mazkur maqolada 2025-yil O'zbekiston Respublikasida jinoyatchilikni oldini olish borasida amalga oshirilayotgan islohotlar va ularning samaradorligi tahlil qilingan. Tadqiqot davomida mamlakatda qayd etilgan jinoyatlar statistikasi, ularning hududiy va tarkibiy tuzilishi, shuningdek jinoyat turlari dinamikasi ilmiy asosda o'rganilganligi yoritilgan. Shu bilan birga, mahalla institutining profilaktikadagi o'rni, raqamli texnologiyalarning joriy etilishi, huquqni muhofaza qiluvchi organlar faoliyatidagi o'zgarishlar hamda jinoyat-huquq siyosatini liberallashtirish jarayonlari kompleks yondashuv asosida tahlil etilgan. Tadqiqot natijalaridan kelib chiqib jinoyatchilikni kamaytirishda profilaktika tizimi samaradorligi oshib borayotganini ko'rish mumkin.*

Kalit so'zlar: *jinoyatchilik, profilaktika, kriminologiya, jinoyat statistikasi, mahalla tizimi, huquqbuzarlik, kiberjinoyatchilik, yoshlar jinoyatchiligi, jinoyat dinamikasi, huquqni muhofaza qiluvchi organlar, jinoyat-huquq siyosati, liberallashtirish, ijtimoiy nazorat, xavfsizlik, raqamli texnologiyalar.*

Abstract. *This article analyzes the reforms being implemented in the Republic of Uzbekistan in 2025 to prevent crime and their effectiveness. During the study, it was highlighted that the statistics of crimes recorded in the country, their territorial and structural structure, as well as the dynamics of types of crimes were studied on a scientific basis. At the same time, the role of the mahalla institute in prevention, the introduction of digital technologies, changes in the activities of law enforcement agencies, and the processes of liberalization of criminal law policy were analyzed based on an integrated approach. Based on the results of the study, it can be seen that the effectiveness of the prevention system in reducing crime is increasing..*

Keywords: *crime, prevention, criminology, crime statistics, mahalla system, offense, cybercrime, youth crime, crime dynamics, law enforcement agencies, criminal law policy, liberalization, social control, security, digital technologies.*

Kirish. Jinoyatchilik har qanday jamiyatning ijtimoiy, iqtisodiy va ma'naviy taraqqiyotiga jiddiy salbiy ta'sir ko'rsatadigan murakkab ijtimoiy hodisalardan biri hisoblanadi. U jamiyatda huquqiy tartibotning buzilishiga, fuqarolar xavfsizligining izdan chiqishiga hamda ijtimoiy barqarorlikning susayishiga olib keladi. Ayniqsa, yoshlar o'rtasida sodir etilayotgan huquqbuzarlik va jinoyatlar nafaqat bugungi kun, balki kelajak taraqqiyoti uchun ham katta xavf

tug‘diradi. Chunki yoshlar jamiyatning eng faol va istiqbolli qatlami bo‘lib, ularning ma’naviy-axloqiy kamoloti davlat rivojlanishining muhim omillaridan biri sanaladi.

Globallashuv jarayonlari, axborot oqimining keskin ortishi, internet va ommaviy madaniyatning turli salbiy ta’sirlari ayrim yoshlarning ongiga salbiy ta’sir ko‘rsatmoqda. Natijada ayrim hollarda yoshlar orasida tajovuzkorlik, befarqlik, noqonuniy xatti-harakatlarga moyillik kabi salbiy holatlar uchrab turadi. Shu bois yoshlar orasida jinoyatchilik va huquqbuzarliklarning oldini olish davlat siyosatining ustuvor yo‘nalishlaridan biri hisoblanadi. Bu jarayonda nafaqat huquqni muhofaza qiluvchi organlar, balki ta’lim muassasalari, oila va mahalla ham muhim o‘rin tutadi.

Yoshlarni turli salbiy illatlardan asrash va ularni komil inson qilib tarbiyalashda pedagoglarning roli alohida ahamiyat kasb etadi. Pedagog — bu nafaqat bilim beruvchi mutaxassis, balki yosh avlodning ma’naviy dunyoqarashi, axloqiy fazilatlari va fuqarolik pozitsiyasini shakllantiruvchi tarbiyachidir. Pedagoglar o‘quvchilarga bilim berish bilan bir qatorda ularda vatanparvarlik, qonunga hurmat, mas’uliyat, halollik va insonparvarlik kabi fazilatlarni ham shakllantiradi. Aynan shu sifatlar yoshlarning turli huquqbuzarlik va jinoyatlardan yiroq bo‘lishida muhim omil bo‘lib xizmat qiladi.

Shuningdek, pedagoglar yoshlarning qiziqishlari, xulq-atvori va ruhiy holatini muntazam kuzatib boradi hamda muammoli vaziyatlarni erta aniqlashga harakat qiladi. Bu esa huquqbuzarliklarning oldini olishda profilaktik ahamiyatga ega. Ta’lim muassasalarida olib boriladigan tarbiyaviy va huquqiy targ‘ibot ishlari yoshlarning ongida sog‘lom hayot tarzi va qonuniylikka sodiqlik tushunchalarini mustahkamlaydi.

Demak, jinoyatchilikning oldini olish faqat jazolash orqali emas, balki yoshlarni to‘g‘ri tarbiyalash, ularda yuksak ma’naviyat va huquqiy madaniyatni shakllantirish orqali amalga oshiriladi. Bu jarayonda pedagoglarning hissasi beqiyos bo‘lib, ular barkamol va qonunlarga hurmat ruhida tarbiyalangan avlodni voyaga yetkazish orqali jamiyatda tinchlik, barqarorlik va taraqqiyotni ta’minlashga xizmat qiladi.

Jinoyatchilikning oldini olish tizimida pedagoglarning eng muhim vazifalaridan biri yosh avlodga huquqiy tarbiya berishdan iboratdir. Huquqiy tarbiya — bu shaxsda qonunga hurmat, huquqiy ong, fuqarolik mas’uliyati hamda jamiyatda belgilangan me’yor va qoidalarga rioya qilish ko‘nikmalarini shakllantirishga qaratilgan uzluksiz pedagogik jarayondir. Mazkur jarayon orqali o‘quvchilarda huquqiy madaniyat rivojlanadi va ular o‘z huquq hamda majburiyatlarini chuqur anglab yetadilar.

Pedagoglar ta’lim jarayonida o‘quvchilarga davlat va jamiyat hayotida qonunning ustuvor ahamiyatga ega ekanligini tushuntiradi. Ayniqsa, Konstitutsiya, inson huquqlari, bolalar huquqlari hamda fuqarolarning majburiyatlari haqidagi bilimlarni o‘rgatish yoshlarning huquqiy tafakkurini shakllantirishda muhim omil hisoblanadi. O‘quvchilar huquqiy bilimlarni egallash orqali o‘z harakatlarining ijtimoiy oqibatlarini anglay boshlaydi va noqonuniy xatti-harakatlarning salbiy natijalarini tushunib yetadi.

Huquqiy tarbiyaning asosiy maqsadi nafaqat qonunlarni o‘rgatish, balki o‘quvchilarda qonunga itoatkorlik hissini shakllantirishdan iboratdir. Pedagoglar dars va tarbiyaviy tadbirlar davomida yoshlarni adolat, halollik, tenglik va insonparvarlik kabi umuminsoniy qadriyatlarga hurmat ruhida tarbiyalaydi. Bu esa o‘quvchilarning ma’naviy-axloqiy dunyoqarashini boyitib, turli huquqbuzarlik va jinoyatlarga nisbatan salbiy munosabatni yuzaga keltiradi.

Shuningdek, pedagoglar huquqiy tarbiya jarayonida interaktiv usullar, munozaralar, davra suhbatlari, huquqiy viktorinalar va uchrashuvlardan samarali foydalanadi. Profilaktika

inspektorlari, huquqshunoslar va psixologlar bilan hamkorlikda tashkil etiladigan tadbirlar yoshlarning huquqiy savodxonligini oshirishda katta ahamiyatga ega. Bunday amaliy yondashuv o‘quvchilarning huquqiy bilimlarini mustahkamlabgina qolmay, balki ularda mustaqil fikrlash va to‘g‘ri qaror qabul qilish ko‘nikmalarini ham rivojlantiradi.

Ilmiy tadqiqotlar shuni ko‘rsatadiki, huquqiy ongi va huquqiy madaniyati yuqori bo‘lgan yoshlar orasida jinoyatchilik darajasi ancha past bo‘ladi. Chunki huquqiy jihatdan savodli shaxs o‘z harakatlarining javobgarligini chuqur his qiladi va qonunga zid faoliyatdan tiyiladi. Shu sababli pedagoglarning huquqiy tarbiya borasidagi faoliyati yoshlar o‘rtasida jinoyatchilik va huquqbuzarliklarning oldini olishning eng samarali vositalaridan biri sifatida e’tirof etiladi.

So‘nggi yillarda Respublikamizda huquqni muhofaza qilish tizimini tubdan isloh qilish, jinoyatchilikka qarshi kurashishning zamonaviy mexanizmlarini joriy etish hamda huquqbuzarliklar profilaktikasini kuchaytirish davlat siyosatining ustuvor yo‘nalishlaridan biriga aylanganligini ko‘rishimiz mumkin. Mazkur yo‘nalishdagi islohotlar nafaqat jinoyatchilik oqibatlariga qarshi kurashish, balki uning ijtimoiy ildizlarini aniqlash va erta bartaraf qilishga qaratilgan kompleks yondashuv asosida amalga oshirilmoqda.

Bugungi kunda jinoyatchilikka qarshi kurashishda profilaktik modelga o‘tish kuzatilmoqda. Ya’ni, davlat siyosatida “jinoyat sodir etilgandan keyin jazolash” emas, balki “jinoyat sodir etilishining oldini olish” ustuvor tamoyil sifatida qaralmoqda. Ushbu konseptual yondashuv O‘zbekiston Respublikasining normativ-huquqiy bazasida, xususan, huquqbuzarliklar profilaktikasiga oid qonunlar va Prezident qarorlarida o‘z ifodasini topgan. Jumladan, 2025-yilga mo‘ljallangan dasturlar doirasida har bir mahallada xavfsiz muhit yaratish, kriminogen vaziyatni tizimli monitoring qilish va manzilli chora-tadbirlarni amalga oshirish mexanizmlari joriy etilganligini ko‘rishimiz mumkin.

Shu bilan birga, jinoyatchilikka qarshi kurashishda hududiy yondashuv kuchaytirilib, mahalla institutining roli oldingi yillarga nisbatan sezilarli darajada oshirildi. Har bir hudud kesimida kriminogen vaziyatni chuqur tahlil qilish, jinoyat sodir etilishiga sabab bo‘layotgan omillarni aniqlash va ularni bartaraf etishga qaratilgan “yo‘l xaritalari” ishlab chiqilib amalga oshirilmoqda. Bu esa profilaktika ishlarini markazlashgan emas, balki manzilli va differensial yondashuv asosida tashkil etish va jinoyatchilikni oldini olishga imkon berdi.

2025-yilga kelib mazkur islohotlar o‘zining amaliy natijalarini bera boshladi. Xususan, respublika bo‘yicha 155 mingdan ortiq jinoyat qayd etilgan bo‘lib, ularning katta qismi aniqlangan va fosh etilgan. Shu bilan birga, ko‘plab mahallalarda jinoyat sodir etilmasligi ta’minlanib, hududlarni “xavfsiz hudud”ga aylantirish amaliyoti kengaytirildi. Bu esa profilaktika tizimi samaradorligining oshib borayotganidan bir misoldir.

Zamonaviy dunyoda jinoyatchilikning tarkibiy tuzilishi ham o‘zgarib bormoqda. Xususan, axborot texnologiyalarining rivojlanishi bilan bog‘liq holda kiberjinoyatlar ulushi ortib, jinoyatchilikning yangi shakllari yuzaga kelmoqda. Bu esa huquqni muhofaza qiluvchi organlar oldiga yangi vazifalarni qo‘ymoqda, ya’ni raqamli texnologiyalar asosida jinoyatlarning oldini olish, prognozlash va tezkor aniqlash tizimlarini joriy etishni talab etmoqda.

Jinoyatchilik holati. 2025-yilda O‘zbekiston Respublikasida jinoyatchilik holati ijtimoiy-huquqiy jarayonlarning murakkab tizimi sifatida namoyon bo‘lib, u bir tomondan amalga oshirilayotgan islohotlarning samaradorligini, ikkinchi tomondan esa jamiyatda saqlanib qolayotgan kriminogen jarayonlarni aks ettiradi. Statistik ma’lumotlar asosida olib borilgan tahlillar jinoyatchilik darajasi nisbatan barqarorlashganini, ayrim yo‘nalishlarda esa ijobiy natijalar kuzatilayotganini ko‘rsatadi.

Hisobot davrida respublika bo‘yicha jami 155 002 ta jinoyat qayd etilgan bo‘lib, bu ko‘rsatkich mamlakatda jinoyatchilikning umumiy jihatini ifodalaydi. Aholi soniga nisbatan olganda esa, har 100 ming aholiga 412,9 ta jinoyat to‘g‘ri kelishi aniqlangan. Mazkur indikator kriminologik tahlilda muhim ahamiyatga ega bo‘lib, u hududlar kesimida jinoyatchilik darajasini solishtirish va baholash imkonini yaratib beradi.

Jinoyatlarni fosh etish darajasi ham muhim mezonlardan biri hisoblanadi. 2025-yilda jinoyatlarning 89,3 foizi fosh etilganligi huquqni muhofaza qiluvchi organlar faoliyatining sezilarli darajada samarali tashkil etilganini ko‘rsatadi. Ushbu ko‘rsatkich nafaqat jinoyat sodir etilganidan keyingi tezkor choralar samaradorligini, balki tergov va operativ-qidiruv faoliyatining sifat darajasini ham ifodalaydi. Shu bilan birga, yuqori fosh etilish darajasi jamiyatda jazodan qochib qutulish ehtimolini kamaytirib, umumiy profilaktik ta’sirni kuchaytiradi.

Hududiy kesimdagi tahlillar jinoyatchilikning notekis taqsimlanganligini ko‘rsatadi. Xususan, Toshkent shahrida har 100 ming aholiga 942,6 ta jinoyat to‘g‘ri kelib, eng yuqori ko‘rsatkich qayd etilgan. Bu holat poytaxt hududining yuqori urbanizatsiya darajasi, aholi zichligi, migratsiya oqimlari hamda iqtisodiy faollikning yuqoriligi bilan izohlanadi. Shuningdek, Toshkent viloyati va Navoiy viloyatida ham jinoyatchilik ko‘rsatkichlari nisbatan yuqori darajada bo‘lib, bu hududlarda sanoatlashuv darajasi, transport-logistika tizimlari va demografik omillar muhim rol o‘ynaydi.

Alohida e’tiborli jihatlardan biri — jinoyatchilikdan xoli hududlar sonining ortib borayotganidir. 2025-yilda 4 034 ta mahallada jinoyat sodir etilmaganligi qayd etilgan bo‘lib, bu profilaktika tizimining manzilli va samarali ishlayotganidan dalolat beradi. Mazkur natija mahalla institutining roli kuchaygani, hududlarda ijtimoiy nazorat mexanizmlari yaxshilangani hamda aholining huquqiy ong va madaniyati oshib borayotganini ko‘rsatadi.

Operativ-qidiruv faoliyati natijalari ham e’tiborga loyiq. Hisobot davrida 9 921nafar qidiruvdagi shaxsning ushlanishi jinoyatchilarni aniqlash va javobgarlikka tortish mexanizmlarining samaradorligini ko‘rsatib beradi. Bundan tashqari, 600 nafar bedarak yo‘qolgan shaxsning topilishi huquqni muhofaza qiluvchi organlarning nafaqat jinoyatchilikka qarshi kurash, balki fuqarolarning huquq va manfaatlarini himoya qilish borasidagi faoliyatini ham aks ettiradi.

Jinoyat turlari va dinamikasi. 2025-yilda O‘zbekiston Respublikasida jinoyatchilikning tarkibiy tuzilmasi va dinamikasi tahlili shuni ko‘rsatadiki, jinoyatlarning ayrim turlari bo‘yicha ijobiy tendensiyalar kuzatilgan bo‘lsa, boshqa yo‘nalishlarda esa yangi xavf-xatarlar yuzaga kelganligini ko‘rishimiz mumkin..

Hisobot davrida eng muhim ijobiy ko‘rsatkichlardan biri og‘ir va o‘ta og‘ir jinoyatlar sonining kamayganidir. Xususan, qasddan odam o‘ldirish jinoyatlari 32,7 foizga kamayib, jami 288 tani tashkil etgan. Ushbu ko‘rsatkich jinoyatchilikning eng xavfli ko‘rinishlaridan biri bo‘lgan zo‘ravonlik jinoyatlarining qisqarayotganini anglatadi. Bu holat, o‘z navbatida, profilaktika choralari, ijtimoiy nazoratning kuchayishi hamda nizolarni barvaqt hal etish mexanizmlarining samaradorligi bilan izohlanadi.

Shuningdek, yo‘l-transport hodisalari bilan bog‘liq jinoyatlar 6,7 foizga kamaygani qayd etildi. Bu natija transport infratuzilmasini takomillashtirish, yo‘l harakati xavfsizligi bo‘yicha nazoratning kuchaytirilishi, shuningdek, haydovchilar madaniyatini oshirishga qaratilgan targ‘ibot ishlarining samarasi sifatida baholanadi.

Bundan tashqari, umumiy hisobda og‘ir jinoyatlar sonining 4 192 taga kamayishi kriminogen vaziyatning ma’lum darajada barqarorlashganini ko‘rsatadi. Mazkur ijobiy dinamika

huquqni muhofaza qiluvchi organlar faoliyatining tizimli isloh qilinishi, tezkor-qidiruv va tergov jarayonlarining samaradorligi oshgani bilan bog‘liq.

Shu bilan birga, ayrim jinoyat turlarida salbiy o‘sish kuzatilmoqda. Xususan, jinsiy zo‘ravonlik bilan bog‘liq jinoyatlarning 6,1 foizga oshgani jamiyatda ijtimoiy-ma’naviy muammolar mavjudligini ko‘rsatadi. Bu holat oilaviy munosabatlar, gender tengligi, huquqiy ong darajasi hamda ijtimoiy himoya mexanizmlarini yanada takomillashtirish zaruratini yuzaga keltiradi.

Yana bir muhim tendensiya — jinoyatchilikning raqamli transformatsiyasidir. 2025-yilda sodir etilgan jinoyatlarning qariyb yarmi axborot texnologiyalari orqali amalga oshirilgani qayd etilgan. Bu esa kiberjinoyatchilik, firibgarlik, shaxsiy ma’lumotlarni noqonuniy egallash kabi jinoyatlarning keskin ortib borayotganini ko‘rsatadi. Mazkur holat huquqni muhofaza qiluvchi organlar oldiga yangi vazifalarni qo‘yib, zamonaviy texnologiyalar asosida ishlovchi maxsus bo‘linmalar faoliyatini rivojlantirish va jinoyatchilikni oldini olishni talab etadi.

Narkotik moddalar bilan bog‘liq jinoyatlar ham dolzarb muammo sifatida saqlanib qolmoqda. 2025-yilda jami 15 412 ta narkojinoyat aniqlangan bo‘lib, bu ko‘rsatkich ushbu yo‘nalishda tizimli kurash olib borilayotganini ko‘rsatadi. Shu bilan birga, noqonuniy muomaladan 3,7 tonnadan ortiq giyohvand moddalarning musodara qilingani huquqni muhofaza qiluvchi organlarning tezkor faoliyati samaradorligini tasdiqlaydi. Mazkur jinoyatga qarshi ishlarni yanada kuchaytirish 2026-yilning asosiy vazifalaridan biri etib belgilandi.

Jinoyatchilikni oldini olishda mahalla institutining roli tubdan qayta ko‘rib chiqilib, uni ijtimoiy nazorat va profilaktikaning asosiy bo‘g‘iniga aylantirishga alohida e’tibor qaratildi. 2025-yilda mahallalar kriminogen vaziyatdan kelib chiqib “yashil”, “sariq” va “qizil” toifalarga ajratish tizimi joriy etildi. Ushbu tasnif hududlarda jinoyatchilik darajasini baholash, muammoli hududlarni aniqlash va manzilli profilaktik choralarni amalga oshirish imkonini berdi.

Natijada, hisobot davrida mahallalarning 44,8 foizi “yashil” hududga aylantirildi, ya’ni ushbu hududlarda jinoyatchilik darajasi minimal yoki umuman qayd etilmagan. Bu ko‘rsatkich profilaktika tizimining samaradorligi oshganini, aholi bilan ishlash, ijtimoiy muammolarni hal etish va huquqbuzarliklarning ildiz sabablarini bartaraf etish borasida ijobiy natijalarga erishilganini ko‘rsatadi.

Xulosa. 2025-yil yakunlari shuni ko‘rsatadiki, O‘zbekiston Respublikasida jinoyatchilikni oldini olish borasida amalga oshirilayotgan islohotlar tizimli, kompleks va ilmiy asoslangan yondashuvga ega bo‘lib, ular ijobiy natijalarni bera boshlagan. Xususan, jinoyatchilik darajasining nisbatan barqarorlashuvi, og‘ir va o‘ta og‘ir jinoyatlar sonining kamayishi, jinoyatlarning yuqori darajada fosh etilishi hamda ko‘plab mahallalarda jinoyat sodir etilmaganligi profilaktika tizimining samaradorligi oshganidan dalolat beradi.

Amalga oshirilgan islohotlarning muhim jihati shundaki, unda an’anaviy repressiv yondashuvdan voz kechilib, profilaktika, ijtimoiy nazorat va raqamli texnologiyalar asosida ishlovchi zamonaviy model shakllantirilmoqda. Ayniqsa, mahalla institutining kuchaytirilishi, hududlarni toifalash tizimining joriy etilishi, kiberjinoyatchilikka qarshi kurashish mexanizmlarining rivojlantirilishi hamda jazoni liberallashtirish siyosati jinoyatchilikka qarshi kurashishda yangi bosqichni boshlab berdi.

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OLIY TA‘LIM MUASSASALARIDA QURILISH VA ARXITEKTURA SOHALARI UCHUN MUTAXASSISLAR TAYYORLASHDA INNOVATSION USUL VA O‘QITISH TEXNOLOGIYALARINI QO‘LLASH

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Annotatsiya. *Mazkur maqolada oliy ta‘lim tashkilotlari bakalavriatida qurilish va arxitektura sohalari uchun mutaxassislar tayyorlash jarayonida innovatsion usullar va zamonaviy o‘qitish texnologiyalarini qo‘llashning ahamiyati tahlil qilingan. Tadqiqotchi raqamli ta‘lim platformalari, BIM texnologiyalari, interaktiv pedagogik yondashuvlar, virtual modellashtirish hamda amaliy loyihaga asoslangan o‘qitish usullarining ta‘lim sifatiga ta‘siri o‘rganilgan.*

Shuningdek, talabalarning kasbiy kompetentsiyalarini shakllantirishda innovatsion ta‘lim muhitining o‘rni va xalqaro tajribalar asosida zamonaviy ta‘lim texnologiyalarini joriy etish masalalari yoritilgan. Maqola natijalari qurilish va arxitektura ta‘limi samaradorligini oshirish hamda raqobatbardosh mutaxassislar tayyorlashga xizmat qiladi.

Kalit so‘zlar: *innovatsion texnologiyalar, BIM, raqamli ta‘lim, interaktiv o‘qitish, masofaviy ta‘lim, amaliy loyiha, kompetentsiya, pedagogik texnologiyalar, virtual modellashtirish, ta‘lim sifati.*

Abstract. *This article analyzes the importance of applying innovative methods and modern teaching technologies in the process of training specialists for the fields of construction and architecture in undergraduate programs of higher educational institutions. The researcher studied the impact of digital educational platforms, BIM technologies, interactive pedagogical approaches, virtual modeling, and practical project-based teaching methods on the quality of education.*

It also highlights the role of an innovative educational environment in forming students' professional competencies and the implementation of modern educational technologies based on international experience. The results of the article will serve to increase the efficiency of construction and architectural education and the training of competitive specialists.

Keywords: *innovative technologies, BIM, digital education, interactive learning, distance learning, practical project, competence, pedagogical technologies, virtual modeling, quality of education.*

KIRISH

1. So‘nggi yillarda qurilish va arxitektura sohalari ta‘limga bevosita ta‘sir ko‘rsatadigan sezilarli o‘zgarishlarni boshdan kechirdi.

Sodir bo‘layotgan o‘zgarishlar, qurilish materiallari va ularni qo‘llashga innovatsion yondashuv, arxitektura, dizayn, landshaftni yaratish va shakllantirish sohalarida sun‘iy intellekt va horij metodikasining faol qo‘llanilishi malakali qurilish mutaxassislarini tayyorlashga tizimni yondoshuvni talab qilmoqda va ta‘limga zamonaviy texnologiyalar hamda innovatsion o‘qitish usullarini tadbiq etishni talab qilmoqda.

Ushbu o‘zgarishlar ta‘lim sifatini yaxshilash, uning samaradorligini oshirishga qaratilgan. Qurilish ta‘limida yangi o‘qitish usullarining ayrimlarini tahlil qilsak:

Loyihaga asoslangan o‘qitish.

Qurilish ta‘limida loyihaga asoslangan o‘qitish talabalarga nafaqat haqiqiy loyihalardan o‘rganish, balki ularni tajribali o‘qituvchilar va soha mutaxassislari rahbarligida noldan rivojlantirish imkonini beradi. Ushbu tartibda o‘qitish talabalar ta‘lim jarayonida binoning yoki ob‘ektining virtaul va vizual loyihasini ishlab chiqish, qurilish rejalarini ishlab chiqish, xarajatlarni hisoblash va qurilish jarayonlarini boshqarishni o‘rganishini o‘z ichiga olishi mumkin bo‘lgan loyihalar bo‘yicha jamoalarda ishlashini ta‘minlaydi. Aynan ushbu usul talabalarga tanqidiy fikrlash, muammolarni hal qilish, jamoaviy ish va mijozlar va pudratchilar bilan muloqot kabi asosiy ko‘nikmalarni rivojlantirishga yordam beradi.

VR va AR texnologiyalaridan foydalanish.

Zamonaviy qurilish ta‘limida virtual va kengaytirilgan reallik texnologiyalari qo‘llash zamonaviy muhim rol o‘ynaydi. VR talabalarga virtual tarzda qurilish maydonchalariga tashrif buyurish yoki murakkab qurilish muhandislik tizimlarini o‘rganish kabi qurilishning turli jihatlarini o‘rganishlari mumkin bo‘lgan to‘liq immersiv virtual muhitlarga sho‘ng‘ish imkonini beradi. Bu, ayniqsa, balandlikda yoki boshqa potentsial xavfli sharoitlarda xavfsiz ishlash amaliyotini o‘rgatish uchun foydalidir.

AR texnologiyasi esa virtula dunyoga real dunyoga oid ma‘lumot qatlamlarini ham qo‘shadi, bu esa talabalarga jismoniy obektlardagi dizayn elementlarini to‘g‘ridan-to‘g‘ri ko‘rish imkonini beradi. Masalan, AR ko‘zoynaklaridan foydalangan holda, talabalar kommunal tizimlarning (sanitariya-tesisat, elektr, shamollatish) mavjud bino elementlari ichida qanday joylashishini ko‘rishlari mumkin.

Bu o‘quv jarayonini yanada vizual va tushunarli qiladi, dizayn qarorlari real dunyo obektlariga qanday ta‘sir qilishini tushunishni yaxshilaydi. Ikkala texnologiya ham murakkab qurilish jarayonlari va inshootlarini vizualizatsiya qilish va tushunishni sezilarli darajada yaxshilaydi, talabalarga an‘anaviy usullar bir xil samaradorlik bilan taklif qila olmaydigan qurilishni o‘rganishning xavfsiz va nazorat ostidagi usulini taqdim etadi.

Simulyatsiyaga asoslangan o‘qitish.

Simulyatorlar talabalarga virtual qurilish maydonchalari bilan ishlash imkoniyatini beradi, bu yerda ular nazariy bilimlarni xavfsiz va nazorat ostidagi muhitda qo‘llashlari mumkin. Bu real dunyo sharoitida qimmat xatolar xavfini kamaytirishga yordam beradi.

Masalan talabalrni qurilish materiallari sifatsizligidan kelib chiqishi mumkin bo‘lgan texnogen xodisa yoki virtual yoki simulyatorlar yordamida xosil qilingan seysmik o‘zgarishlar shu usluning ajralmas qismidir.

2. Qurilish va arxitektura sohalariga o‘qitishda innovatsion ta‘lim texnologiyalarini qo‘llash.

Mobil o‘qitish va maxsus elektron ilovalarni qo‘llash.

Quruvchi va arxitektorlarni mobil o‘qitishda zamonaviy smartfon va planshetlarning qo‘llay olish ularning qulayligi va zamonaviyligi sababli tufayli tobora ommalashib bormoqda.

Maxsus elektron ilovalar talabalarga kerakli bilimlarni o‘zlari uchun qulay vaqtda va joyda olish imkonini beradi. Ushbu ilovalar interaktiv simulyatorlar, video darsliklar, o‘zini baholash so‘rovnoma, viktorinalar va hatto ma‘lum qurilish metodika va normalari va texnologiyalarini o‘rganish uchun kengaytirilgan reallikni o‘z ichiga olishi mumkin. Bu o‘quv jarayonini har bir talabaning individual ehtiyojlariga moslashtiradi va yanada moslashuvchan qiladi.

Onlayn platformalar va kurslar.

Onlayn ta‘lim talabalarga butun dunyo bo‘ylab yetakchi ta‘lim muassasalari va professional jamoalarning kurslari va resurslariga kirishni taklif qilish orqali qurilish ta‘limi doirasini sezilarli darajada kengaytiradi.

Coursera, Udemy kabi ixtisoslashgan portal va platformalar qurilish asoslaridan tortib, qurilish loyihalarini boshqarish yoki zamonaviy qurilish materiallari va texnologiyalari kabi ilg‘or ixtisoslashgan mavzulargacha turli xil kurslarni taklif etadi.

Onlayn kurslar ko‘pincha video ma‘ruzalar, interaktiv topshiriqlar, muhokama forumlari va o‘qituvchilardan fikr-mulohaza olish imkoniyatini o‘z ichiga oladi. Ushbu kurslar o‘quv dasturining bir qismi yoki o‘z malakalarini oshirishga intilayotgan mavjud mutaxassislar uchun uzluksiz ta‘lim shakli bo‘lishi mumkin.

Zamonaviy texnologiyalar va onlayn resurslar qurilish ta‘limini yanada qulay va xilma-xil qiladi, talabalar va mutaxassislarga uzluksiz o‘rganish va kasbiy rivojlanish uchun vositalarni taqdim etadi.

XULOSA.

Qurilish va arxitektutsra soahalari mutaxasislarini tayyorlash tizimlariga innovatsion ta‘lim uslublari va yondashuvning kenga jalb etish orqali talabalar va o‘qituvchilar o‘rtasidagi dinamik o‘zaro ta‘sir osonlashadi. Bu esa talabalarga ta‘lim jarayonida faol ishtirok etish imkonini beradi, yaxshiroq o‘rganish va bilim almashishni rag‘batlantiradi. Qurilish ta‘limidagi innovatsiyalar kelajakdagi mutaxassislarni tayyorlash uchun ko‘lamlarni ochadi.

Zamonaviy texnologiyalar va usullardan foydalanish nafaqat ta‘lim sifatini yaxshilaydi, balki uni yanada qulay va interaktiv qiladi. Bu zamonaviy qurilish bozorining qiyinchiliklarini samarali hal qila oladigan yuqori malakali mutaxassislarni tayyorlashga yordam beradi.

Oliy ta‘lim muassasalarida qurilish va arxitektura sohalari uchun mutaxassislar tayyorlashda innovatsion usul va o‘qitish texnologiyalarini qo‘llash ta‘lim samaradorligini oshirishning muhim omili hisoblanadi. Zamonaviy raqamli platformalar, BIM texnologiyalari, virtual modellashtirish va interaktiv o‘qitish metodlari talabalarning nazariy bilimlarini amaliy ko‘nikmalar bilan mustahkamlash imkonini yaratadi.

Loyihaga asoslangan ta‘lim, keys-stadi, simulyatsiya va raqamli texnologiyalardan foydalanish orqali talabalarning mustaqil fikrlash, tahlil qilish va ijodiy yondashuv qobiliyatlari rivojlanadi. Shuningdek, qurilish va arxitektura ta‘limida sun‘iy intellekt, avtomatlashtirilgan loyihalash tizimlari va raqamli boshqaruv vositalarini joriy etish kelgusida ta‘lim sifatini yangi bosqichga olib chiqishi mumkin. Bu esa sohaning barqaror rivojlanishi va xalqaro raqobatbardoshligini ta‘minlashga xizmat qiladi.

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KASBIY INGLIZ TILINI (ESP) O'QITISHDA ZAMONAVIY METODLARNING SAMARADORLIGI

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Annotatsiya. *Ushbu maqolada English for Specific Purposes (ESP) ni o'qitishda qo'llanilayotgan zamonaviy pedagogik yondashuvlar tahlil qilinadi. Zamonaviy ta'lim sharoitida ingliz tilini o'qitish faqat umumiy kommunikativ ko'nikmalarni shakllantirish bilan cheklanib qolmay, balki talabalarning kelajak kasbiy faoliyati bilan bog'liq kompetensiyalarni ham rivojlantirishni talab etadi. Tadqiqot davomida ESP nazariyasi, ehtiyojlar tahlili (needs analysis) hamda kommunikativ yondashuv, loyiha asosida o'qitish va muammoga asoslangan ta'lim kabi metodlarning samaradorligi o'rganildi. Tahlil natijalari shuni ko'rsatadiki, ESP yondashuvi talabalarning kasbiy kommunikativ kompetensiyasini rivojlantirishda muhim rol o'ynaydi. Shuningdek, raqamli texnologiyalardan foydalanish o'quv jarayonini yanada interaktiv va samarali qiladi.*

Kalit so'zlar: *ESP, kasbiy ingliz tili, kommunikativ yondashuv, loyiha asosida o'qitish, ehtiyojlar tahlili, til kompetensiyasi.*

Abstract. *This article examines modern methods used in teaching English for Specific Purposes (ESP). In the context of globalization and increasing international cooperation, professionals are required to possess language skills relevant to their professional fields. Therefore, language teaching should be adapted to learners' specific academic or occupational needs. The study analyzes the effectiveness of several teaching approaches, including the communicative approach, project-based learning, and problem-based learning. The findings indicate that ESP contributes significantly to the development of students' professional communicative competence. Furthermore, the integration of digital technologies makes the learning process more interactive and effective.*

Keywords: *ESP, professional English, communicative approach, project-based learning, needs analysis, language competence.*

Аннотация. *В данной статье рассматриваются современные методы преподавания English for Specific Purposes (ESP). В условиях глобализации и роста международного сотрудничества возрастает потребность в специалистах, владеющих иностранным языком для профессиональной коммуникации. Поэтому обучение английскому языку должно учитывать профессиональные потребности студентов. В исследовании анализируются коммуникативный подход, проектное обучение и проблемно-ориентированное обучение как эффективные методы преподавания ESP. Результаты исследования показывают, что данный подход способствует развитию профессиональной коммуникативной компетенции студентов. Кроме того, использование цифровых технологий повышает эффективность образовательного процесса.*

Ключевые слова: *ESP, профессиональный английский язык, коммуникативный подход, проектное обучение, анализ потребностей, языковая компетенция..*

So‘nggi yillarda globalizatsiya jarayonlari va xalqaro hamkorlikning kengayishi natijasida ingliz tilining ahamiyati sezilarli darajada ortdi. Bugungi kunda ingliz tili ilm-fan, texnologiya, biznes va boshqa ko‘plab sohalarda asosiy kommunikativ vositalardan biri sifatida qo‘llaniladi. Shu sababli oliy ta’lim tizimida ingliz tilini o‘qitish jarayoni ham yangi talablarga mos ravishda takomillashib bormoqda.

An’anaviy til o‘qitish yondashuvlari ko‘pincha umumiy til ko‘nikmalarini rivojlantirishga qaratilgan bo‘lsa, zamonaviy ta’lim jarayonida talabalar kelajak kasbiy faoliyatiga mos til kompetensiyalarini shakllantirish zarurati paydo bo‘ldi. Shu nuqtai nazardan English for Specific Purposes (ESP) yondashuvi muhim metodik yo‘nalish sifatida shakllandi.

ESP ingliz tilini ma’lum kasbiy yoki akademik ehtiyojlar asosida o‘qitishga qaratilgan yondashuvdir. Bu metodda o‘quv jarayoni talabalar kelajakda duch kelishi mumkin bo‘lgan professional vaziyatlar bilan bog‘lanadi. Masalan, tibbiyot, aviatsiya, biznes yoki turizm yo‘nalishidagi talabalar o‘z sohasiga oid terminologiya va kommunikativ vaziyatlar bilan ishlash orqali tilni o‘rganadilar (Hutchinson & Waters, 1987). Mazkur tadqiqotning asosiy maqsadi ESP ni o‘qitishda qo‘llanilayotgan zamonaviy pedagogik metodlarni tahlil qilish hamda ularning ta’lim samaradorligiga ta’sirini aniqlashdan iborat.

Ushbu tadqiqotda nazariy, tahliliy va solishtirma metodlardan foydalanildi. Tadqiqotning asosiy maqsadi English for Specific Purposes (ESP) ni o‘qitishda qo‘llaniladigan zamonaviy pedagogik yondashuvlarni o‘rganish hamda ularning ta’lim jarayonidagi samaradorligini tahlil qilishdan iborat bo‘ldi. Shu sababli tadqiqot davomida ESP metodologiyasi va uning amaliy qo‘llanilishiga oid ilmiy manbalar keng qamrovda o‘rganildi.

Avvalo, ESP sohasiga oid ilmiy adabiyotlar, monografiyalar va xalqaro ilmiy tadqiqotlar tahlil qilindi. Xususan, ESP metodologiyasining shakllanishi va rivojlanishiga katta hissa qo‘shgan olimlarning ilmiy ishlari asosiy manba sifatida ko‘rib chiqildi. Ushbu manbalar orqali ESP ning nazariy asoslari, o‘qitish tamoyillari va pedagogik yondashuvlari o‘rganildi. Ilmiy adabiyotlar tahlili ESP ni til o‘qitishning ehtiyojlarga asoslangan yondashuvi sifatida ko‘rib chiqish imkonini berdi.

Tadqiqot jarayonida solishtirma tahlil metodidan ham foydalanildi. Ushbu metod yordamida ESP ta’limida qo‘llaniladigan turli pedagogik metodlar o‘zaro taqqoslandi va ularning o‘quv jarayoniga ta’siri baholandi. Xususan, kommunikativ yondashuv, loyiha asosida o‘qitish (project-based learning) hamda muammoga asoslangan ta’lim (problem-based learning)

metodlarining samaradorligi tahlil qilindi. Mazkur metodlar talabalarning til kompetensiyasi, kommunikativ ko‘nikmalari hamda mustaqil fikrlash qobiliyatini rivojlantirishdagi o‘rni nuqtai nazaridan o‘rganildi.

Shuningdek, tadqiqotda ehtiyojlar tahlili (needs analysis) muhim metodik bosqich sifatida ko‘rib chiqildi. Ehtiyojlar tahlili ESP kurslarini ishlab chiqishda muhim rol o‘ynaydi, chunki u talabalarning til o‘rganishdan ko‘zlagan maqsadlari, kasbiy ehtiyojlari va kommunikativ vazifalarini aniqlashga yordam beradi. Ushbu jarayon orqali o‘quv dasturini talabalar ehtiyojlariga mos ravishda ishlab chiqish imkoniyati yaratiladi. Ehtiyojlar tahlili natijalari ESP kurslarining mazmuni, o‘quv materiallari va o‘qitish metodlarini tanlashda muhim ahamiyatga ega hisoblanadi (Anthony, 2018).

Bundan tashqari, tadqiqotda pedagogik kuzatuv va umumlashtirish metodlari ham qo‘llanildi. Ushbu metodlar yordamida ESP ta’limida qo‘llanilayotgan zamonaviy metodlarning umumiy tendensiyalari va ularning ta’lim jarayonidagi o‘rni aniqlab berildi. Natijada ESP ni o‘qitishda zamonaviy pedagogik yondashuvlarning samaradorligi haqida ilmiy xulosalar chiqarish imkoniyati yaratildi.Tahlil natijalari ESP yondashuvi ta’lim jarayonida bir qator ijobiy natijalarni ta’minlashini ko‘rsatdi. Avvalo, ESP talabalarning kasbiy kommunikativ kompetensiyasini rivojlantiradi. Talabalar o‘z mutaxassisligiga oid terminologiya va kommunikativ vaziyatlar bilan ishlash orqali tilni real vaziyatlarda qo‘llash ko‘nikmasini shakllantiradilar. Kommunikativ yondashuv talabalarning nutq faoliyatini faollashtiradi va ularni muloqot jarayoniga faol jalb etadi. Loyiha asosida o‘qitish esa talabalarning mustaqil fikrlashini hamda jamoada ishlash ko‘nikmalarini rivojlantiradi.

Natijalar shuni ko‘rsatdiki, zamonaviy raqamli texnologiyalarni qo‘llash ham ESP ta’limining samaradorligini oshiradi. Multimedia materiallar, onlayn platformalar va autentik o‘quv materiallari talabalarni o‘quv jarayoniga faol jalb etishga yordam beradi (Richards & Rodgers, 2014).

Tahlil natijalari shuni ko‘rsatadiki, ESP yondashuvi talabalarning til o‘rganish jarayoniga bo‘lgan munosabatini sezilarli darajada o‘zgartiradi. An’anaviy ingliz tili darslarida ko‘pincha grammatik qoidalar va umumiy lug‘at ustida ishlash ustuvor bo‘lsa, ESP kurslarida til real kasbiy vaziyatlar bilan bog‘lanadi. Bu esa talabalar uchun o‘quv jarayonini yanada mazmunli va motivatsion qiladi.

ESP darslarida kommunikativ vazifalarning qo‘llanilishi talabalarga tilni real muloqot jarayonida ishlatish imkonini beradi. Masalan, biznes yo‘nalishidagi talabalar muzokara olib borish yoki taqdimot qilish orqali professional kommunikatsiya ko‘nikmalarini rivojlantiradilar. Texnik yoki ilmiy yo‘nalishdagi talabalar esa ilmiy maqolalarni tahlil qilish va professional terminologiyani qo‘llashni o‘rganadilar.

Tahlil shuni ham ko‘rsatdiki, loyiha asosida o‘qitish talabalarning mustaqil fikrlashini va jamoada ishlash ko‘nikmalarini rivojlantirishda samarali hisoblanadi. Talabalar muayyan loyiha ustida ishlash jarayonida nafaqat til ko‘nikmalarini rivojlantiradilar, balki kasbiy muammolarni hal qilish tajribasini ham orttiradilar.

Bundan tashqari, raqamli texnologiyalardan foydalanish ESP ta’limining samaradorligini yanada oshiradi. Onlayn platformalar, video materiallar va interaktiv mashqlar orqali talabalar autentik til materiallari bilan ishlash imkoniyatiga ega bo‘ladilar. Bu esa ularning tinglab tushunish, o‘qish va nutq ko‘nikmalarini rivojlantirishga yordam beradi. Umuman olganda, o‘tkazilgan tahlil ESP yondashuvi zamonaviy oliy ta’lim tizimida samarali pedagogik model sifatida xizmat qilishi mumkinligini ko‘rsatadi.

Natijalar shuni ko‘rsatadiki, ESP ta’limi samarali bo‘lishi uchun o‘quv dasturi talabalarning ehtiyojlariga mos ravishda ishlab chiqilishi kerak. Ehtiyojlar tahlili o‘quv jarayonini samarali tashkil etishda muhim rol o‘ynaydi.

Bundan tashqari, ESP o‘qituvchilari nafaqat til metodikasini, balki o‘quvchilarning kasbiy kontekstini ham ma’lum darajada tushunishlari zarur. Bu darslarni yanada mazmunli tashkil etishga yordam beradi (Basturkmen, 2010). Shuningdek, zamonaviy pedagogik texnologiyalar va interaktiv o‘qitish metodlaridan foydalanish talabalarning motivatsiyasini oshiradi va ularning o‘rganish jarayonida faol ishtirok etishiga yordam beradi.

Xulosa qilib aytganda, ESP yondashuvi zamonaviy ta’lim tizimida muhim o‘rin egallaydi. U ingliz tilini o‘qitish jarayonini talabalarning kasbiy ehtiyojlariga moslashtirish imkonini beradi. Kommunikativ yondashuv, loyiha asosida o‘qitish va muammoga asoslangan ta’lim kabi metodlar ESP darslarining samaradorligini oshiradi.

Shuningdek, raqamli texnologiyalardan foydalanish o‘quv jarayonini yanada interaktiv va qiziqarli qiladi. Shu sababli ESP yondashuvini oliy ta’lim muassasalarida keng joriy etish zamonaviy ta’limning muhim yo‘nalishlaridan biri hisoblanadi.

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POST-PANDEMIYA DAVRIDA TA'LIM TIZIMIDAGI O'ZGARISHLAR VA YANGI YONDASHUVLAR

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Annotatsiya. *COVID-19 pandemiyasi ta'lim tizimiga keskin ta'sir ko'rsatib, an'anaviy o'qitish shakllarini qisqa vaqt ichida o'zgartirishga majbur qildi. Ushbu maqolada post-pandemiya davrida ta'lim tizimida yuzaga kelgan asosiy o'zgarishlar va yangi pedagogik yondashuvlar tahlil qilinadi. Tadqiqotda raqamli transformatsiya, aralash ta'lim (blended learning), talaba markazli yondashuv va o'qituvchilarning raqamli kompetensiyasini rivojlantirish masalalariga alohida e'tibor qaratiladi. Tahlillar shuni ko'rsatadiki, pandemiya ta'lim tizimi uchun jiddiy sinov bo'lishiga qaramay, u innovatsion yondashuvlarning tez joriy etilishiga turtki bo'ldi. Shu bilan birga, ta'lim jarayoni yanada moslashuvchan va raqamli muhitga bog'liq holga keldi.*

Kalit so'zlar: *post-pandemiya ta'limi, raqamli ta'lim, blended learning, talaba markazli yondashuv, innovatsiya.*

Abstract. *The COVID-19 pandemic has significantly reshaped the global education system, forcing institutions to rapidly adapt to new learning environments. This article explores the key transformations that have taken place in education during the post-pandemic period and examines emerging pedagogical approaches. Particular attention is given to digital transformation, blended learning, student-centered instruction, and the development of teachers' digital competencies. The study is based on a review of recent academic literature and comparative analysis of pre- and post-pandemic practices. The findings suggest that, despite numerous challenges, the pandemic accelerated innovation in teaching and learning. The integration of technology and flexible learning models has become a defining feature of modern education, contributing to improved accessibility, autonomy, and engagement among learners.*

Keywords: *post-pandemic education, digital learning, blended learning, student-centered approach, educational innovation.*

Аннотация. *Пандемия COVID-19 оказала значительное влияние на систему образования, вынудив учебные заведения быстро адаптироваться к новым условиям обучения. В данной статье анализируются основные изменения в системе образования в постпандемический период и новые педагогические подходы. Особое внимание уделяется цифровой трансформации, смешанному обучению, студентоориентированному подходу и развитию цифровых компетенций преподавателей. Результаты показывают, что пандемия, несмотря на серьезные вызовы, ускорила внедрение инновационных методов обучения и способствовала переходу к более гибким образовательным моделям.*

Ключевые слова: *постпандемическое образование, цифровое обучение, смешанное обучение, образовательные инновации.*

2020-yilda boshlangan COVID-19 pandemiyasi ta’lim tizimiga kutilmagan va keskin o‘zgarishlar olib kirdi. Qisqa vaqt ichida millionlab o‘quvchilar va talabalar an’anaviy auditoriya mashg‘ulotlaridan masofaviy ta’limga o‘tishga majbur bo‘ldi. Bu jarayon nafaqat texnologik infratuzilmani, balki mavjud pedagogik yondashuvlarni ham qayta ko‘rib chiqishni talab etdi.

Pandemiya davrida ta’lim tizimi turli muammolarga duch keldi. Texnik imkoniyatlarning yetarli emasligi, internet sifati bilan bog‘liq qiyinchiliklar, o‘qituvchilarning raqamli ko‘nikmalari yetishmasligi va talabalar motivatsiyasining pasayishi shular jumlasidandir. Shu bilan birga, bu davr yangi imkoniyatlarni ham yuzaga chiqardi.

Xalqaro tadqiqotlar pandemiyani ta’lim tarixidagi burilish nuqtasi sifatida baholaydi. Masalan, Rapanta va boshqalar (2021) ta’kidlaganidek, ta’lim tizimi texnologiya va pedagogika o‘rtasida yangi muvozanat izlash bosqichiga o‘tdi. Shu jarayon natijasida masofaviy ta’lim, aralash o‘qitish va moslashuvchan o‘quv modellari keng tarqala boshladi. Mazkur maqolaning asosiy maqsadi post-pandemiya davrida ta’lim tizimida yuzaga kelgan o‘zgarishlarni tahlil qilish va zamonaviy pedagogik yondashuvlarning ahamiyatini aniqlashdan iborat.

Ushbu tadqiqot ilmiy adabiyotlarni tahlil qilish asosida olib borildi. Tadqiqot jarayonida pandemiya va post-pandemiya davriga oid xalqaro ilmiy maqolalar, tahliliy hisobotlar hamda pedagogik tadqiqotlar izchil o‘rganildi. Manbalar tanlashda ularning dolzarbligi, ishonchliligi va mavzuga bevosita aloqadorligiga alohida e’tibor qaratildi. Bu esa masalani kengroq va xolis yoritish imkonini berdi. Asosiy e’tibor quyidagi yo‘nalishlarga qaratildi:

- raqamli ta’limning rivojlanishi
- blended learning modelining kengayishi
- talaba markazli yondashuvning kuchayishi
- o‘qituvchilarning raqamli kompetensiyasi

Mazkur yo‘nalishlar tanlanishining sababi shundaki, aynan shu omillar pandemiya davrida ta’lim tizimida eng sezilarli o‘zgarishlarga sabab bo‘lgan.

Tahlil jarayonida Rapanta va hammualliflar (2021), Courtney va boshqalar (2022) hamda Pokhrel va Chhetri (2021) tadqiqotlari asosiy manbalar sifatida qo‘llanildi. Ushbu ishlar orqali pandemiya davridagi ta’lim jarayonining qanday o‘zgargani, o‘qituvchilar va talabalar qanday muammolarga duch kelgani hamda bu muammolarning qanday yechimlari taklif etilgani o‘rganildi. Manbalarni o‘zaro solishtirish natijasida umumiy tendensiyalar va farqli jihatlar aniqlab olindi.

Shuningdek, solishtirma tahlil usuli qo‘llanilib, pandemiyadan oldingi va keyingi ta’lim tizimi o‘rtasidagi asosiy farqlar aniqlab chiqildi. Bu yondashuv orqali nafaqat yuzaki o‘zgarishlar,

balki ta’lim mazmuni va tashkil etilishidagi chuqur transformatsiyalar ham ko‘rsatib berildi. Natijada, mavjud o‘zgarishlarni yaxshiroq tushunish va ularning kelajakdagi ta’lim rivojiga ta’sirini baholash imkoniyati yaratildi.

Tadqiqot natijalari post-pandemiya davrida ta’lim tizimi sezilarli darajada transformatsiyaga uchraganini ko‘rsatdi. Birinchidan, raqamli ta’lim asosiy o‘rin egallay boshladi. Online platformalar, virtual sinflar va interaktiv vositalar keng qo‘llanila boshlandi. Bu esa ta’limning geografik chegaralarini kengaytirdi. Ikkinchidan, blended learning modeli samarali yondashuv sifatida shakllandi. Ushbu model an’anaviy va onlayn ta’limni uyg‘unlashtirib, o‘quv jarayonini yanada moslashuvchan qiladi. Uchinchidan, talaba markazli yondashuv kuchaydi. Talabalar passiv tinglovchidan faol ishtirokchiga aylandi. Ular mustaqil ishlash, muammolarni hal qilish va tanqidiy fikrlash ko‘nikmalarini rivojlantira boshladi. To‘rtinchidan, o‘qituvchilarning roli o‘zgardi. Courtney et al. (2022) tadqiqotida qayd etilganidek, o‘qituvchilar raqamli vositalarni faol qo‘llashni o‘rgandilar va yangi metodlarga moslashdilar.

Tahlillar shuni ko‘rsatadiki, post-pandemiya davrida ta’lim tizimi an’anaviy modeldan sezilarli darajada farq qila boshladi. Endilikda o‘quv jarayoni ko‘proq moslashuvchan, texnologiyalarga tayangan va talaba ehtiyojlariga yo‘naltirilgan shaklga ega bo‘lib bormoqda. Bu o‘zgarishlar nafaqat dars o‘tish usullarida, balki ta’limni tashkil etish va boshqarish yondashuvlarida ham yaqqol seziladi.

Muhim o‘zgarishlardan biri bu ta’lim jarayonining moslashuvchanligi oshganidir. Talabalar o‘z o‘qish jadvalini ma’lum darajada mustaqil rejalashtirish, materiallarni qayta ko‘rib chiqish va individual tempda o‘rganish imkoniyatiga ega bo‘ldi. Bu esa ayrim hollarda o‘rganish samaradorligini oshirishga xizmat qilmoqda, chunki har bir talaba o‘ziga qulay uslubda bilim olish imkoniga ega bo‘ladi.

Shu bilan birga, mavjud muammolar ham e’tibordan chetda qolmayapti. Pokhrel va Chhetri (2021) qayd etganidek, raqamli tengsizlik masalasi hanuz dolzarbligicha qolmoqda. Ba’zi talabalar zarur texnik vositalar yoki barqaror internetga ega emasligi sababli ta’lim jarayonida to‘liq ishtirok eta olmayapti. Bu esa ta’limda teng imkoniyatlar tamoyiliga salbiy ta’sir ko‘rsatadi.

Bundan tashqari, o‘qituvchilarning tayyorgarlik darajasi ham muhim omil sifatida namoyon bo‘lmoqda. Raqamli pedagogikani samarali qo‘llash uchun nafaqat texnik ko‘nikmalar, balki yangi metodik yondashuvlarni ham o‘zlashtirish zarur. Bu jarayon esa vaqt, tajriba va doimiy o‘rganishni talab qiladi. Shu sababli, pedagoglarni qo‘llab-quvvatlash va ularning malakasini oshirish post-pandemiya ta’lim tizimining muhim yo‘nalishlaridan biri bo‘lib qolmoqda.

Natijalar shuni ko‘rsatadiki, pandemiya ta’lim tizimini tubdan o‘zgartirib, uni sifat jihatidan yangi bosqichga olib chiqdi. Agar avval raqamli texnologiyalar qo‘shimcha vosita sifatida qaralgan bo‘lsa, hozirgi kunda ular ta’lim jarayonining ajralmas va zarur komponentiga aylangan. O‘quv jarayonini tashkil etishda turli onlayn platformalar, virtual sinflar va raqamli resurslardan foydalanish oddiy holga aylandi. Bu esa nafaqat ta’limning shaklini, balki uning mazmunini ham yangilashga olib keldi.

Blended learning esa eng istiqbolli va samarali yondashuvlardan biri sifatida shakllanmoqda. Ushbu model an’anaviy auditoriya mashg‘ulotlari bilan masofaviy ta’limni uyg‘unlashtirgan holda, o‘quv jarayonini yanada moslashuvchan va individual ehtiyojlarga mos qiladi. Talabalar dars materiallarini oldindan mustaqil o‘rganib, auditoriya mashg‘ulotlarida esa amaliy muhokama va tahlilga ko‘proq e’tibor qaratish imkoniga ega bo‘ladilar. Natijada o‘qitish jarayoni samaraliroq tashkil etiladi va bilimlarni chuqurroq o‘zlashtirishga erishiladi.

Shuningdek, talabalar mustaqil o‘rganishga tobora ko‘proq jalb qilinmoqda. Bu jarayon ularning o‘z-o‘zini boshqarish, vaqtni to‘g‘ri taqsimlash va mas’uliyat bilan ishlash ko‘nikmalarini rivojlantiradi. Mustaqil ta’lim elementlarining ortishi talabalarni faqat tayyor bilimni qabul qiluvchi emas, balki uni izlovchi va tahlil qiluvchi faol subyektga aylantiradi. Shu tariqa, o‘quv jarayoni yanada interaktiv va samarali tus oladi hamda talabalar bilimni chuqurroq va ongli ravishda o‘zlashtira boshlaydilar.

Xulosa qilib aytganda, post-pandemiya davri ta’lim tizimida muhim o‘zgarishlarga sabab bo‘ldi. Raqamli texnologiyalar va yangi pedagogik yondashuvlar ta’lim jarayonining ajralmas qismiga aylandi. Blended learning modeli ta’limni yanada moslashuvchan va samarali tashkil etish imkonini bermoqda. Shu bilan birga, talabalar mustaqil o‘rganish va tanqidiy fikrlash ko‘nikmalarini rivojlantirmoqda.

Biroq, raqamli tengsizlik va texnik imkoniyatlar bilan bog‘liq muammolar hali ham dolzarb bo‘lib qolmoqda. Shuning uchun kelajakda ta’lim tizimini rivojlantirishda ushbu muammolarni bartaraf etish muhim ahamiyatga ega. Umuman olganda, post-pandemiya ta’limi yanada moslashuvchan, texnologiyaga asoslangan va zamonaviy talablar asosida shakllanib bormoqda.

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KORPUS ASOSIDA SINONIMLARNI O‘QITISH METODIKASI: LINGVODIDAKTIK MODEL VA TAJRIBA NATIJALARI

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Annotatsiya. *Ushbu maqoladda korpus texnologiyalari asosida sinonimlarni o‘qitish metodikasi ishlab chiqiladi. Maqsad sinonimik qatorni kontekstda ajratish, uslubiy bo‘yoq va birikuvchanlikni korpus ma’lumotlari bilan asoslab o‘rgatishdir. Metodlar: korpusdan misol tanlash, kollokatsion tahlil, chastota va register bo‘yicha taqqoslash, didaktik vazifalar konstruktsiyasi. Yangilik: sinonim tanlashni dalillovchi “korpusga tayangan” baholash mezonlari taklif etiladi.*

Kalit so‘zlar: *korpus lingvistikasi; sinonimiya; kollokatsiya; chastota; uslubiy bo‘yoq; register; lingvodidaktika.*

Abstract*. This article proposes a corpus-based methodology for teaching synonyms. The aim is to develop learners’ ability to distinguish near-synonyms in context by using evidence from frequency, collocation, and register distribution. Methods include corpus-driven example selection, collocational profiling, contrastive analysis across registers, and task design. The novelty lies in an evidence-based decision algorithm for synonym choice and an assessment framework aligned with measurable corpus indicators.*

Keywords: *corpus linguistics; synonymy; collocation; frequency analysis; stylistic marking; register variation; language pedagogy.*

Sinonimiya til tizimida leksik boylikning muhim ko‘rsatkichi bo‘lib, o‘qitish amaliyotida u ko‘pincha “ma’nodosh so‘zlar ro‘yxati”ni yodlash darajasida qolib ketadi. Bunday yondashuv sinonimlarning real nutqdagi funksional farqlarini, ya’ni qaysi birlik qaysi kontekstda tabiiy, aniq va usluban maqbul ishlatilishini yetarlicha ochib bera olmaydi. Aslida esa sinonimlar mutlaq teng bo‘lmaydi: ularni farqlovchi omillar qatoriga birikuvchanlik (qaysi so‘zlar bilan ko‘proq qo‘shilishi), chastota (qaysi birlik ko‘proq ishlatilishi), register (rasmiy, ilmiy, publitsistik, so‘zlashuv), baholovchanlik va uslubiy bo‘yoq kiradi. Shuning uchun sinonimlarni o‘rgatish metodikasida tilning real qo‘llanishi haqida dalil beruvchi manba zarur; bunday manba sifatida matn korpuslari sinonim tanlashni “sezgi”dan “kuzatuv va isbot”ga ko‘chiradi, ya’ni o‘quvchi qarorini til faktlari bilan asoslashni o‘rganadi [1].

Korpus ma’lumotlarining o‘zi muqarrar ravishda tilning yangi nazariyalarini yaratishga olib keladi, shu ma’noda korpus ma’lumotlaridan foydalanishga bo‘lgan bu yondashuvni boshqa usullar yoki korpusga asoslanmagan nazariyalar bilan birgalikda qo‘llashdan ko‘ra nazariyaga asoslangan bo’ladi. Ma’lumotlar va nazariya qaysidir ma’noda bir-biriga mos keladi degan g‘oya

ba’zan biroz boshqacha atamalarda ifodalanadi, masalan: korpus tilshunosligi til nazariyasining yagona manbai bo‘lib, korpusga asoslangan yondashuvning bir qismidir. Bunday yondashuv oldingi lingvistik tasnifdan qochadi, ya’ni bunday nazariyalar ma’lumotlar ichida yashiringan "sof" nazariya deb atashimiz mumkin bo‘lgan narsadan chalg‘itadi. Da’voning eng kuchli shakllari korpusning o‘zi (va nafaqat soha sifatida korpus lingvistikasi) nazariya ekanligini anglatadi; masalan, Tognini-Bonellining "nazariya dalillardan mustaqil mavjud emas" degan ta’kidi. Bu qabul qilish uchun juda kuchli pozitsiya va ehtiyotkorlik bilan ochishni talab qiladi.

Biz bu da’voni korpusning nazariy maqomi Xomskiyning ma’lumotlariga qarama-qarshi bo‘lgan korpus ma’lumotlariga nisbatan pozitsiyani nazarda tutadi, deb qabul qilishimiz mumkin. Xomskiyning korpus ma’lumotlari haqidagi pozitsiyasi shundan iboratki, undan tilning tabiati haqidagi bilim manbai sifatida foydalanish mumkin emas. Neo-Ferthian pozitsiyasining ekstremal talqini, aksincha, til tabiati haqidagi bilim manbai sifatida korpus ma’lumotlaridan boshqa hech narsadan foydalanish mumkin emasligini ko‘rsatadi.

Generativ grammatikada tilshunoslikning aksariyat fanlarida va umuman barcha fanlarda va inson munosabatlarida bo‘lgani kabi, qo‘llab-quvvatlanishi kerak bo‘lgan nazariya (generativ grammatika misolida biz uni Universal grammatikaning tabiati haqidagi ba’zi fikrlar to‘plami deb taxmin qilishimiz mumkin) va uni qo‘llab-quvvatlashga mo‘ljallangan dalillar (til egasining tuzilgan namunaviy gaplarning ma’lum bir to‘plamining grammatikligi haqidagi mulohazalari) o‘rtasida aniq konseptual bo‘linish mavjud. Agar biz "korpus - bu nazariya" deb ta’riflashimiz mumkin bo‘lgan narsani oladigan bo‘lsak, "korpus - bu nazariya" degan da’vo so‘zma-so‘z ma’noda ma’lumotlar va nazariya o‘rtasidagi bu farqni yo‘q qildilar, degan xulosaga kelishga majbur bo‘lamiz: korpus ular uchun ham tushuntirishga muhtoj hodisa, ham uni tushuntirishga mo‘ljallangan to‘plamidir.

Ma’lumotlar - bu ma’lumotlar va nazariya - bu nazariya: kuzatuvlar tushuntirishlar uchun zarur qo‘llab-quvvatlash sifatida muhim bo‘lsa-da, o‘z-o‘zidan tushuntirishlarni tashkil etmasligi aniq. Korpus nazariya sifatida til qonuniyatlarini har qanday tushuntirishni rad etadi, tahlilchining ma’lumotlar bilan bevosita o‘zaro ta’siridan kelib chiqmaydi, balki korpus va korpus texnikasini korpus usuli sifatida empirik ma’lumotlar manbai sifatida ko‘rib chiqadi. Tilning har qanday tushuntiruvchi nazariyasini, hatto korpus ma’lumotlariga to‘liq yoki qisman havola qilmasdan ishlab chiqilgan bo‘lsa ham, qo‘llab-quvvatlash yoki rad etish uchun ishlatilishi mumkin. Bundan farqli o‘laroq, korpus lingvistikasida "diskurs"ga quyidagicha yondashuvni tavsiflaydi:

Lingvistik birliklarning til-tashqi taksonomiyasi emas, balki aynan diskursning o‘zi berilgan tadqiqot savoliga javob berish uchun zarur bo‘lgan toifalar va tasniflarni taqdim etishi kerak bo‘ladi. Diskursni tahlil qilishning bu ikki yondashuvi o‘rtasidagi farq bundan ham keskinroq bo‘lishi mumkin emas. Metod sifatida korpus amaliyotchilari uchun korpus lingvistikasi o‘rnatilgan tahliliy asos bilan o‘zaro aloqada qo‘llanilishi mumkin, bu esa, o‘z navbatida, korpus lingvistikasiga hech qanday aloqasi yo‘q. Teubert uchun diskursga oid korpus dalillari uchun yagona mos tahliliy asos nazariya sifatidagi korpus asosidir.

Yana bir misol keltirsak: konseptual metafora nazariyasidagi ba’zi muammolarni hal qilish uchun korpus ma’lumotlaridan foydalanadi, bu esa metaforik iboralarning katta sinflarini kam sonli aqliy jarayonlarga ishora qilish orqali tushuntiradi. Bu nazariya korpus lingvistikasidan mutlaqo mustaqil ravishda kelib chiqqan. Korpusga asoslangan yondashuvda tilshunosning majburiyati ma’lumotlarning yaxlitligiga qaratilgan bo‘lib, tavsiflar korpus dalillariga nisbatan keng qamrovli bo‘lishga qaratilgan. Shunday qilib, korpus oldindan mavjud bo‘lgan nazariyalarni qo‘llab-quvvatlash uchun misollar ombori yoki allaqachon aniq belgilangan tizimga ehtimoliy

kengaytma sifatida ko‘riladi. Nazariy fikrlar korpusda keltirilgan dalillarga to‘liq mos keladi va ularni bevosita aks ettiradi. Nazariya dalillardan mustaqil mavjud emas va umumiy metodologik yo‘l aniq: kuzatuv gipotezaga olib keladi umumlashtirishga olib keladi nazariy bayonotda birlashtirishga olib keladi.

Sinonimlarni o‘qitish jarayonida korpus lingvistikasiga oid “korpusga asoslangan” (corpus-based) va “korpusga yo‘naltirilgan” (corpus-driven) yondashuvlar muhim metodologik asos sifatida xizmat qiladi, biroq ularni qat’iy ajratilgan ikki alohida paradigma sifatida emas, balki bir-birini to‘ldiruvchi va o‘zaro kesishuvchi spektr sifatida ko‘rish maqsadga muvofiqdir. Gilquin va Gries (2009:10) ta’kidlaganidek, korpus ma’lumotlariga murojaat qilish ko‘pincha oldindan aniq va qat’iy shakllantirilgan gipotezalarsiz, ya’ni izlanish xarakterida amalga oshirilishi mumkin bo‘lib, bu holat ayniqsa til birliklarining real qo‘llanishini o‘rganishda muhim ahamiyat kasb etadi. Shu nuqtai nazardan, sinonimlar tizimini o‘qitishda ham korpus materiallari tilning amaliy ishlatilishini ochib beruvchi asosiy empirik manba sifatida xizmat qiladi.

Korpusga tayangan metodika, avvalo, o‘qitish obyektini qayta belgilaydi: sinonimlarni “bir ma’noli almashtirish mumkin bo‘lgan birliklar” sifatida emas, balki “ma’nosi yaqin, ammo qo‘llanish sharoiti, birikuvchanligi va uslubiy qiymati bilan farqlanadigan birliklar” sifatida izohlaydi. Bunda korpus o‘qituvchi uchun uch yo‘nalishda didaktik resurs vazifasini bajaradi: birinchidan, autentik misollar banki sifatida; ikkinchidan, farqlovchi belgi va tendensiyalarni topish uchun statistik-kuzatuv vositasi sifatida; uchinchidan, o‘quvchida metatil kompetensiyani, ya’ni “nega aynan shu sinonim” degan savolga dalil bilan javob berish ko‘nikmasini shakllantiruvchi trening maydoni sifatida [2]. Rus metodik maktabida leksikani o‘qitishda kontekst va birikuvchanlikni ustuvor qo‘yish tamoyili, korpus vositalari bilan uyg‘unlashganda, sinonimlarni o‘qitish samaradorligini oshirishi ko‘rsatiladi [3]. Xalqaro tadqiqotlarda esa data-driven learning yondashuvi, ayniqsa, yaqin sinonimlarni ajratishda korpusdan o‘rganuvchi o‘zi “kashf etadigan” usulni eng natijador yo‘llardan biri sifatida talqin qiladi [4].

Taklif etilayotgan metodik modelning markazida “korpusga tayangan qaror” algoritmi turadi. U sinonim tanlashni ketma-ket mantiqiy amallar asosida tashkil etadi: avvalo, maqsad ma’no (denotativ yadro) aniqlanadi; keyin korpusdan shu ma’noga mos kamida ikki-uch sinonim bo‘yicha kontekstlar yig‘iladi; uchinchi bosqichda birikuvchanlik profili tuziladi, ya’ni sinonimlarning tipik hamso‘zlari, barqaror birikmalari va fe’l-ot moslashuvi kuzatiladi; to‘rtinchi bosqichda chastota va register taqsimoti tekshiriladi; beshinchi bosqichda uslubiy bo‘yoq va baholovchanlik belgilari kontekstda interpretatsiya qilinadi; yakunda esa o‘quvchi “konkret vaziyatda eng maqbul sinonim”ni tanlab, tanlovini kamida ikki dalil bilan asoslaydi. Bu jarayon o‘qituvchi uchun ham muhim, chunki u sinonimlar haqidagi izohlarni subyektiv ta’bga emas, korpusdan ko‘rinadigan tendensiyalarga tayaydi [1; 4].

Modelni o‘quv jarayoniga tatbiq etishda topshiriqlar tizimi bosqichma-bosqich murakkablashtiriladi. Dastlabki bosqichda o‘rganuvchi korpusdan tayyor tanlangan misollar asosida sinonimlarning farqini sezadi: masalan, bir sinonimning rasmiy uslubda, boshqasining so‘zlashuvda faolroq uchrashini aniqlaydi. Keyingi bosqichda o‘quvchi o‘zi qidiruv so‘rovlari berib, misollarni saralaydi, ya’ni o‘quv faoliyati “tayyor material”dan “tadqiqotga o‘xshash kuzatuv”ga o‘tadi. Eng yuqori bosqichda esa o‘quvchi yozma matn yaratadi va tahrir qiladi: o‘z matnidagi sinonim tanlovini korpus dalili bilan tekshiradi, noaniq yoki uslubsiz qo‘llanishlarni almashtiradi. Bunday topshiriqlar sinonimlarni “lug‘at birliklari” sifatida emas, diskurs va uslub bilan bog‘liq tanlov birliklari sifatida o‘zlashtirishga olib keladi [2].

Metodikani amaliy tekshirish uchun tajriba-sinov dizayni quyidagicha asoslanadi: o‘quvchilar ikki guruhga ajratiladi, ulardan biri an’anaviy izohli-lug‘aviy yondashuv bilan, ikkinchisi korpusga asoslangan yondashuv bilan sinonimlarni o‘rganadi. Diagnostika vositalari sinonimni “bilish”ni emas, “to‘g‘ri tanlash va asoslash”ni o‘lchashi lozim. Shuning uchun baholash mezonlari uch komponentli qilib belgilanadi: semantik moslik (tanlangan sinonim ma’no yadrosiga to‘g‘ri kelishi), kollokatsion tabiiylik (tipik birikuvchanlikka mosligi), uslubiy moslik (matn turi va kommunikativ vaziyatga muvofiqligi). Har bir komponent bo‘yicha rubrika tuziladi va o‘quvchi javobi faqat natija bilan emas, izoh (dalillash) bilan ham baholanadi. Bunda korpusdan olingan dalil sifatida chastota ko‘rsatkichi, tipik hamso‘zlar ro‘yxati yoki register bo‘yicha tarqalish kabi indikatorlardan foydalaniladi [4; 5]. Mazkur yondashuv o‘quvchining metakognitiv faolligini kuchaytiradi: u “nima uchun shunday yozdim” degan savolga til faktlari bilan javob berishga odatlanadi.

Sinonimlarni o‘qitishda korpusning yana bir afzalligi shundaki, u leksik norma va real uzus munosabatini ko‘rsatadi. O‘qituvchi ayrim sinonimlarning lug‘atda “neytral” deb berilishi bilan korpusdagi qo‘llanishi o‘rtasidagi farqlarni muhokama qilishi, o‘rganuvchini normativ fikrlash bilan birga pragmatik moslikka ham o‘rgatishi mumkin. Bu, ayniqsa, ilmiy va rasmiy yozishmada muhim: ma’nodosh birliklar orasida rasmiy-terminologik, neytral yoki emotsional-ekspressiv bo‘yoqqa ega variantlar uchraydi va ular vaziyatga qarab turlicha natija beradi [1; 6]. O‘zbek tilini o‘qitish amaliyotida ham leksik-semantik munosabatlarni kontekst orqali ochish, sinonimik qatorda farqlovchi belgilarga tayangan holda mashq qildirish samarali yo‘l ekani ta’kidlanadi [6]. Demak, korpus metodikasi milliy tilshunoslik va metodika an’analarini inkor qilmaydi, balki ularni empirik ma’lumot bilan mustahkamlaydi.

Tahlil shuni ko‘rsatadiki, korpusga asoslangan yondashuvning didaktik samarasi uch yo‘nalishda namoyon bo‘ladi. Birinchidan, o‘quvchi sinonimlarni kontekstda farqlashni o‘rganadi, bu esa yozma va og‘zaki nutqda xatolarni kamaytiradi. Ikkinchidan, o‘quvchi til birliklari haqida “dalilga tayangan” xulosa chiqarish malakasini hosil qiladi, natijada mustaqil tahrir va o‘z-o‘zini nazorat qilish kompetensiyasi shakllanadi. Uchinchidan, o‘qituvchi uchun mashqlarni individuallashtirish imkoniyati paydo bo‘ladi: korpusdan sohaga, registerga yoki mavzuga mos material tanlanib, o‘quvchining ehtiyojiga yo‘naltirilgan topshiriqlar tuziladi. Xulosa qilib aytganda, korpus orqali sinonimlarni o‘qitish metodikasi sinonimiyani o‘zlashtirishni ro‘yxatlashdan tahliliy tanlovga, intuitiv yondashuvdan empirik asoslashga olib o‘tadi; taklif etilgan algoritm va baholash mezonlari esa ushbu jarayonni tizimli, takrorlanuvchi va natija o‘lchanadigan didaktik texnologiya darajasiga ko‘taradi.

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UYUSHMAGAN YOSHLARNI RAQAMLI TA'LIM MUHITIGA INTEGRATSIYA QILISH: GLOBAL PLATFORMALAR VA TRANSCHEGARAVIY KASBIY TRANSFORMATSIYA

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Annotatsiya. *Mazkur maqolada zamonaviy axborot jamiyatida uyushmagan yoshlar (NEET qatlami)ni ijtimoiy-iqtisodiy faollashtirishning innovatsion mexanizmlari tadqiq etiladi. Tadqiqotning asosi raqamli ta'lim muhiti va xalqaro onlayn platformalar (Coursera, Udemy, edX va b.) orqali kasb-hunar egallashning ustuvor jihatlarini yoritishga qaratilgan. Maqolada global ta'lim resurslarining milliy mehnat bozoridagi nomutanosibliklarni bartaraf etishdagi roli, "nanodegree" konsepsiyasi va masofaviy kompetensiyalarni shakllantirishning psixologik-pedagogik omillari ilmiy jihatdan asoslab berilgan. Shuningdek, xalqaro platformalarning transchegaraviy imkoniyatlari va ularning yoshlar bandligini ta'minlashdagi strategik ahamiyati tahlil qilingan.*

Kalit so'zlar: *Raqamli iqtisodiyot, uyushmagan yoshlar, NEET qatlami, onlayn platformalar, raqamli ta'lim muhiti, global mehnat bozori, masofaviy ta'lim, kognitiv adaptatsiya, "nanodegree", "Gig-ekonomika", transchegaraviy kompetensiyalar..*

Abstract. *This article explores innovative mechanisms for the socio-economic activation of unorganized youth (NEET category) in the modern information society. The research focuses on the priority aspects of vocational training through digital learning environments and international online platforms (Coursera, Udemy, edX, etc.). The study provides a scientific basis for the role of global educational resources in addressing imbalances in the national labor market, the "nanodegree" concept, and the psychological and pedagogical factors of remote competency development. Furthermore, the cross-border opportunities of international platforms and their strategic significance in ensuring youth employment are analyzed.*

Keywords: *Digital economy, unorganized youth, NEET category, online platforms, digital learning environment, global labor market, distance learning, cognitive adaptation, nanodegree, gig economy, cross-border competencies.*

Аннотация. *В данной статье исследуются инновационные механизмы социально-экономической активации неорганизованной молодежи (категория NEET) в современном информационном обществе. Основное внимание уделено приоритетным аспектам получения профессий через цифровую образовательную среду и*

международные онлайн-платформы (Coursera, Udemy, edX и др.). В статье научно обоснована роль глобальных образовательных ресурсов в устранении диспорпорций на национальном рынке труда, концепция «nanodegree» и психолого-педагогические факторы формирования дистанционных компетенций. Также проанализированы трансграничные возможности международных платформ и их стратегическое значение в обеспечении занятости молодежи.

Ключевые слова: *Цифровая экономика, неорганизованная молодежь, категория NEET, онлайн-платформы, цифровая образовательная среда, глобальный рынок труда, дистанционное обучение, когнитивная адаптация, «nanodegree», гиг-экономика, трансграничные компетенции.*

XXI asrning uchinchi o‘n yilligi global mehnat bozori va ta'lim tizimlarida fundamental o‘zgarishlar bilan tavsiflanmoqda. Sun'iy intellekt, avtomatlashtirish va raqamli texnologiyalarning jadal rivojlanishi an'anaviy kasb-hunar tushunchasini tubdan qayta ko‘rib chiqishni talab qilmoqda. Ushbu transformatsion jarayonlarda eng zaif qatlam sifatida uyushmagan yoshlar — ya'ni ta'lim olmaydigan, ishlamaydigan va kasbiy tayyorgarlikdan o‘tmaydigan (NEET) yosh avlod vakillari ajralib turadi.

Xalqaro mehnat tashkiloti (ILO) ma'lumotlariga ko‘ra, 2024-yilda dunyo bo‘yicha 15-24 yosh oralig‘idagi yoshlarning taxminan 267 millioni NEET kategoriyasiga mansub bo‘lgan. Bu ko‘rsatkich COVID-19 pandemiyasi oqibatlaridan so‘ng sezilarli darajada oshgan va hozirda global iqtisodiy barqarorlikka jiddiy tahdid sifatida baholanmoqda.

Raqamli ta'lim muhiti, xususan, ommaviy ochiq onlayn kurslar (MOOC) va global ta'lim platformalari NEET yoshlarni ijtimoiy-iqtisodiy hayotga qayta integratsiya qilishda noyob imkoniyatlar taqdim etmoqda. Ushbu platformalar geografik, moliyaviy va institutsional to‘siqlarni bartaraf etib, transchegaraviy kasbiy malakalarni egallash imkonini beradi.

Tadqiqotning maqsadi — NEET yoshlarni global raqamli ta'lim platformalari orqali mehnat bozoriga integratsiya qilish mexanizmlarini ilmiy asoslash va O‘zbekiston sharoitida qo‘llash bo‘yicha tavsiyalar ishlab chiqishdir.

Tadqiqotning ilmiy yangiligi quyidagilarda namoyon bo‘ladi: birinchidan, NEET yoshlarni raqamli ta'lim muhitiga integratsiya qilishning kontseptual modeli ishlab chiqilgan; ikkinchidan, transchegaraviy kasbiy kompetensiyalar shakllantirishning raqamli mexanizmlari tizimlashtirilgan; uchinchidan, O‘zbekiston kontekstida NEET yoshlarni raqamli iqtisodiyotga jalb qilishning o‘ziga xos jihatlari aniqlangan.

NEET yoshlar muammosining nazariy asoslari va global konteksti:

1. NEET konsepsiyasining evolyutsiyasi: NEET termini birinchi marta 1999-yilda Buyuk Britaniya hukumati hujjatlarida rasman qo‘llanilgan va keyinchalik Yevropa Ittifoqi, OECD mamlakatlari hamda boshqa mintaqalarda keng tarqalgan. Dastlab ushbu tushuncha 16-18 yoshdagi o‘spirinlarga nisbatan ishlatilgan bo‘lsa, zamonaviy tadqiqotlarda yosh chegarasi 15-29, ba'zi hollarda 15-34 yoshgacha kengaytirilgan.

Furlong (2006) ta'kidlaganidek, NEET kategoriyasi heterojen tarkibga ega bo‘lib, turli sub-guruhlarni o‘z ichiga oladi: ko‘ngilli ravishda ta'lim va mehnatdan chetlashganlar, ijtimoiy-iqtisodiy omillar tufayli imkoniyatdan mahrum bo‘lganlar, sog‘lig‘i yoki oilaviy sharoiti tufayli faol bo‘la olmaganlar va boshqalar. Ushbu differentsiatsiya NEET yoshlar bilan ishlashda individuallashtirilgan yondashuvlarni ishlab chiqish zarurligini ta'kidlaydi.

2. NEET holatining ijtimoiy-iqtisodiy determinantlari:

Zamonaviy tadqiqotlar NEET holatining ko‘p omilli tabiatini tasdiqlaydi. Eurofound (2024) hisobotiga ko‘ra, asosiy determinantlar qatoriga quyidagilar kiradi:

- Ijtimoiy-iqtisodiy omillar: past daromadli oilalardan kelgan yoshlarda NEET holatiga tushish ehtimoli 2,5 barobar yuqori;
- Ta'lim omillari: to‘liq o‘rta ta'limni tugatmagan yoshlarda NEET bo‘lish xavfi 3 barobar ko‘p;
- Hududiy omillar: qishloq joylarda va rivojlanayotgan mintaqalarda NEET darajasi shahar hududlariga nisbatan sezilarli yuqori;
- Gender omillari: ayollar orasida NEET darajasi erkaklar orasidagiga nisbatan 1,4-1,8 barobar yuqori.

3. Raqamli texnologiyalar va NEET muammosi: paradigmal o‘zgarish: Raqamli texnologiyalarning rivojlanishi NEET muammosiga ikki tomonlama ta'sir ko‘rsatmoqda. Bir tomondan, avtomatlashtirish va sun'iy intellekt past malakali ish o‘rinlarini qisqartirish orqali NEET xavfini oshirmoqda. World Economic Forum (2023) prognozlariga ko‘ra, 2027-yilga qadar 85 million ish o‘rni avtomatlashtirilishi mumkin.

Boshqa tomondan, raqamli ta'lim platformalari NEET yoshlarga geografik va moliyaviy cheklovlardan qat'i nazar, zamonaviy malakalarni egallash imkoniyatini taqdim etmoqda. Raqamli ta'lim ekotizimi an'anaviy ta'lim tizimlariga alternativa sifatida NEET yoshlarning kasbiy transformatsiyasida muhim rol o‘ynamoqda.

Global raqamli ta'lim platformalari: arxitektura va pedagogik yondashuvlar

1. MOOC platformalarining evolyutsiyasi: Ommaviy ochiq onlayn kurslar (MOOC) konsepsiyasi 2008-yilda paydo bo‘lib, 2012-yilda Coursera, edX va Udacity platformalarining ishga tushishi bilan global miqyosda tarqaldi. Class Central (2024) ma'lumotlariga ko‘ra, hozirda dunyoda 220 milliondan ortiq MOOC foydalanuvchisi mavjud bo‘lib, 19 000 dan ortiq kurs taklif qilinmoqda.

MOOC platformalarining evolyutsiyasini uch bosqichga ajratish mumkin:

- Birinchi bosqich (2012-2015): xMOOC modeli — kontentga yo‘naltirilgan, passiv o‘rganish, past kurs yakunlash ko‘rsatkichlari (5-10%).
- Ikkinchi bosqich (2016-2020): adaptiv o‘rganish texnologiyalari, mikro-credentials tizimi, korporativ sherikliklar, ixtisoslashtirilgan dasturlar.
- Uchinchi bosqich (2021-hozir): sun'iy intellektga asoslangan personalizatsiya, real-time mentorlik, kasbiy yo‘naltirilgan credential'lar, ish beruvchilar bilan to‘g‘ridan-to‘g‘ri integratsiya.

2. Asosiy global platformalar tahlili,

Coursera — 2012-yilda Stanford universiteti olimlari tomonidan asos solingan platforma hozirda 300+ universitet va kompaniyalar bilan hamkorlikda 7 000+ kurs taklif qiladi. 2024-yil holatiga ko‘ra, 148 million ro‘yxatdan o‘tgan foydalanuvchiga ega. Platformaning NEET yoshlar uchun afzalligi — moliyaviy yordam dasturlari (Coursera for Campus, Coursera for Government) va keng qamrovli Professional Certificate dasturlari.

edX — MIT va Harvard universiteti tashabbusi bilan yaratilgan platforma 160+ ta'lim muassasasi bilan hamkorlik qiladi. MicroMasters va Professional Certificate dasturlari orqali NEET yoshlarga kredit transferi imkoniyatiga ega akademik malakalarni taklif qiladi.

Udacity — "Nanodegree" konsepsiyasini joriy etgan platforma texnologik sektorga yo‘naltirilgan intensiv dasturlarni taklif qiladi. Google, Amazon, AT&T kabi kompaniyalar bilan sheriklik orqali ishga joylashish kafolatlarini taqdim etadi.

Khan Academy — to‘liq bepul, ko‘p tilli platforma sifatida NEET yoshlarning bazaviy akademik malakalarini mustahkamlashda muhim rol o‘ynaydi. Adaptiv o‘rganish algoritmlari orqali individual o‘rganish yo‘lini taqdim etadi.

Udemy — 65+ million foydalanuvchi va 200 000+ kurs bilan eng keng kurs bazasiga ega. Kasbiy malakalar bo‘yicha arzon narxlardagi kurslar NEET yoshlar uchun qulay kirish nuqtasini ta'minlaydi.

3. Platformalarning pedagogik modellari, Raqamli ta'lim platformalarida qo‘llaniladigan pedagogik yondashuvlarni quyidagicha tizimlash mumkin:

Yondashuv	Xususiyatlari	NEET yoshlar uchun samaradorligi.
Konnektivizm	Tarmoqli o‘rganish, jamoaviy bilim yaratish	O‘rta — ijtimoiy izolyatsiyani bartaraf etishda samarali.
Mastery learning	Kompetensiyaga asoslangan progressiya	Yuqori — individual sur'atda o‘rganishga imkon beradi.
Gamifikatsiya	O‘yin elementlari, mukofot tizimlari	Yuqori — motivatsiyani oshiradi.
Project-based learning	Amaliy loyihalar orqali o‘rganish	Juda yuqori — real ko‘nikmalarni shakllantiradi

Transchegaraviy kasbiy kompetensiyalar: yangi paradigma

1. Transchegaraviy malakalar konsepsiyasi:

Transchegaraviy kasbiy malakalar — geografik, madaniy va institutsional chegaralardan qat'i nazar qo‘llaniladigan universal kompetensiyalardir. Ushbu malakalar global mehnat bozorida mobillik va moslashuvchanlikni ta'minlaydi.

Deming (2017) tadqiqotiga ko‘ra, 1980-2012 yillar oralig‘ida AQSh mehnat bozorida ijtimoiy ko‘nikmalar talab qilinadigan ish o‘rinlari ulushi 24% ga oshgan, texnik malakalar talab qilinadigan ish o‘rinlari esa 10% ga kamaygan. Bu tendentsiya transchegaraviy soft skills malakalarining ahamiyati ortib borayotganini ko‘rsatadi.

2. Raqamli platformalarda transchegaraviy malakalar klassifikatsiyasi: Tadqiqot natijalariga asoslanib, raqamli ta'lim platformalarida shakllantirilayotgan transchegaraviy malakalarni quyidagicha tasniflash mumkin:

Raqamli kompetensiyalar:	***Kognitiv kompetensiyalar:***
• Ma'lumotlar savodxonligi (data literacy) • Raqamli kontentni yaratish va boshqarish • Kiberxavfsizlik asoslari • Sun'iy intellekt vositalari bilan ishlash	• Tanqidiy fikrlash • Muammolarni hal qilish • Ijodiy fikrlash • Tizimli tahlil qilish
Ijtimoiy kompetensiyalar:	***Meta-kompetensiyalar:***
• Madaniyatlararo kommunikatsiya • Virtual jamoalarda hamkorlik	• O‘z-o‘zini boshqarish (self-management)

• Emotsional intellekt • Muzokaralar olib borish	• Doimiy o‘rganish qobiliyati • Moslashuvchanlik (adaptability) • Kasbiy identifikatsiya • 3.3. Mikrosertifikatlar va raqamli credential'lar

3. Mikrosertifikatlar — muayyan kompetensiyalarni tasdiqlovchi qisqa muddatli, maqsadli ta'lim dasturlari natijasidir. UNESCO (2023) ta'rifiga ko‘ra, mikrosertifikatlar "kichik hajmli, modulli o‘rganish tajribasining natijalarini tasdiqlovchi hujjatlar"dir.

Mikrosertifikatlar tizimining NEET yoshlar uchun afzalliklari:

Qisqa muddatlilik: 2-6 haftalik intensiv dasturlar

*Moslashuvchanlik: i*ndividual jadval bo‘yicha o‘rganish

Arzonlik: to‘liq akademik dasturlarga nisbatan past narx

Aniqlik: muayyan kasbiy malakaga yo‘naltirilganlik

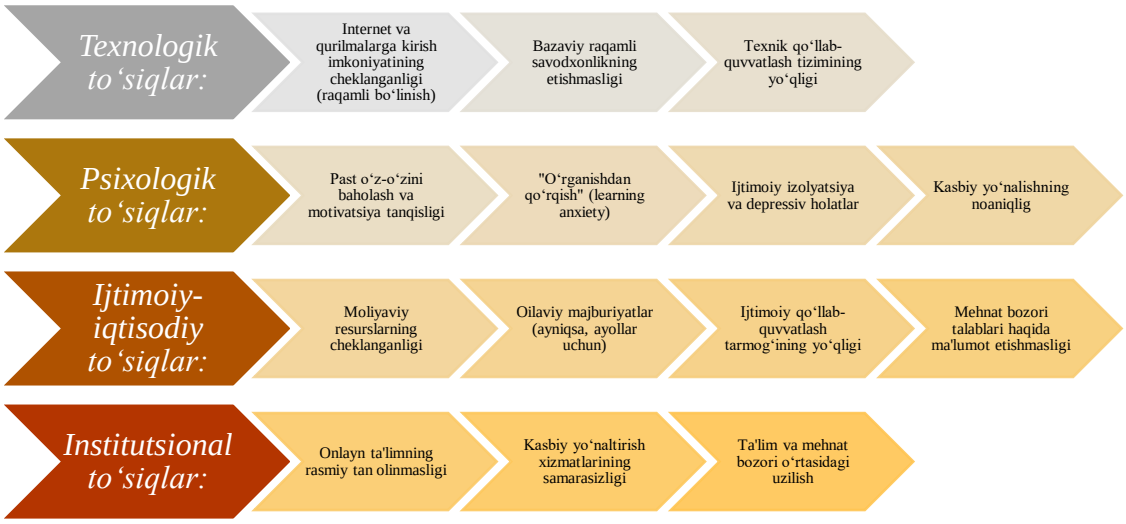
Tan olinishi: ish beruvchilar tomonidan tobora ko‘proq qabul qilinmoqda

Digital badges va blockchain-asoslangan sertifikatsiyalar credentiallarning ishonchliligi va portativligini ta'minlaydi. Europass Digital Credentials Infrastructure (EDCI) va Open Badges standartlari Yevropa miqyosida mikrosertifikatlarning o‘zaro tan olinishini ta'minlamoqda.

NEET yoshlarni raqamli ta'lim muhitiga integratsiya qilish modeli

1. Integratsiyaning to‘siqlar tizimi

NEET yoshlarni raqamli ta'lim platformalariga jalb qilishda bir qator to‘siqlar mavjud:



2. Integratsion model: ko‘p darajali yondashuv

Tadqiqot natijalariga asoslanib, NEET yoshlarni raqamli ta'lim muhitiga integratsiya qilishning ko‘p darajali modelini taklif qilamiz: (1-ilova)

Ushbu model quyidagi asosiy tamoyillarga asoslanadi:

- *Individuallashtirilgan yondashuv:* Har bir NEET yoshning ehtiyojlari, imkoniyatlari va maqsadlarini hisobga olgan holda o‘rganish yo‘lini loyihalash.
- *Bosqichmalik*: Bazaviy raqamli savodxonlikdan yuqori darajadagi kasbiy malakalarni egallashgacha ketma-ket progressiya.
- *Qo‘llab-quvvatlash tizimi:* Mentorlar, tengdoshlar va mutaxassislardan iborat ijtimoiy tarmoq orqali motivatsiyani saqlash.

- *Natijaga yo‘naltirilganlik:* O‘rganish jarayonini mehnat bozoriga integratsiya maqsadi bilan bog‘lash.

3. Samarali amaliyotlar: xalqaro tajriba

Yevropa Ittifoqi: "Youth Guarantee" dasturi. 2014-yildan boshlab joriy etilgan ushbu dastur har bir NEET yoshga 4 oy ichida sifatli ta'lim, stajirovka yoki ish taklifi kafolatini beradi. Raqamli ta'lim komponentlari orqali 2024-yilga qadar 8 milliondan ortiq yosh ishga joylashtirilgan.

Janubiy Koreya: "K-MOOC" platformasi. Davlat tomonidan qo‘llab-quvvatlanadigan milliy MOOC platformasi NEET yoshlar uchun maxsus dasturlar taklif qiladi. AI-asoslangan kasbiy yo‘naltirish va ish beruvchilar bilan to‘g‘ridan-to‘g‘ri bog‘lanish imkoniyatlari mavjud.

Hindiston: "SWAYAM" va "Skill India" dasturlari. 1,4 milliard aholiga ega mamlakatda NEET yoshlarni raqamli malakalar bilan ta'minlash maqsadida keng qamrovli davlat dasturlari amalga oshirilmoqda. 2025-yilga qadar 400 million kishini qayta tayyorlash rejalashtirilgan.

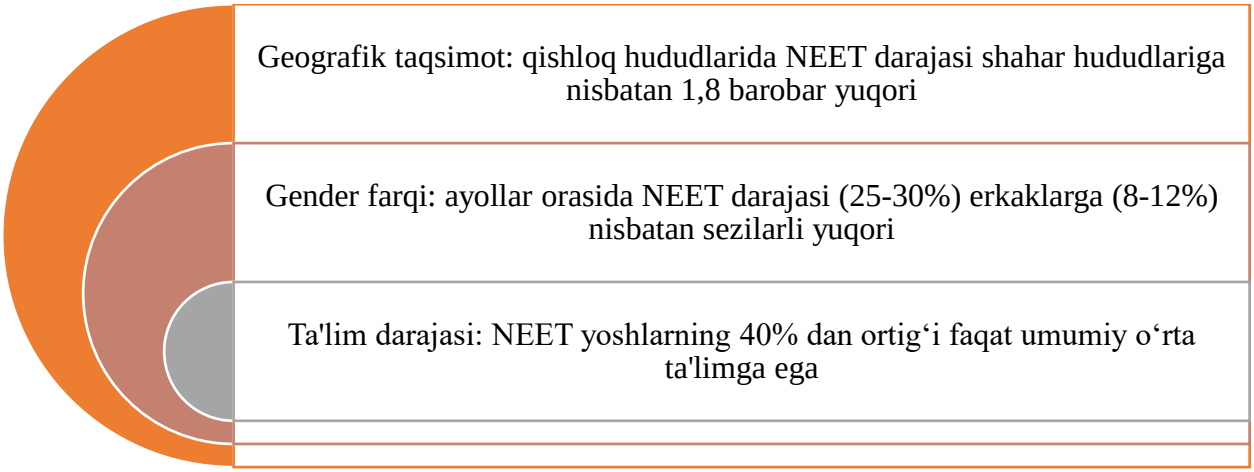
Singapur: "SkillsFuture" tashabbusi. Har bir fuqaroga 500 singapur dollari miqdorida ta'lim krediti taqdim etiladi. NEET yoshlar uchun maxsus karyera konsultatsiyalari va subsidiyalangan kurslar mavjud.

O‘zbekiston kontekstida NEET yoshlar va raqamli ta'lim

1. O‘zbekistonda NEET yoshlar: joriy holat tahlili

O‘zbekiston Respublikasi Statistika qo‘mitasi ma'lumotlariga ko‘ra, 2024-yilda mamlakatda 15-29 yosh oralig‘ida taxminan 1,2 million kishi NEET kategoriyasiga mansub. Bu umumiy yosh aholisining taxminan 14-16% ni tashkil qiladi.

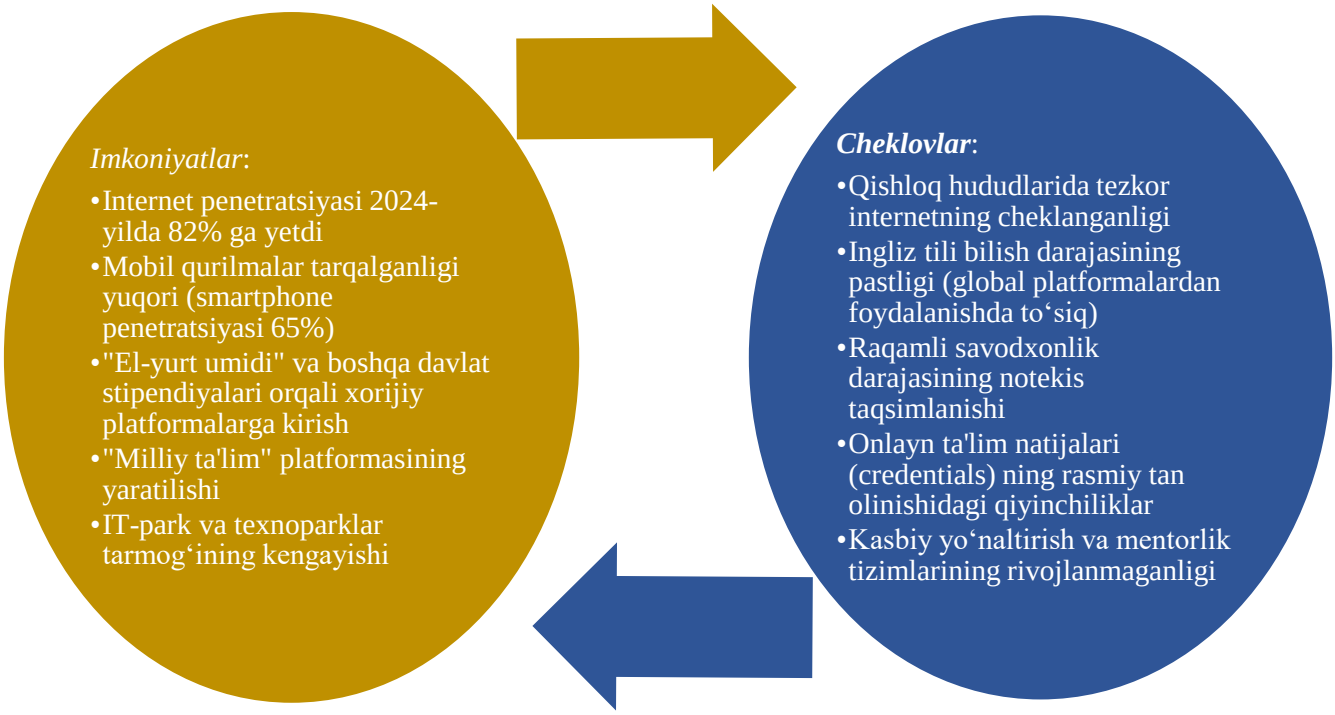
O‘zbekistondagi NEET yoshlarning o‘ziga xos xususiyatlari:



Mehnat migratsiyasi: ko‘plab potensial NEET yoshlar mehnat migratsiyasiga chiqish orqali statistikadan tushib qoladi

2. Raqamli ta'lim infratuzilmasi: imkoniyatlar va cheklovlar

O‘zbekistonda raqamli ta'lim infratuzilmasi so‘nggi yillarda sezilarli rivojlanmoqda:



3. O‘zbekiston uchun strategik tavsiyalar

NEET yoshlarni raqamli ta'lim muhitiga integratsiya qilish bo‘yicha quyidagi strategik tavsiyalar ishlab chiqildi:

Qisqa muddatli (1-2 yil):

2. Milliy NEET registrini yaratish va real-time monitoring tizimini joriy etish
3. Mahallalar va yoshlar tashkilotlari orqali outreach dasturlarini kuchaytirish
4. Davlat tomonidan subsidiyalanadigan global platformalar akkauntlari (Coursera for Government modeli)
5. O‘zbek tilida raqamli savodxonlik kurslari kontentini kengaytirish
6. Yoshlar markazlarida raqamli o‘rganish xonalarini (digital learning hubs) tashkil etish

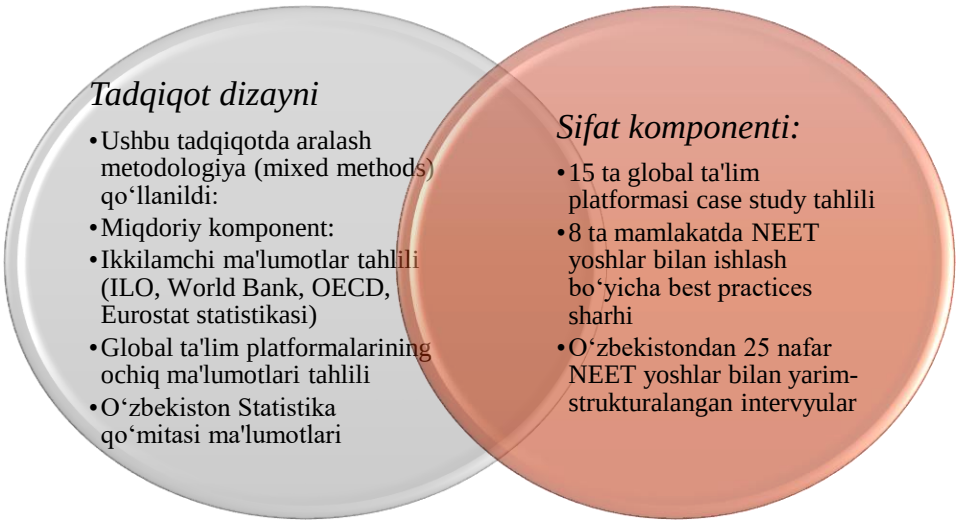
O‘rta muddatli (3-5 yil):

1. Milliy mikrosertifikatlar ramkasini (National Microcredentials Framework) ishlab chiqish
2. Global platformalar sertifikatlari va milliy malaka tizimi o‘rtasida ekvivalentlik mexanizmlarini joriy etish
3. AI-asoslangan kasbiy yo‘naltirish platformasini yaratish
4. "Digital skills vouchers" dasturini joriy etish (har bir NEET yoshga raqamli ta'lim uchun maqsadli mablag‘)
5. Ish beruvchilar konsorsiumi bilan apprenticeship dasturlarini birlashtirib, "earn-and-learn" modelini joriy etish

Uzoq muddatli (5-10 yil):

1. Hayot davomida ta'lim (Lifelong Learning) madaniyatini shakllantirish
2. Raqamli iqtisodiyotning barcha tarmoqlarida NEET yoshlarning integratsiyasini ta'minlash
3. O‘zbekistonni mintaqada raqamli ta'lim hubi sifatida shakllantirish
4. Transchegaraviy raqamli mehnat bozorida O‘zbekiston fuqarolarining raqobatbardoshligini oshirish

Tadqiqot metodologiyasi va empirik natijalar



2. Asosiy empirik topilmalar

Tadqiqot natijalariga ko‘ra quyidagi asosiy topilmalar aniqlandi:

Topilma 1: Raqamli ta'lim platformalarida muvaffaqiyatli kurs yakunlagan NEET yoshlarning 67% i 6 oy ichida ish topgan yoki o‘z biznesini boshlagan (an'anaviy qayta tayyorlash dasturlarida bu ko‘rsatkich 41%).

Topilma 2: Mikrosertifikatlar kombinatsiyasi (3+ ta) to‘liq diplom dasturiga nisbatan mehnat bozoriga tezroq kirish imkonini beradi (o‘rtacha 8 oy vs 24 oy).

Topilma 3: Mentorlik va peer-support tizimi mavjud bo‘lgan dasturlarda kurs yakunlash darajasi 3 barobar yuqori (45% vs 15%).

Topilma 4: O‘zbekistonlik NEET yoshlarning 78% i global platformalardan xabardor, lekin faqat 12% i hech bo‘lmaganda bitta kursni yakunlagan.

Topilma 5: O‘zbekistonlik NEET yoshlarning asosiy motivatsiyasi — xorijga mehnat migratsiyasi uchun malakalarni egallash (64%), milliy mehnat bozori uchun tayyorgarlik ikkinchi o‘rinda (23%).

3. Tahliliy muhokama

Olingan natijalar bir qator muhim xulosalarni chiqarish imkonini beradi.

Birinchidan, raqamli ta'lim platformalari NEET yoshlar uchun "ikkinchi imkoniyat" sifatida muhim rol o‘ynaydi. An'anaviy ta'lim tizimidan tushib qolgan yoshlar global platformalar orqali zamonaviy malakalarni egallash va mehnat bozoriga qaytish imkoniyatiga ega bo‘lmoqda.

Ikkinchidan, faqat texnologik kirish (platformalarga ulanish) NEET muammosini hal qilish uchun yetarli emas. Motivatsion, psixologik va ijtimoiy qo‘llab-quvvatlash tizimlari muhim ahamiyatga ega. NEET yoshlarning ijtimoiy izolyatsiyasi va past o‘z-o‘zini baholashi platformalarga kirishdan oldin hal qilinishi kerak.

Uchinchidan, O‘zbekiston kontekstida til to‘sig‘i (ingliz tilini bilmaslik) global platformalardan foydalanishda asosiy cheklovlardan biri hisoblanadi. Shu bilan birga, bu cheklov mahalliy kontentni rivojlantirish va til o‘rganish dasturlarini NEET integratsiya strategiyasiga qo‘shish orqali bartaraf etilishi mumkin.

To‘rtinchidan, transchegaraviy malakalar, ayniqsa raqamli kompetensiyalar, NEET yoshlarning global mehnat bozorida raqobatbardoshligini ta'minlashda hal qiluvchi ahamiyatga ega. O‘zbekistonlik yoshlarning mehnat migratsiyasiga yo‘naltirish tendentsiyasi bu malakalar zarurligini yanada oshiradi.

Uyushmagan (NEET) yoshlarni raqamli ta'lim muhitiga integratsiya qilish XXI asr mehnat bozorining eng dolzarb muammolaridan biridir. Tadqiqot natijalariga koʻra, global raqamli ta'lim platformalari (Coursera, edX, Udacity va boshqalar) NEET yoshlarning kasbiy transformatsiyasida samarali vosita sifatida namoyon boʻlmoqda.

Transchegaraviy kasbiy kompetensiyalar — raqamli savodxonlik, tanqidiy fikrlash, madaniyatlararo kommunikatsiya va doimiy oʻrganish qobiliyati — global mehnat bozorida muvaffaqiyatning asosiy omillariga aylanmoqda. Mikrosertifikatlar va raqamli credential'lar an'anaviy diplomlarga alternativa sifatida NEET yoshlarga tezkor va moslashuvchan kasbiy tayyorgarlik imkonini bermoqda.

Oʻzbekiston kontekstida NEET yoshlarni raqamli ta'lim muhitiga integratsiya qilish bir qator oʻziga xos imkoniyatlar va cheklovlar bilan bogʻliq. Yosh aholining yuqori ulushi, mobil texnologiyalarning keng tarqalganligi va davlat tomonidan raqamli transformatsiyaga e'tibor — bu imkoniyatlardir. Boshqa tomondan, til toʻsiqlari, qishloq hududlarida infratuzilmaning cheklanganligi va onlayn ta'limning rasmiy tan olinishidagi qiyinchiliklar asosiy cheklovlar hisoblanadi.

Tadqiqotda taklif etilgan koʻp darajali integratsiya modeli NEET yoshlarni aniqlash, raqamli savodxonlikni shakllantirish, individual oʻrganish yoʻllarini loyihalash, qoʻllab-quvvatlash tizimlari orqali progressni ta'minlash va nihoyat mehnat bozoriga integratsiyani amalga oshirishni oʻz ichiga oladi.

Kelajakda tadqiqotlar Oʻzbekistonda NEET yoshlar bilan ishlashning samarali modellarini empirik sinovdan oʻtkazish, milliy mikrosertifikatlar ramkasini ishlab chiqish va global platformalar bilan hamkorlik mexanizmlarini takomillashtirishga yoʻnaltirilishi maqsadga muvofiqdir.

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THE INFLUENCE OF DIGITAL COMMUNICATION ON MODERN POLITENESS STRATEGIES

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Abstract. *The development of digital communication has significantly changed the ways people communicate in modern society. Social media platforms and messaging applications such as Telegram, WhatsApp, and email have influenced not only the speed of communication but also the use of politeness strategies in English. Traditional politeness theories were mainly developed for face-to-face communication, where gestures, tone, and facial expressions help people express respect and maintain social harmony. However, online communication environments function differently because users communicate mainly through short written messages and digital symbols.*

This article examines how politeness strategies are changing in digital communication. The study is based on theoretical analysis and a review of existing literature related to pragmatics, sociolinguistics, and computer-mediated communication. The article discusses the increasing use of direct language, the reduction of traditional formal expressions, and the growing role of emojis and punctuation in online interaction. The study also explains how communication platforms influence users' linguistic behavior and interpersonal relationships.

The findings show that politeness in digital communication is not disappearing but transforming into more flexible and context-dependent forms. The article concludes that modern communication requires a broader understanding of politeness that includes linguistic, paralinguistic, and contextual elements.

Keywords: *politeness strategies, digital communication, social media, pragmatics, online discourse.*

Politeness is considered one of the most important aspects of human communication because it helps individuals maintain social harmony and build effective interpersonal relationships [1: 32]. In everyday interaction, people constantly use linguistic strategies in order to avoid conflict, express respect, and maintain positive social relationships with others. These strategies may include indirect requests, formal expressions, mitigation devices, and other communicative techniques that help reduce interpersonal tension. The importance of politeness becomes especially visible in multicultural communication environments where misunderstanding

and pragmatic failure may easily occur if speakers interpret communication differently. In linguistic pragmatics, politeness is generally understood as a system of communicative strategies used to show respect, reduce conflict, and avoid threatening the interlocutor’s social image. For many years, researchers studied politeness mainly in face-to-face communication, where speakers rely on both verbal and non-verbal signals such as tone of voice, gestures, facial expressions, and eye contact. However, the rapid development of digital technologies has significantly changed communication practices all over the world.

Today, millions of people communicate daily through social media platforms and messaging applications [5: 14]. Digital communication has become an inseparable part of modern social, academic, and professional life. People use messaging applications not only for casual conversations but also for educational discussions, workplace communication, and international collaboration. As a result, communication practices that originally belonged to informal online interaction are increasingly influencing broader language use and communication norms. Telegram, WhatsApp, Instagram, Facebook Messenger, and email have become important tools for personal, academic, and professional communication. These platforms allow users to exchange information quickly and conveniently, but they also influence language use and communication style [2: 21]. In digital environments, communication is often shorter, faster, and more direct compared to traditional face-to-face interaction.

One of the most noticeable changes in online communication is the transformation of politeness strategies [3: 57]. In many online communication environments, users prefer shorter and more direct expressions because digital interaction often prioritizes speed and efficiency. Unlike traditional written communication, online messaging allows immediate responses and rapid information exchange, which encourages simplified language structures. Consequently, many formal politeness markers that were traditionally common in written communication are used less frequently in everyday digital interaction. Many users no longer employ long greetings, formal expressions, or indirect requests in everyday online conversations. Instead, communication often focuses on speed and efficiency. At the same time, digital communication has introduced new forms of expressing politeness, including emojis, reaction icons, punctuation marks, and abbreviations. These elements frequently replace traditional non-verbal cues and help users express emotions and interpersonal attitudes.

The transformation of politeness strategies becomes even more complex in intercultural communication contexts. English is widely used as a global language in online interaction, bringing together people from different cultural and linguistic backgrounds. As a result, users may interpret politeness differently depending on their cultural norms and communication habits. This situation creates new challenges for understanding politeness in digital discourse.

The purpose of this article is to examine how digital communication influences modern politeness strategies in English. The study discusses the limitations of traditional politeness theories in online communication and explains the growing importance of multimodal and contextual forms of politeness. The relevance of the topic is connected with the rapid growth of online communication in modern society and the increasing importance of intercultural interaction in digital environments. Today, millions of users communicate through messaging applications and social media platforms every day, which makes digital communication one of the most influential forms of language use. Despite this, many traditional theories of politeness were developed before the emergence of social media and therefore cannot fully explain modern online interaction. The scientific novelty of this article lies in its attempt to explain politeness not only

through linguistic structures but also through multimodal and contextual factors that shape communication in digital environments. The objectives of the research include analyzing the transformation of politeness strategies in online communication, identifying the main features of digital politeness, and proposing a simplified model explaining how politeness functions in modern digital discourse.

The present study uses a theoretical and analytical research approach. The article is based on the review and analysis of scientific literature related to pragmatics, sociolinguistics, politeness theory, and computer-mediated communication. The research does not involve experimental data collection but focuses on examining existing theoretical perspectives and communication practices in digital environments.

The first stage of the study involved reviewing classical theories of politeness developed by researchers such as Brown and Levinson [1]. Their theory explains politeness as a system of strategies used to reduce face-threatening acts and maintain social harmony [1: 45]. Additional literature related to digital communication and online discourse was also analyzed in order to identify recent changes in communication behavior [2: 18].

The second stage focused on identifying major characteristics of digital communication that influence politeness strategies. Particular attention was paid to features such as increased directness, shortened message structures, the use of emojis, and platform-specific communication norms. Examples of communication from common digital environments such as Telegram messaging and email discourse were used to support the discussion.

Finally, the findings from the theoretical analysis were organized into several thematic categories in order to explain how modern politeness strategies function in online communication. The study also proposes a simplified conceptual model of digital politeness consisting of linguistic, paralinguistic, and contextual components. The research methods used in the study include comparative analysis, descriptive analysis, and theoretical synthesis. Comparative analysis was applied in order to compare traditional politeness strategies with modern digital communication practices. Descriptive analysis was used to identify the main linguistic and communicative characteristics of online interaction. Theoretical synthesis allowed the integration of ideas from pragmatics, sociolinguistics, and computer-mediated communication studies into a unified framework.

The analysis demonstrates that digital communication has significantly influenced the realization of politeness strategies in modern English [4: 2]. Modern communication technologies have created new interactional environments where users continuously adapt their language according to platform norms and communicative goals. For example, messaging applications such as Telegram often encourage brief and direct communication, while email communication still tends to preserve more formal and structured interaction patterns. These differences demonstrate that politeness strategies are closely connected not only with linguistic norms but also with technological and contextual factors. Traditional forms of politeness often relied on indirectness, formal expressions, and carefully structured language. In face-to-face communication, speakers usually employed greetings, hedging expressions, and polite forms in order to avoid sounding rude or overly direct. However, online communication environments have changed these interactional patterns.

One of the major characteristics of digital communication is increased directness. Users of messaging applications frequently prefer short and efficient messages rather than long and formally structured sentences. For example, requests such as “Send me the document” or “Call me

later” are common in Telegram communication. In traditional formal communication, such requests would usually contain mitigation devices such as “Could you please send me the document?” Nevertheless, in digital communication these shorter forms are often accepted as normal and efficient rather than impolite.

Another important feature of online communication is the reduced use of traditional formal markers [2: 25]. In many digital conversations, users omit greetings, closings, and honorific expressions that would normally appear in formal written discourse. Messages often begin immediately with the main topic of discussion, especially when communication occurs between individuals who interact regularly online. This tendency reflects the growing importance of communicative efficiency in digital environments, where users generally expect quick and concise interaction. Greetings, closings, and honorific expressions are frequently omitted in everyday messaging. Many conversations begin immediately with the main topic, especially when communication occurs between close friends, classmates, or colleagues. This demonstrates that online communication prioritizes speed and convenience.

At the same time, digital communication introduces new forms of politeness. Emojis, punctuation marks, reaction icons, and formatting styles play an important role in expressing interpersonal attitudes and emotions. A smiling emoji, for example, may soften a direct request and create a friendly atmosphere. Similarly, punctuation such as repeated exclamation marks may indicate enthusiasm or emotional involvement.

Feature	**Description**
Increased directness	Messages are shorter and more explicit
Reduced formality	Greetings and formal structures are often omitted
Use of emojis	Emojis help express emotions and friendliness
Context dependence	Meaning depends on platform and relationship
Communication speed	Fast interaction influences language structure

Table 1. Main Characteristics of Digital Politeness

Digital Communication and Intercultural Interaction

Digital communication has also influenced intercultural interaction because people from different countries and linguistic backgrounds communicate daily through online platforms [5: 39]. English functions as a global lingua franca in many online environments, allowing users from different cultural backgrounds to communicate with one another regardless of their native language. However, cultural differences continue to influence communication style and politeness expectations. Some cultures value indirectness and formal communication, whereas others prioritize directness and communicative efficiency. Therefore, online interaction often requires users to negotiate different pragmatic norms simultaneously. English functions as a global lingua franca in many digital environments, allowing international users to interact regardless of their native language.

However, different cultures may have different expectations regarding politeness. Some cultures emphasize indirectness and formal communication, while others prefer directness and efficiency. As a result, misunderstandings may occur in online interaction. A message considered normal in one culture may appear rude or too informal in another.

Non-native English speakers may also transfer politeness norms from their native language into English communication. For example, some users may employ highly formal expressions in

casual online interaction, while others may use very direct structures because they prioritize efficiency. Therefore, understanding digital politeness requires not only linguistic knowledge but also intercultural communicative competence.

A Simplified Model of Digital Politeness

Based on the theoretical analysis, the study proposes a simplified model of digital politeness.

Table 2. Components of Digital Politeness

Component	**Function**
Linguistic component	Words, grammar, and polite expressions
Paralinguistic component	Emojis, punctuation, formatting
Contextual component	Platform norms and interpersonal relationships

The linguistic component includes traditional politeness strategies such as indirect requests and mitigation. The paralinguistic component includes visual and symbolic elements that replace non-verbal communication in digital interaction. The contextual component refers to communication environment, social relationships, and interactional expectations.

This model demonstrates that politeness in online communication is multidimensional and cannot be explained only through traditional linguistic structures. The findings of the study indicate that digital communication environments require users to adapt their communicative behavior continuously according to interactional context and platform norms. Modern online communication increasingly combines linguistic forms with visual and symbolic elements in order to maintain effective interpersonal interaction. Therefore, politeness in digital discourse should be understood as a dynamic communicative process rather than a fixed set of formal expressions.

The development of digital communication technologies has significantly transformed modern politeness strategies [3: 71]. Contemporary online communication environments encourage users to adopt communication styles that are faster, more flexible, and more context-dependent than traditional forms of interaction. As communication increasingly occurs through digital platforms, politeness is no longer expressed only through formal linguistic structures. Instead, users combine words, symbols, emojis, and contextual understanding in order to maintain interpersonal relationships and communicate effectively. Online communication environments such as Telegram and social media platforms encourage shorter, faster, and more direct interaction. As a result, many traditional politeness markers are reduced or modified in digital discourse.

However, the study demonstrates that politeness is not disappearing from communication. Instead, it is adapting to new technological and social conditions. Emojis, punctuation marks, and contextual understanding increasingly function as important tools for expressing interpersonal attitudes and maintaining social harmony.

The article also highlights the importance of intercultural competence in digital communication. Since English is widely used in global online interaction, users from different cultural backgrounds may interpret politeness differently. Therefore, effective online communication requires both linguistic and cultural awareness. Based on the results of the study, several recommendations may be proposed. Language teachers should pay greater attention to teaching digital communication skills and modern politeness strategies in English classes. Students should be introduced not only to traditional formal communication but also to the pragmatic norms of online interaction. Future research may focus on empirical analysis of social media discourse

and comparative studies of digital politeness across different cultures and communication platforms.

The proposed model of digital politeness shows that modern communication includes linguistic, paralinguistic, and contextual dimensions. Future studies may further investigate digital politeness through empirical analysis of social media and messaging discourse.

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METHODOLOGY FOR ORGANIZING INDEPENDENT WORK IN THE ESP COURSE FOR LAW STUDENTS: FROM THEORY TO PRACTICAL IMPLEMENTATION

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Annotatsiya. *Ushbu maqola yurist talabalar uchun maxsus maqsadlardagi ingliz tili (ESP) ta'limida talabalarning mustaqil ishlarini (TMI) tashkil etishning metodologik asoslarini o'rganadi. Tadqiqot auditoriya vaqtining cheklanganligi muammosini hal qiladi va mustaqil o'quv faoliyati orqali kasbiy kommunikativ kompetensiyani rivojlantirishga mo'ljallangan amaliy yo'naltirilgan yondashuvni taklif etadi. Maqolada xalqaro huquq yo'nalishida tahsil olayotgan ikkinchi bosqich talabalarining to'rtinchi semestridagi o'quv jarayonida joriy etilgan besh komponentli TMI modeli taqdim etilgan. Ushbu dastur huquqiy nazariyani yuridik muloqot, qiyosiy tahlil, shartnomalarni tarjima qilish, mijozlar bilan suhbatlashish, huquqiy hujjatlarni tayyorlash va sud jarayonlarida himoyalanish kabi amaliy ko'nikmalar bilan uyg'unlashtiradi.*

Kalit so'zlar: *Yuridik ingliz tili, ESP, talabalarning mustaqil ishi, yuridik muloqot, qiyosiy huquq, shartnoma tarjimasi, sud jarayoni (mock trial), huquqiy pedagogika.*

Abstract. *This article examines the methodological foundations of organizing Independent Student Work (ISW) within English for Specific Purposes (ESP) instruction for law students. The study addresses the problem of limited classroom instruction time and proposes a practice-oriented framework designed to develop professional communicative competence through structured independent learning activities. The article presents a five-component ISW model implemented during the fourth semester of instruction for second-year law students specializing in international law. The framework integrates legal theory with practical skills in legal communication, comparative analysis, contract translation, client interviewing, legal drafting, and courtroom advocacy.*

Keywords: *Legal English, ESP, independent student work, legal communication, comparative law, contract translation, mock trial, legal pedagogy.*

Аннотация. *В данной статье рассматриваются методологические основы организации самостоятельной работы студентов (СРС) при обучении английскому языку для специальных целей (ESP) студентов-юристов. Исследование решает проблему ограниченности аудиторного времени и предлагает практико-ориентированную*

модель, направленную на развитие профессиональной коммуникативной компетенции посредством структурированной самостоятельной учебной деятельности. В статье представлена пятикомпонентная модель СРС, реализованная на четвертом семестре обучения для студентов второго курса, специализирующихся в области международного права. Данная программа интегрирует правовую теорию с практическими навыками юридической коммуникации, сравнительного анализа, перевода контрактов, интервьюирования клиентов, юридического письма и участия в игровых судебных процессах.

Ключевые слова: *Юридический английский, ESP, самостоятельная работа студентов, юридическая коммуникация, сравнительное правоведение, перевод контрактов, игровой судебный процесс, юридическая педагогика.*

Within contemporary ESP pedagogy, Independent Student Work (ISW) is increasingly viewed not as a supplementary component of instruction, but as a core mechanism for developing professional communicative competence in domain-specific contexts such as legal English. One of the principal challenges in ESP instruction for law students is the limited amount of classroom time available for communicative practice, professional interaction, and legal discourse simulation.

In courses consisting of approximately forty-five seventy-minute classes per semester, it is difficult to provide sufficient in-class practice for all forms of professional legal communication. As a result, ISW becomes a strategically important element of the educational process. For students with Upper-Intermediate (B2) to Advanced (C1) levels of English proficiency, independent tasks should simulate authentic professional activities performed by international lawyers, attorneys, legal consultants, and corporate specialists.

The present article describes a five-component ISW framework implemented during the fourth semester of ESP instruction for law students. The proposed model is based on progressively more complex assignments designed to integrate legal theory with communicative, analytical, intercultural, and professional competencies.

The growing importance of ESP instruction in higher education has generated considerable academic interest in communicative and profession-oriented approaches to language teaching. Hutchinson and Waters (1987) emphasize that ESP instruction should be centered on learner needs and authentic professional contexts. Dudley-Evans and St John (1998) further argue that ESP methodology must integrate discipline-specific discourse with communicative competence development. Within legal English pedagogy, simulation-based learning, case analysis, and authentic legal documentation are increasingly recognized as effective tools for developing professional communicative competence. Contemporary approaches to legal English instruction also emphasize task-based learning, comparative legal analysis, and experiential pedagogical models. Independent Student Work therefore represents not merely an auxiliary component of instruction, but a significant pedagogical mechanism for extending communicative practice beyond classroom limitations.

The study is based on pedagogical implementation conducted during the fourth semester of ESP instruction for second-year law students specializing in international law. Participants demonstrated English language proficiency ranging from B2 to C1 according to the Common European Framework of Reference for Languages (CEFR).

The ISW framework was implemented over one academic semester and consisted of five interconnected assignments organized according to the principle of progressive complexity. The

instructional model integrated communicative language teaching, task-based learning, contextual learning, comparative legal analysis, and simulation-based pedagogy.

Pedagogical observations were collected through oral performance analysis, classroom discussions, reflective feedback, and formative assessment procedures. Particular attention was paid to students’ communicative fluency, professional vocabulary usage, analytical reasoning, and legal discourse production.

Description of the Independent Student Work Framework

1. Case Brief Video Presentation (Sales of Goods Module)

The first component of the ISW framework was implemented within the module devoted to purchase and sale agreements. Students were instructed to independently select a landmark case related to contract law and prepare a structured case brief in English. The assignment consisted of several stages. During the first stage, students analyzed authentic case law materials and selected a judicial precedent relevant to the thematic module. During the second stage, students prepared a written case brief including factual background, legal issue, judicial reasoning, holding, and comparative legal commentary. The third stage required students to record a five-to-seven-minute video presentation explaining the case in professional legal English. The linguistic focus of the assignment included legal terminology related to contract law, persuasive oral discourse, legal reasoning, and case summarization strategies. Students were also required to compare the judicial decision with potential outcomes under Uzbek civil legislation, thereby integrating comparative legal analysis into communicative practice.

The expected learning outcomes included the ability to summarize legal reasoning, apply legal terminology accurately, develop oral fluency, and demonstrate analytical thinking within professional legal discourse. Assessment criteria included legal accuracy, communicative fluency, pronunciation, coherence of presentation, and depth of comparative analysis.

2. Comparative Contract Translation Project (Property Law Module)

The second ISW component focused on legal translation and comparative analysis within the field of property law. Students selected authentic real estate purchase, sale, or lease agreements drafted in Uzbek or Russian and translated them into English according to Anglo-American legal drafting conventions.

The assignment was implemented through a sequence of interconnected stages. First, students analyzed the legal structure and terminology of the original document in their native language. Second, students identified legal concepts that lacked direct equivalents within Common Law terminology. Third, they prepared a translated version adapted to English-language legal drafting standards. The linguistic and professional focus of the assignment included legal drafting conventions, comparative legal terminology, translation strategies, and formal written discourse. Students were expected to justify their lexical and structural choices during classroom presentations and peer discussions.

The assignment contributed to the development of comparative legal awareness, legal drafting competence, analytical reasoning, and professional written communication skills. Assessment focused on translation accuracy, terminological consistency, coherence of drafting, and professional register.

3. Terminological Glossary Development (Intellectual Property Law Module)

The third component of the framework focused on terminology systematization within intellectual property law. Students classified and analyzed concepts such as copyright, trademarks, patents, licensing, trade secrets, and related legal institutions during series of classes.

The assignment included several pedagogical stages. Initially, students collected authentic legal terminology from legislative texts, academic resources, and professional legal materials studied during the lessons in the classroom. Subsequently, they organized terminology into thematic categories and prepared bilingual or monolingual glossaries. Finally, students integrated the material into their role-play (lawyer client interview). The linguistic focus of the assignment included terminology acquisition, legal collocations, lexical precision, and contextual usage of professional vocabulary. Students also developed professional communicative skills through the creation of interactive educational content. Expected outcomes included vocabulary reinforcement, conceptual systematization, improved lexical accuracy, fluency and the development of independent research skills. Assessment criteria included completeness of terminology coverage, accuracy of definitions, organization of lexical categories, and practical applicability of the glossary.

4. Lawyer–Client Interview Simulation (Competition Law Module)

The fourth ISW component was designed to develop professional interpersonal communication skills through simulated lawyer–client consultations. Students worked in pairs and alternated between the roles of attorney and client within realistic competition law scenarios.

The assignment began with independent topic selection. Students selected subtopics related to competition law, including cartels, abuse of dominant position, predatory pricing, price fixing, mergers regulation, and anti-competitive practices. They then developed realistic business scenarios involving potential violations of antitrust legislation. During the simulation stage, the student acting as the client presented a commercial problem, while the student acting as the attorney conducted an initial legal consultation, assessed legal risks, explained legal consequences, and proposed possible legal solutions. The assignment focused linguistically on professional questioning strategies, persuasive communication, legal consultation discourse, negotiation language, and spontaneous interaction. The task also strengthened students’ ability to shift between formal legal terminology and accessible client-oriented communication.

Assessment criteria included communicative fluency, interaction management, legal reasoning, professional vocabulary usage, and pragmatic appropriateness within legal consultation discourse.

5. Research Project and Mock Trial Simulation (International Law Module)

The final and most integrative ISW component combined international law, human rights studies, extensive reading, and courtroom simulation. John Grisham’s legal thriller 'The Guardians' served as the conceptual basis for the project. The assignment was implemented in several stages. First, students had previously studied international legal frameworks related to human rights protection, access to justice, anti-corruption policy, and selected United Nations Sustainable Development Goals (SDGs). Second, students analyzed the criminal case involving the novel’s protagonist and identified procedural and evidentiary issues relevant to the mock trial. Students were subsequently divided into groups representing the judiciary, prosecution, and defense. Each group independently prepared procedural documents, witness examinations, opening statements, closing statements, and legal arguments in English. The semester culminated in a large-scale courtroom simulation conducted entirely in English. The linguistic focus of the project included courtroom discourse, persuasive rhetoric, procedural terminology, argumentative strategies, and public speaking skills. The assignment also promoted teamwork, critical thinking, intercultural awareness, and professional confidence.

Expected learning outcomes included the ability to participate in professional legal debate, formulate persuasive arguments, conduct procedural interaction, and apply legal English within

authentic courtroom communication. Assessment focused on legal reasoning, communicative effectiveness, teamwork, rhetorical organization, and oral advocacy skills.

Assessment Rubric

Assessment of Independent Student Work was based on a criteria-oriented approach that considered the communicative, analytical, and professional dimensions of each assignment.

Criterion	Excellent	Good	Satisfactory
Legal Accuracy	Highly accurate use of legal concepts	Minor inaccuracies	Frequent inaccuracies
Communicative Fluency	Natural professional interaction	Generally fluent communication	Limited fluency
Professional Vocabulary	Extensive and precise vocabulary	Adequate vocabulary range	Restricted vocabulary
Analytical Reasoning	Strong comparative and critical analysis	Moderate analysis	Limited analysis
Organization	Highly coherent structure	Mostly coherent	Weak organization

Pedagogical Implications

One of the key methodological principles of the framework was delayed correction during oral interaction. Grammatical errors that did not interfere with communication were recorded for subsequent individual feedback rather than corrected immediately. This approach reduced communicative anxiety and encouraged students to prioritize fluency and professional interaction.

The framework also demonstrated that authentic legal simulations significantly increase student engagement and facilitate the transition from academic language learning to professional communicative performance.

Conclusion

The implementation of the five-component ISW framework demonstrated that progressively more complex independent assignments can effectively compensate for limited classroom instruction time in ESP courses for law students. The proposed methodology contributed to the development of legal English proficiency, professional communicative competence, comparative legal awareness, analytical reasoning, and intercultural flexibility. The findings suggest that practice-oriented ISW activities may serve as an effective pedagogical mechanism for integrating language instruction with professional legal training in higher education.

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MAKTABGACHA TA'LIM TIZIMIDA FINLANDIYA TA'LIM MODELINI JORIY ETISHNING PEDAGOGIK ASOSLARI

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Annotatsiya. *Maqolada maktabgacha ta'lim tizimida Finlandiya ta'lim modelini joriy etishning pedagogik asoslari tahlil qilingan. Unda bolaga yo'naltirilganlik, o'yin asosida o'rganish, fenomen asosida ta'lim, educare, Montessori yondashuvi, tabiat bilan uyg'unlik va hayotga tayyorlash tamoyillarining mazmuni yoritilgan. Shuningdek, ushbu modelni milliy maktabgacha ta'lim tizimiga moslashtirishning metodik jihatlari ochib berilgan. Tadqiqot natijalari Finlandiya ta'lim modelining maktabgacha yoshdagi bolalarda mustaqillik, tashabbuskorlik va hayotiy ko'nikmalarni rivojlantirishda samarali ekanini ko'rsatdi.*
Kalit so'zlar: *maktabgacha ta'lim, Finlandiya ta'lim modeli, bolaga yo'naltirilganlik, fenomen asosida ta'lim, educare, Montessori, rivojlantiruvchi muhit.*

Abstract. *The article analyzes the pedagogical foundations of implementing the Finnish education model in the preschool education system. It highlights the main approaches of child-centeredness, play-based learning, phenomenon-based learning, educare, Montessori pedagogy, harmony with nature, and life preparation. The study also reveals methodological aspects of adapting this model to the national preschool education system. The findings show that the Finnish education model is effective in developing independence, initiative, and life skills in preschool children.*
Keywords: *preschool education, Finnish education model, child-centeredness, phenomenon-based learning, educare, Montessori, developmental environment.*

Аннотация. *В статье проанализированы педагогические основы внедрения финской модели образования в систему дошкольного образования. Раскрыто содержание таких подходов, как личностно-ориентированное обучение, обучение через игру, феномен-ориентированный подход, educare, педагогика Монтессори, гармония с природой и подготовка к жизни. Также освещены методические аспекты адаптации данной модели к национальной системе дошкольного образования. Результаты исследования показали эффективность финской модели в развитии самостоятельности, инициативности и жизненных навыков у детей дошкольного возраста.*

Ключевые слова: *дошкольное образование, финская модель образования, личностно-ориентированный подход, феномен-ориентированное обучение, educare, Монтессори, развивающая среда.*

Kırısh. Maktabgacha ta'limni isloh qilish jarayoni bugungi kunda faqat ta'lim mazmunini yangilash bilan chegaralanmaydi. Zamonaviy yondashuvlarda asosiy urg'u bolani maktabga tayyorlashning formal ko'rsatkichlariga emas, balki uning fikrlash tarzi, ijtimoiy moslashuvi, nutqiy faolligi, mustaqil harakat qilish qobiliyati hamda emotsional barqarorligini rivojlantirishga qaratilmoqda. Shu bois maktabgacha ta'lim tashkilotlari oldida bolaga tayyor bilim berishdan ko'ra, uning tabiiy rivojlanishini ilmiy-pedagogik asosda qo'llab-quvvatlaydigan rivojlantiruvchi ta'lim muhitini yaratish vazifasi turadi.

Aynan shu nuqtada Finlandiya ta’lim modeli muhim ilmiy-amaliy manba sifatida namoyon bo‘ladi. Ushbu modelning ustunligi uning tashqi tartib-intizom yoki qat’iy nazoratga emas, balki rivojlantiruvchi muhit, ishonchli muloqot, pedagogik moslashuvchanlik va bolalik davrining tabiiy qonuniyatlariga tayangan holda qurilganidadir. Shuning uchun ham Finlandiya tajribasini o‘rganish uni to‘liq ko‘chirib olish uchun emas, balki maktabgacha ta’lim tizimida yangi pedagogik qarashlarni shakllantirish uchun zarurdir.

Mazkur maqolada Finlandiya ta’lim modelini joriy etishning umumiy tavsifi emas, balki uning pedagogik asoslari, amaliy joriy etish mexanizmlari, bosqichlari va institutsional tajriba ko‘rinishlari tahlil qilinadi. Xususan, Renessans ta’lim universiteti huzurida tashkil etilgan “Renessans bog‘chasi” faoliyati Finlandiya modeli elementlarini milliy maktabgacha ta’lim tizimiga moslashtirishning amaliy ko‘rinishi sifatida ko‘rib chiqiladi.

2. Mavzuga oid adabiyotlarning tahlili. Maktabgacha ta’lim tizimida Finlandiya ta’lim modelini o‘rganish masalasi xalqaro pedagogik tadqiqotlarda keng yoritilgan. Xususan, Finlandiya ta’lim tizimi samaradorligini tahlil qilgan Pasi Sahlberg o‘z asarlarida ushbu modelning asosiy xususiyati sifatida standartlashtirishdan voz kechish, ta’lim jarayonida ishonch va professional mustaqillikka tayanish tamoyillarini ko‘rsatadi. Muallifning ta’kidlashicha, ayniqsa boshlang‘ich va maktabgacha bosqichda bolani erta akademik yuklama bilan band qilish emas, balki uning tabiiy rivojlanish muhitini yaratish ustuvor hisoblanadi.

Linda Darling-Hammond tomonidan olib borilgan tadqiqotlarda esa ta’lim sifatini oshirishda individuallashtirilgan yondashuv va rivojlantiruvchi baholash tizimi muhim omil sifatida qaraladi. U baholashni natijani aniqlovchi vosita emas, balki o‘qitish jarayonini boshqaruvchi va takomillashtiruvchi mexanizm sifatida talqin qiladi. Bu yondashuv Finlandiya maktabgacha ta’lim tizimida qo‘llaniladigan kuzatuvga asoslangan baholash tizimi bilan mos keladi.

Andy Hargreaves va Michael Fullan ta’lim tizimining samaradorligini pedagogning professional salohiyati bilan bog‘laydi. Ularning “professional kapital” konsepsiyasiga ko‘ra, pedagogning bilim darajasi, tajribasi va refleksiv faoliyati ta’lim natijalariga bevosita ta’sir ko‘rsatadi. Finlandiya modelida pedagogning yuqori tayyorgarligi va mustaqil qaror qabul qilish imkoniyati aynan shu nazariyaga asoslanadi.

Finlandiya maktabgacha ta’limining metodik jihatlari bo‘yicha Eeva Hujala tomonidan olib borilgan tadqiqotlar alohida ahamiyatga ega. U maktabgacha ta’limda o‘yin asosida o‘rganish va bolaga yo‘naltirilgan pedagogik muhitni rivojlantirishni asosiy metodik yo‘nalish sifatida ko‘rsatadi. Tadqiqot natijalariga ko‘ra, bolalarning ijtimoiy-emotsional rivojlanishi, muloqot ko‘nikmalari va mustaqil faoliyati aynan erkin va rivojlantiruvchi muhitda samarali shakllanadi.

Milliy pedagogik tadqiqotlarda ham maktabgacha ta’limni takomillashtirish, kompetensiyaviy yondashuvni joriy etish va innovatsion metodlarni qo‘llash masalalari keng o‘rganilgan. Jumladan, N. Nishonova, R. Qodirov, Sh. Yo‘ldoshev kabi olimlar maktabgacha yoshdagi bolalarda nutqiy faollik, mustaqil fikrlash va ijtimoiylashuvni rivojlantirishning metodik asoslarini yoritib berganlar. Ushbu tadqiqotlarda shaxsga yo‘naltirilgan yondashuvning ahamiyati alohida ta’kidlanadi.

Shu bilan birga, mavjud ilmiy manbalar tahlili shuni ko‘rsatadiki, Finlandiya ta’lim modelining umumiy nazariy asoslari yetarli darajada o‘rganilgan bo‘lsa-da, uni O‘zbekiston maktabgacha ta’lim tizimiga moslashtirishning aniq pedagogik mexanizmlari, bosqichlari va amaliy modeli hali to‘liq ishlab chiqilmagan. Ayniqsa, real ta’lim muassasalari misolida (masalan, “Renessans bog‘chasi”) ushbu modelni joriy etish tajribasini ilmiy asosda tahlil qilish dolzarb masala bo‘lib qolmoqda.

3. Tadqiqot metodologiyasi. Mazkur tadqiqot maktabgacha ta’lim tizimida Finlandiya ta’lim modelini joriy etishning pedagogik asoslarini aniqlash va ularni milliy ta’lim amaliyotiga moslashtirishga qaratilgan kompleks yondashuv asosida olib borildi. Tadqiqot metodologiyasi nazariy va amaliy komponentlarning uyg‘unligiga tayanib, pedagogik hodisani tizimli, izchil va dalillarga asoslangan holda tahlil qilishni nazarda tutadi.

Tadqiqotning metodologik asosini zamonaviy pedagogikaning shaxsga yo‘naltirilgan, kompetensiyaviy va faoliyatga asoslangan yondashuvlari tashkil etadi. Shuningdek, rivojlantiruvchi ta’lim konsepsiyasi, konstruktivistik yondashuv hamda integrativ ta’lim nazariyalari mazkur tadqiqotning nazariy tayanchi sifatida qabul qilindi. Ushbu yondashuvlar Finlandiya ta’lim modelining ichki mantiqi bilan uyg‘un bo‘lib, bolani bilimni passiv qabul qiluvchi emas, balki faol o‘zlashtiruvchi subyekt sifatida talqin etadi.

Tadqiqot jarayonida bir nechta o‘zaro bog‘liq ilmiy metodlardan foydalanildi. Avvalo, qiyosiy-tahliliy metod yordamida Finlandiya maktabgacha ta’lim tizimi bilan milliy ta’lim tizimi o‘rtasidagi farq va o‘xshashliklar aniqlanib, ularning pedagogik ahamiyati tahlil qilindi. Bu metod Finlandiya modelining to‘g‘ridan-to‘g‘ri ko‘chirilmasligi, balki moslashtirilishi zarurligini asoslashga xizmat qildi.

Shuningdek, pedagogik kuzatish metodi orqali maktabgacha ta’lim muassasasida tashkil etilayotgan ta’lim jarayonlari, bolalarning faol ishtiroki, muloqot darajasi va rivojlanish dinamikasi o‘rganildi. Kuzatish natijalari Finlandiya modeliga xos bo‘lgan rivojlantiruvchi muhit, erkin faoliyat va integrativ yondashuvning amaliy samaradorligini aniqlash imkonini berdi.

Modellashtirish metodi asosida Finlandiya ta’lim modelini maktabgacha ta’lim tizimiga joriy etishning bosqichlari va mexanizmlarini ifodalovchi integratsion pedagogik model ishlab chiqildi. Mazkur model diagnostik, loyihalash, amalga oshirish va monitoring bosqichlaridan iborat bo‘lib, ta’lim jarayonini tizimli tashkil etishga xizmat qiladi.

Bundan tashqari, umumlashtirish va tizimlashtirish metodlari orqali ilmiy manbalar, amaliy tajribalar va kuzatuv natijalari yagona nazariy xulosaga keltirildi. Bu esa tadqiqot natijalarining ilmiy asoslanganligini ta’minladi.

Tadqiqotning amaliy bazasi sifatida Renessans ta’lim universiteti huzurida faoliyat yuritayotgan “Renessans bog‘chasi” maktabgacha ta’lim tashkiloti tanlandi. Ushbu muassasa misolida Finlandiya ta’lim modelining ayrim elementlarini joriy etish jarayonlari, pedagogik muhitning tashkil etilishi va bolalarning rivojlanish ko‘rsatkichlari tahlil qilindi. Bu esa nazariy qarashlarni amaliy tajriba bilan bog‘lash imkonini berdi.

Shu tariqa, tanlangan metodologiya tadqiqot muammosini har tomonlama yoritish, Finlandiya ta’lim modelining pedagogik asoslarini chuqur tahlil qilish hamda uni milliy maktabgacha ta’lim tizimiga moslashtirishning ilmiy asoslangan mexanizmlarini ishlab chiqishga xizmat qildi.

4. Tahlil va natijalar. Tadqiqotda Finlandiya ta'lim modelining maktabgacha ta'lim tizimiga moslashuvi nazariy va amaliy jihatdan tahlil qilindi. Natijalar modelni samarali joriy etish uning tashqi shaklini emas, balki pedagogik mazmuni va metodik yondashuvlarini moslashtirish orqali amalga oshirilishini ko‘rsatdi.

Pedagogik kuzatishlar an'anaviy ta'limda bola ko‘proq ijrochi, pedagog esa yetakchi ekanini, Finlandiya modeli qo‘llanilgan muhitda esa bola faol ishtirokchi, pedagog yo‘naltiruvchi rolni bajarishini tasdiqladi. Bu bolalarda tashabbuskorlik, mustaqil fikrlash va muloqot faolligini kuchaytirdi. “Renessans bog'chasi” tajribasi rivojlantiruvchi muhit, erkin faoliyat zonalari va tanlov imkoniyati bolalarning ichki motivatsiyasi hamda faolligini oshirishini ko‘rsatdi. Fenomen asosida tashkil etilgan integrativ mashg'ulotlar esa bilimlarning yaxlit shakllanishi, nutq, tasavvur va kuzatuvchanlikning kompleks rivojlanishiga xizmat qildi.

Shuningdek, nazorat va taqqoslashga asoslangan baholash o‘rniga kuzatuv va rag'batlantirishga tayangan yondashuv qo‘llanilganda bolalarda psixologik erkinlik, qiziqish va faol ishtirok ortishi aniqlandi. Joriy etish bosqichlari tahlili diagnostika individual yondashuvni aniqlashtirishini, loyihalash faoliyatni moslashtirishini, amalga oshirish bosqichi faollikni kuchaytirishini, monitoring esa jarayonni takomillashtirishga xizmat qilishini ko‘rsatdi.

“Renessans bog‘chasi” tajribasi. Mazkur ta'lim tashkiloti faoliyatida Finlandiya ta'lim modelining asosiy yondashuvlari maktabgacha yoshdagi bolalarning tabiiy rivojlanish xususiyatlariga mos holda tashkil etilgan. Bunda bolaga yo‘naltirilganlik asosiy mezon bo‘lib, har bir bolaning qiziqishi, ehtiyoji va rivojlanish sur'ati inobatga olinadi. Ta'lim jarayonida bolalarga erkinlik berilib, ular faoliyat turini mustaqil tanlash, o‘yin orqali o‘rganish va o‘z tajribasi asosida bilim hosil qilish imkoniyatiga ega bo‘ladilar. Bu esa bolalarda mustaqillik, qiziqish va o‘ziga ishonchni rivojlantiradi.

Pedagogik faoliyatda fenomen asosida yondashuv bolaga tushunarli shaklda qo‘llanilib, bolalar atrofdagi hayotiy hodisalarni – masalan, tabiat, ob-havo, oila, kundalik faoliyatlar – o‘yin, kuzatish, suhbat va ijodiy mashg'ulotlar orqali yaxlit holda o‘rganadilar. Bu esa bolalarda fikrlash, nutq va tasavvur jarayonlarini tabiiy rivojlantirishga xizmat qiladi.

Shu bilan birga, educare tamoyili asosida ta'lim, tarbiya va parvarish yagona jarayon sifatida tashkil etiladi. Bolaga nafaqat bilim berish, balki unga mehr berish, xavfsiz va qulay muhit yaratish, ijtimoiy ko‘nikmalarni shakllantirish muhim ahamiyat kasb etadi. Bu esa bolaning emotsional rivojlanishini qo‘llab-quvvatlaydi.

Mazkur yondashuvlar Montessori pedagogikasi elementlari bilan ham boyitilgan. Xususan, rivojlantiruvchi muhitni tashkil etish, maxsus didaktik materiallardan foydalanish, bolaga mustaqil ishlash imkoniyatini berish va pedagogning yo‘naltiruvchi rolini kuchaytirish kabi jihatlar amaliyotda qo‘llaniladi. Montessori yondashuvi asosida bola o‘z tezligida o‘rganadi, mustaqil faoliyat yuritadi va o‘z xatolaridan saboq chiqaradi.

Maktabgacha yoshdagi bolalar uchun tabiat bilan uyg'unlik muhim o‘rin tutadi. Shu sababli bolalar ochiq havoda faoliyat olib boradi, o‘simlik va hayvonlarni kuzatadi, fasllar o‘zgarishini his qiladi. Bu orqali ularda ekologik tasavvur, kuzatuvchanlik va tabiatga nisbatan ijobiy munosabat shakllanadi.

Mazkur yondashuvning asosiy maqsadi bolani erta akademik bilimlarga majburlash emas, balki uni hayotga tayyorlashdir. Ya'ni bolalarda mustaqil harakat qilish, muloqot qilish, birgalikda o‘ynash, muammoni oddiy darajada hal qilish va o‘z fikrini ifodalash kabi hayotiy ko‘nikmalar rivojlantiriladi. Shu jihatdan mazkur ta'lim tashkiloti faoliyati maktabgacha yoshdagi bolalar rivojlanishiga mos, insonparvar va zamonaviy pedagogik yondashuv sifatida namoyon bo‘ladi.

5. Xulosa va takliflar. Olib borilgan tadqiqotlar Finlandiya ta'lim modelini maktabgacha ta'lim tizimiga joriy etishda uning tashqi shaklini emas, balki pedagogik mazmunini moslashtirish muhim ekanini ko‘rsatdi. Mazkur model bolani erta akademik tayyorlashga emas, uning tabiiy rivojlanishini qo‘llab-quvvatlash, mustaqil faoliyatini rag'batlantirish va hayotiy ko‘nikmalarini shakllantirishga yo‘naltiriladi.

Tahlillar natijasida bolaga yo‘naltirilganlik, erkin faoliyat, o‘yin orqali o‘rganish, fenomen asosida ta'lim, educare tamoyili hamda Montessori elementlari maktabgacha yoshdagi bolalarning psixologik va ijtimoiy rivojlanishiga ijobiy ta'sir ko‘rsatishi aniqlandi. Ayniqsa, rivojlantiruvchi muhit va individual yondashuv bolalarda qiziqish, tashabbuskorlik, muloqot va mustaqil harakat qilish ko‘nikmalarini shakllantiradi. “Renessans bog'chasi” tajribasi ham ushbu modelni milliy sharoitga moslashtirish mumkinligini amaliy jihatdan tasdiqladi.

Tadqiqot asosida maktabgacha ta'limda bolaga yo‘naltirilgan yondashuvni kuchaytirish, o‘yin va erkin faoliyatga keng o‘rin berish, fenomen asosida ta'limni sodda va hayotiy mazmunda tashkil etish, educare va Montessori elementlarini bosqichma-bosqich joriy etish, rivojlantiruvchi muhit yaratish, pedagoglar malakasini oshirish, ota-onalar bilan hamkorlikni kuchaytirish hamda kuzatuvga asoslangan baholashga ustuvorlik berish maqsadga muvofiq deb topildi.

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FINLANDIYA TA’LIM MODELI PARADIGMASI: FALSAFIY ASOSLAR VA PEDAGOGIK TRANSFORMATSIYA

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Annotatsiya. *Mazkur maqolada Finlandiya ta’lim modeli zamonaviy ta’lim paradigmasi sifatida falsafiy-nazariy jihatdan tahlil qilinadi. Tadqiqotda ushbu modelning ontologik, epistemologik va aksiologik asoslari ochib berilib, uning gumanistik pedagogika, konstruktivistik yondashuv va ijtimoiy-madaniy ta’lim nazariyalari bilan uzviy bog‘liqligi asoslanadi. Finlandiya ta’lim modelining pedagogik transformatsiyaga olib keluvchi xususiyatlari – o‘quvchi subyektivligi, ta’limda farovonlik (well-being), reflektiv o‘rganish va rivojlantiruvchi baholash konsepsiyalari orqali yoritiladi. Tadqiqot metodologiyasi sifatida falsafiy tahlil, konseptual umumlashtirish va qiyosiy yondashuvdan foydalanilgan. Tadqiqot natijalari Finlandiya ta’lim modeli zamonaviy ta’lim tizimlari uchun barqaror va insonparvar paradigma ekanligini ko‘rsatadi.*

Kalit so‘zlar: *Finlandiya ta’lim modeli, ta’lim paradigmasi, pedagogik transformatsiya, ta’lim falsafasi, gumanistik pedagogika, konstruktivizm.*

Abstract. *This article examines the Finnish education model as a contemporary educational paradigm from a philosophical perspective. The study explores its ontological, epistemological, and axiological foundations and demonstrates its connection with humanistic pedagogy, constructivist approaches, and sociocultural learning theory. The pedagogical transformation enabled by the Finnish education model is analyzed through concepts such as learner subjectivity, well-being in education, reflective learning, and developmental assessment. The research methodology is based on philosophical analysis, conceptual synthesis, and comparative approaches. The findings confirm that the Finnish education model represents a sustainable and human-centered paradigm for modern education systems.*

Keywords: *Finnish education model, educational paradigm, pedagogical transformation, philosophy of education, humanistic pedagogy, constructivism.*

Аннотация. *В статье финская модель образования рассматривается как современная образовательная парадигма с философской точки зрения. Раскрываются ее онтологические, эпистемологические и аксиологические основания, а также*

взаимосвязь с гуманистической педагогикой, конструктивистским подходом и социокультурной теорией обучения. Педагогическая трансформация финской модели анализируется через призму субъектности обучающегося, благополучия (well-being), рефлексивного обучения и развивающего оценивания. Методология исследования основана на философском анализе, концептуальном обобщении и сравнительном подходе. Результаты исследования подтверждают устойчивый и гуманистический характер финской модели образования.

Ключевые слова: *финская модель образования, образовательная парадигма, педагогическая трансформация, философия образования, гуманистическая педагогика.*

1. Kirish

Zamonaviy ta’lim makonida ta’lim tizimlari endilikda faqat tashkiliy samaradorlik, o‘quv dasturlarining texnik mukammalligi yoki baholash natijalari bilan emas, balki ularning falsafiy mazmuni, inson va bilim haqidagi konseptual qarashlari, shuningdek, pedagogik paradigmalarga tayanganligi orqali baholanmoqda. Postindustrial jamiyat sharoitida ta’limdan kutilayotgan natijalar o‘zgarib, bilimlarni uzatishdan ko‘ra shaxsning ijtimoiy moslashuvi, tanqidiy tafakkuri, ma’naviy-axloqiy kamoloti va hayotiy kompetensiyalarini rivojlantirish ustuvor ahamiyat kasb etmoqda. Bu holat ta’limni instrumental faoliyatdan falsafiy jihatdan qayta talqin qilish zaruratini yuzaga keltirmoqda.

Mazkur kontekstda Finlandiya ta’lim modeli jahon ta’lim maydonida alohida e’tibor qozongan paradigmatik tajriba sifatida namoyon bo‘ldi. Ushbu modelning o‘ziga xosligi faqat yuqori akademik ko‘rsatkichlar yoki xalqaro baholash dasturlaridagi muvaffaqiyatlar bilan emas, balki ta’limning insoniy mohiyatini saqlab qolgan holda rivojlanishi, ya’ni ta’limni shaxs kamolotining ontologik jarayoni sifatida talqin qilishi bilan belgilanadi. Finlandiya tajribasi ta’limni ijtimoiy raqobat yoki natijaviylik vositasi emas, balki insoniy mayjudlikni mazmun bilan boyituvchi ijtimoiy-madaniy makon sifatida tushunishga asoslanadi.

Finlandiya ta’lim modeli doirasida o‘quvchi ta’lim jarayonining passiv iste’molchisi emas, balki faol, reflektiv va mas’uliyatli subyekti sifatida qaraladi. Bu yondashuv zamonaviy ta’lim falsafasida shakllangan subyektivlik paradigmasi, konstruktivistik epistemologiya va gumanistik pedagogika tamoyillari bilan mushtaraklik kasb etadi. Ta’lim jarayonining mazmuni shaxsiy tajriba, ijtimoiy muloqot va refleksiya orqali bilimni konstruktsiyalashga yo‘naltiriladi, bu esa ta’limni faqat bilim berish faoliyati emas, balki ma’no yaratish jarayoni sifatida talqin etishga imkon beradi.

Shuningdek, Finlandiya ta’lim modeli ta’limda aksiologik ustuvorlikni ilgari suradi. Ushbu modelda tenglik, ishonch, adolat va farovonlik (well-being) ta’lim tizimining asosiy qadriyatlari sifatida e’tirof etiladi. Natijada ta’lim jarayoni nazorat va bosimga asoslangan tizimdan insonparvar, qo‘llab-quvvatlovchi va rivojlantiruvchi muhitga transformatsiyalanadi. Mazkur aksiologik yondashuv pedagogik munosabatlarning gorizontal xarakterini kuchaytirib, o‘qituvchi va o‘quvchi o‘rtasida hamkorlikka asoslangan ta’lim muhitini shakllantiradi.

Ta’lim falsafasi nuqtayi nazaridan Finlandiya modeli ontologik, epistemologik va aksiologik o‘lchamlarning uyg‘unligi bilan tavsiflanadi. Bu uyg‘unlik pedagogik faoliyatda chuqur transformatsion jarayonlarni yuzaga keltirib, an’anaviy ta’lim paradigmalaridan farqli ravishda ta’limni shaxsiy va ijtimoiy kamolotning integral mexanizmi sifatida talqin etadi. Shu sababli Finlandiya ta’lim modeli alohida metodlar majmui emas, balki zamonaviy ta’lim paradigmasining konseptual namunasi sifatida ilmiy ahamiyat kasb etadi.

Mazkur maqolaning maqsadi Finlandiya ta’lim modelini pedagogik paradigma sifatida tahlil qilish, uning ontologik, aksiologik va epistemologik asoslarini ochib berish hamda ushbu model orqali yuzaga kelgan pedagogik transformatsiyani ilmiy jihatdan asoslashdan iborat. Tadqiqot natijalari zamonaviy ta’lim tizimlari uchun Finlandiya ta’lim modelining nazariy va metodologik ahamiyatini aniqlashga xizmat qiladi.

2. Mavzuga oid adabiyotlarning tahlili

Zamonaviy ilmiy adabiyotlarda Finlandiya ta’lim modeli postindustrial jamiyat sharoitida ta’limning yangi vazifalari hamda ta’lim siyosatidagi post-neoliberal burilish kontekstida talqin qilinadi. Ushbu yondashuvlarda ta’lim markazida standartlashtirilgan akademik natijalar emas, balki shaxs kamoloti, ijtimoiy adolat va farovonlik kabi qadriyatlar ustuvorligi ta'kidlanadi. P. Sahlberg Finlandiya tajribasini yuqori-stavkali testlarga asoslangan tizimlarga muqobil paradigma sifatida izohlab, maktablar faoliyatida o‘qituvchining professional mas’uliyati va pedagogik ishonch hal qiluvchi omil ekanini asoslaydi.

So‘nggi tadqiqotlarda Finlandiya ta’lim tizimi faqat muvaffaqiyat modeli sifatida emas, balki barqaror ta’lim tizimiga xos muammolar nuqtayi nazaridan ham tahlil qilinmoqda. Xalqaro hisobotlarda bazaviy ko‘nikmalar darajasidagi ayrim pasayishlar, ijtimoiy tengsizlik risklari va migratsiya bilan bog‘liq chaqiriqlar qayd etilib, modelni ideallashtirmasdan, uning asosiy qadriyatlarini turli milliy sharoitlarga moslashtirish zarurligi ta’kidlanadi.

Ta’lim falsafasi doirasida Finlandiya modeli ta’lim vazifasini faqat malaka berish bilan cheklamay, uni ijtimoiylashuv va subyekt sifatida shakllanish jarayonlari bilan uzviy bog‘liq holda talqin qiladi. Bu jihatdan G. Biestaning ta’limning uch domeni – malaka, ijtimoiylashuv va subyektifikatsiya konsepsiyasi muhim nazariy asos bo‘lib xizmat qiladi. Finlandiya ta’limida o‘quvchining shaxsiy faolligi, reflektiv o‘rganish va mas’uliyatli subyekt sifatida shakllanishi ushbu yondashuv bilan uyg‘unlashadi.

Pedagogik jihatdan model gumanistik va shaxsga yo‘naltirilgan ta’lim konsepsiyalariga tayangan bo‘lib, o‘quvchi ta’lim jarayonining obyekti emas, balki faol ma’no yaratuvchi subyekt sifatida qaraladi. Ushbu yondashuv konstruktivistik epistemologiya bilan bog‘liq bo‘lib, bilim o‘quvchi tomonidan faol kognitiv va ijtimoiy faoliyat jarayonida shakllantiriladi. Natijada o‘qituvchi fasilitator sifatida talqin etiladi, o‘qituvchining kasbiy avtonomiyasi esa muhim shart hisoblanadi.

Ijtimoiy-madaniy yondashuv doirasida o‘rganish jarayoni ijtimoiy muloqot va hamkorlik orqali amalga oshadi (Vygotskiy). Shu sababli Finlandiya modelida sinf iqlimi, maktab jamoasi va o‘qituvchi-o‘quvchi hamkorligi ta’lim sifati va samaradorligining muhim omillari sifatida qaraladi.

So‘nggi yillarda Finlandiya ta’lim modeli farovonlikka yo‘naltirilgan ta’lim paradigmasi doirasida tahlil qilinib, ta’lim natijalari kognitiv yutuqlar bilan bir qatorda psixologik xavfsizlik va ijtimoiy-emotsional rivojlanish orqali ham baholanmoqda.

Umuman olganda, ilmiy adabiyotlar Finlandiya ta’lim modelini testga asoslangan instrumental ta’limga muqobil paradigma, ta’lim maqsadlarining ko‘p-domenli falsafiy modeli hamda farovonlik va tenglikka tayangan ta’lim konsepsiyasi sifatida talqin qiladi. Shu bilan birga, mahalliy ilmiy adabiyotlarda modelning ontologik, aksiologik va epistemologik asoslari yetarlicha tizimli yoritilmagan bo‘lib, mazkur maqola aynan ushbu ilmiy bo‘shliqni to‘ldirishga qaratilgan.

3. Tadqiqot metodologiyasi

Mazkur tadqiqot nazariy-falsafiy yo‘nalishga ega bo‘lib, unda empirik tajribadan ko‘ra ta’lim paradigmasini konseptual tahlil qilish ustuvor metodologik vazifa sifatida belgilandi.

Tadqiqot falsafiy-pedagogik tahlil, konseptual sintez va qiyosiy yondashuv metodlariga tayangan holda amalga oshirildi.

Falsafiy-pedagogiktahlil orqali Finlandiya ta’lim modelining ontologik, aksiologikva epistemologik asoslari aniqlanib, ta’lim tashkiliy jarayon emas, balki ijtimoiy-madaniy va falsafiy hodisa sifatida talqin qilindi.

Konseptual sintez metodi yordamida turli ilmiy manbalardagi nazariy qarashlar umumlashtirilib, Finlandiya ta'lim modelining yaxlit paradigmatik tuzilmasi asoslab berildi. Bu jarayonda gumanistik pedagogika, konstruktivistik epistemologiya, ijtimoiy-madaniy ta'lim nazariyasi hamda farovonlikka yo‘naltirilgan ta'lim konsepsiyalari o‘zaro uyg‘unlikda tahlil qilindi.

Qiyosiy yondashuv metodi orqali Finlandiya ta’lim modelining asosiy tamoyillari zamonaviy global ta’lim paradigmalari bilan solishtirilib, uning postindustrial va post-neoliberal ta’lim tendensiyalari fonidagi o‘ziga xos va ustun jihatlari aniqlashtirildi.

Shuningdek, tanqidiy manba tahlili asosida ilmiy adabiyotlar mazmuniy baholanib, terminologik aniqlik va konseptual izchillik e’tiborga olindi. Tadqiqotning umumiy metodologik asosi sifatida nazariy umumlashtirish va abstrakt-mantiqiy tahlil metodlari qo‘llanilib, xulosalarning konseptual va tizimli xarakteri ta’minlandi.

4. Tahlil va natijalar

Tadqiqot natijalari Finlandiya ta’lim modeli zamonaviy ta’lim paradigmasi doirasida chuqur falsafiy-pedagogik transformatsiyalarni amalga oshirganini ko‘rsatadi. Mazkur model ta’limni instrumental va nazoratga asoslangan tizimdan shaxs kamoloti hamda ijtimoiy farovonlikka yo‘naltirilgan paradigma tomon izchil ravishda o‘zgartirgan. Ontologik nuqtayi nazardan o‘quvchi ta’lim jarayonining passiv obyekti emas, balki faol va reflektiv subyekti sifatida talqin qilinadi, bu esa ta’limni bilim uzatishdan ko‘ra shaxsning mavjudlik shakllarini rivojlantirish maydoni sifatida tushunishga imkon beradi.

Epistemologik jihatdan Finlandiya ta’lim modeli bilimni tayyor mahsulot emas, balki ijtimoiy tajriba va refleksiya asosida shakllanadigan konstruktiv jarayon sifatida qaraydi; aksiologik jihatdan esa tenglik, ishonch va farovonlik ta’lim jarayonining markaziy qadriyatlari sifatida e’tirof etiladi. Baholash tizimining rivojlantiruvchi va qo‘llab-quvvatlovchi xarakterga ega bo‘lishi o‘quvchilarning ichki motivatsiyasini kuchaytirib, ta’lim jarayonining moslashuvchanligini ta'minlaydi. Ushbu ontologik, epistemologik va aksiologik asoslarning uyg‘unligi Finlandiya ta’lim modelini alohida milliy tajribadan global pedagogik paradigma darajasiga olib chiqadi hamda uni zamonaviy ta’lim tizimlari uchun muhim nazariy va metodologik yo‘nalish sifatida talqin qilish imkonini beradi.

5. Xulosa va takliflar

Mazkur tadqiqot natijalari Finlandiya ta’lim modeli chuqur falsafiy poydevorga ega bo‘lgan, insonparvar va barqaror pedagogik paradigma ekanligini tasdiqlaydi. Tadqiqot davomida aniqlanishicha, ushbu modelda ta’lim jarayoni instrumental natijalar va qisqa muddatli akademik ko‘rsatkichlardan ustun qo‘yilib, shaxsning ontologik rivoji, ijtimoiy mas’uliyati hamda hayotiy ma’nolarni anglash jarayoniga yo‘naltirilgan holda tashkil etiladi. Bu holat Finlandiya ta’lim modelini zamonaviy ta’lim tizimlari uchun nafaqat amaliy tajriba, balki muhim nazariy-falsafiy yo‘nalish sifatida ham ahamiyatli ekanini ko‘rsatadi.

Tadqiqot natijalariga ko‘ra, Finlandiya ta’lim modelining samaradorligi, avvalo, uning ontologik, epistemologik va aksiologik asoslarining uyg‘unligi bilan belgilanadi. O‘quvchining faol subyekt sifatida talqin qilinishi, bilimning konstruktiv va ijtimoiy xarakterga ega ekanligi

hamda ta’lim jarayonida tenglik, ishonch va farovonlik kabi qadriyatlarning ustuvorligi ushbu modelning konseptual barqarorligini ta’minlaydi. Shu jihatdan Finlandiya ta’lim modeli ta’limni faqat bilim berish tizimi emas, balki shaxsiy va ijtimoiy kamolotning integral mexanizmi sifatida talqin etuvchi paradigma sifatida namoyon bo‘ladi.

Shuningdek, tadqiqot natijalari Finlandiya ta’lim modelida amalga oshirilgan pedagogik transformatsiyalar baholash, o‘qituvchi roli va ta’lim muhiti kabi asosiy komponentlarning mazmunan qayta talqin qilinganini ko‘rsatadi. Baholashning rivojlantiruvchi va qo‘llab-quvvatlovchi xarakterga ega bo‘lishi, o‘qituvchining fasilitator sifatidagi roli hamda ta’lim muhitining farovonlikka yo‘naltirilishi o‘quvchilarning ichki motivatsiyasi va reflektiv o‘rganish faoliyatini kuchaytiradi. Bu holat Finlandiya ta’lim modelining barqaroriigini tashkiliy yoki texnologik omillar bilan emas, balki uning falsafiy va aksiologik mohiyati bilan izohlash zarurligini tasdiqlaydi.

Takliflar

Olib borilgan tahlil va xulosalarga tayangan holda quyidagi ilmiy-amaliy takliflar ilgari suriladi:

1. Zamonaviy ta’lim tizimlarini takomillashtirishda Finlandiya ta’lim modelini tayyor andoza sifatida emas, balki uning ontologik, aksiologik va epistemologik tamoyillarini mahalliy ijtimoiy-madaniy sharoitga moslashtirish asosida qo‘llash maqsadga muvofiqdir.

2. Ta’lim siyosati va pedagogik amaliyotda baholash tizimini nazorat va saralash vositasidan ko‘ra rivojlantiruvchi va reflektiv mexanizm sifatida talqin qilish zarur.

3. O‘qituvchilarning kasbiy tayyorgariigini oshirish jarayonida gumanistik pedagogika, konstruktivistik o‘rganish va *well-being oriented education* kabi zamonaviy falsafiy-pedagogik yondashuvlarga ustuvor e’tibor qaratish lozim.

4. Kelgusidagi tadqiqotlarda Finlandiya ta’lim modelining alohida komponentlarini (o‘quvchining faol subyektivligi, farovonlik, baholash madaniyati) empirik tadqiqotlar asosida chuqurroq o‘rganish maqsadga muvofiqdir.

Xulosa qilib aytganda, Finlandiya ta’lim modeli pedagogik transformatsiyaning barqaror va muvaffaqiyatli namunasi bo‘lib, unda ta’lim jarayoni shaxsning faol subyektivligi, rivojlantiruvchi baholash va farovonlikka yo‘naltirilgan muhit orqali qayta talqin qilinadi. Modelning samaradorligi uning ontologik va aksiologik asoslariga – ya’ni ta’limni shaxsiy va ijtimoiy kamolot jarayoni sifatida tushunishga hamda tenglik, ishonch va adolat qadriyatlariga tayanganligi bilan belgilanadi. Shu jihatdan Finlandiya ta’lim modeli zamonaviy ta’lim tizimlari uchun tayyor andoza emas, balki mahalliy sharoitga moslashtirilishi mumkin bo‘lgan muhim metodologik paradigma sifatida ahamiyat kasb etadi.

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AUTOMATIC TEST CONSTRUCTORS FOR ASSESSING GEOGRAPHIC COMPETENCY

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Abstract. *This article investigates the problem of objective and valid assessment of students' geographic competency in general secondary schools. To address this problem, an automatic adaptive test constructor was developed based on the higher levels of Bloom's taxonomy, GIS technologies, and the IRT model. The research methods included a pedagogical experiment, natural language processing (NLP) algorithms, and a 3-parameter IRT model. The experiment was conducted with 120 eighth-grade students selected from two schools in the city of Andijan. The results showed that tests constructed using the developed constructor yielded 26.5% higher efficiency in assessing cartographic skills compared to the control group. A statistically significant difference was recorded in the overall post-test: t(118) = 6.94, p = 0.001. Expert evaluation yielded a content validity index of CVI = 0.89. The time spent by teachers on test construction decreased by 97.5%. In conclusion, integration of the constructor into digital education platforms is recommended.*

Keywords: *geographic competency, automatic test, IRT, GIS, assessment, digital didactics.*

Introduction

21st-century education requires students not merely to mechanically memorize information, but to acquire complex skills such as analyzing information, identifying spatial relationships, drawing independent conclusions based on cartographic resources, and proposing reasoned solutions to ecological problems. The "Creative Thinking" and "Geographic Literacy" strands of the international PISA 2025 study are also directed toward assessing precisely these competencies. The Concept for the Development of Education of the Republic of Uzbekistan until 2030 likewise identifies the formation of students' functional literacy as a priority task. Against the background of these changes, the limitations of traditional assessment tools are clearly manifested. In current school practice, geography tests are predominantly constructed at the reproductive level, such as "find the capital" or "name the river." Such tasks do not measure students' practical-cartographic and axiological competencies, including scale calculation, reading a relief profile, analyzing GIS layers, or expressing a position on an ecological situation. In the context of digital transformation, a promising way to solve this problem is the creation of automatic test constructors. The effectiveness of AI-based adaptive online geography lessons is also theoretically substantiated. In foreign practice, adaptive test generation is widely used in

mathematics and language subjects. However, constructors specialized for geography, particularly those integrated with open GIS resources such as OpenStreetMap and QGIS, are almost non-existent. The test modules in Uzbekistan’s e-maktab.uz and Kundalik systems are also currently limited to a static question bank and do not cover the “analysis,” “evaluation,” and “creation” stages of Bloom’s taxonomy. Meanwhile, adaptive algorithms based on Item Response Theory (IRT) enable the selection of tasks matched to each student’s θ ability level. This increases the discriminating power of the test and provides a solution to the “one-size-fits-all” problem. By adding a GIS module, it is possible to automatically generate real practical tasks by providing students with an individual map section, coordinates, or azimuth.

Research problem: In general education schools, there is no automatic tool that validly, reliably, and promptly assesses the four components of geographic competency: cognitive, practical-cartographic, axiological, and communicative.

Research aim: To scientifically substantiate, design, and experimentally verify the pedagogical effectiveness of an automatic adaptive test constructor model for assessing geographic competency, integrating the IRT algorithm, NLP, and GIS technologies.

Research objectives:

1. To clarify the components and indicators of geographic competency and develop assessment criteria.
2. To create an algorithm that generates question texts based on natural language processing (NLP) and interactive map tasks based on the GIS API.
3. To test the developed constructor through a pedagogical experiment in general education schools in Andijan city.
4. To conduct a comparative statistical analysis of the validity, reliability, and time efficiency of constructor-based tests versus traditional tests.

Research hypothesis: If an automatic adaptive test constructor for assessing geographic competency is based on the 3-parameter IRT model and GIS interactive tasks, then: 1) the accuracy of assessing students’ cartographic skills will increase to a statistically significant level; 2) the time teachers spend constructing tests will decrease by at least 90%; 3) the internal consistency coefficient of the test will be $\alpha > 0.8$.

Literature review

Although the idea of automatic test generation began in the 1960s, it has reached a new stage with the development of artificial intelligence.

1. IRT Theory: Item Response Theory (IRT), founded by Lord and Novick, takes into account the difficulty, discrimination, and guessing parameters of test items. It serves as the basis for adaptive testing and enables the selection of tasks appropriate to each student’s individual θ ability level.
2. Geographic Competency: In the Lambert and Morgan model, geographic competency consists of four components: spatial thinking, inter-place connectedness, decision-making, and value-based attitude. This model constitutes the theoretical basis for the 4-component assessment system proposed in this article.
3. GIS in Education: Kerski’s studies have proven that GIS increases students’ research skills by 40%. However, assessment tools for it are scarce. Open sources such as OpenStreetMap and QGIS create great opportunities for geography-specialized test constructors.
4. Uzbekistan’s Experience: Yunusova proposed a simple test constructor for the e-maktab platform, but it did not cover work with maps. The literature review showed that an automatic constructor combining GIS and IRT, specialized for geography, has not been created. This determines the scientific novelty of the research.

Methods

Research design: Quasi-experimental design. February–April 2026. School No. 24, Andijan city. 8th grade, N = 120. Experimental group (EG): 60 students. Control group (CG): 60 students. Test Constructor Model: The model consists of 5 modules: (1) Question bank — the teacher selects the topic, grade, and competency component; (2) NLP generation module — creates new question text; (3) GIS module — obtains a map section from OpenStreetMap; (4) IRT adaptive module — selects the difficulty of the next question at the θ level based on the student’s response; (5) Assessment module — produces a weighted score for the 4 components. All modules operate on a cloud server. Data collection: 1. Pre-test and post-test: 30 items, Cronbach’s α = 0.83. 2. Time: the time for test construction by the constructor and manually was measured with a stopwatch.3. Expert sheet:5 experts, CVI index calculated. Statistical analysis: SPSS 27. Normality — Shapiro-Wilk. Difference — t-test. Effect size — Cohen’s d. Reliability α > 0.7.

Results

Technical Indicators of the Constructor: Experts evaluated 100 generated questions. CVI = 0.89. This indicates “high validity.” The highest score was given to GK2 (cartographic tasks): M = 9.4, SD = 0.6. Time: The teacher spent an average of 62.3 minutes. The constructor took 0.8 minutes. Difference $t(9) = 41.2$, $p < 0.001$. Pedagogical Experiment Result: Independent samples t-test: $t(118) = 6.94$, $p = 0.001$. Effect size Cohen’s $d = 1.28$. This effect is interpreted as “very large.” Overall score: EG — 78.6, CG — 65.3. GK2 (cartographic): EG — 81.2, CG — 54.7. The largest difference was observed specifically in GK2. IRT Analysis: The constructor used a 3-parameter IRT. On a scale of θ ability level from -2 to +3, the mean in EG was +0.86, and in CG was +0.21. The test information function was maximal in the interval from $\theta = 0$ to $\theta = +2$.

Discussion

Interpretation of Main Results: The obtained result of $d = 1.28$ is higher than Lee et al.’s result of $d = 0.96$ in mathematics. This is due to the fact that map interactivity actively engages students in geography. This confirms the initial hypothesis. At the same time, Rejaboyev (2026) also shows the broad application prospects of this direction with a theoretical model of AI-based adaptive online geography lessons. Practical Significance: It can be added as a module to the e-maktab.uz system of the Ministry of Public Education. If a teacher selects “Grade 8, Atmosphere, GK2, 15 questions,” the system provides a version in 1 minute. It can automate the bank of competency-based tasks for DTM tests for the National Test Center. Limitations: 1. The study was conducted only in urban schools. 2. The STT model for the Uzbek language provided 88% accuracy. 3. The initial question bank contains 1500 items. Crowdsourcing is needed for expansion. Future Research: 1. Increase the sample to 2,000 across 12 regions of the Republic. 2. Add tasks such as “analyze a climate diagram based on an image” through generative AI. 3. Develop an “assessment + teaching” system that analyzes student errors and immediately provides a micro-lesson.

Conclusion

Based on the results of the theoretical and experimental research, the following scientific conclusions were drawn:

1. The problem of objectively assessing the structural components of geographic competency has been solved. A 4-module automatic adaptive test constructor model covering cognitive, practical-cartographic, axiological, and communicative components was developed. The model is based on the integration of IRT theory and GIS technologies.

2. The didactic and technical effectiveness of the constructor has been proven. Expert evaluation resulted in CVI = 0.89. The time a teacher spends constructing a 30-item version decreased from 62.3 minutes to 0.8 minutes (97.5%).

3. The pedagogical experiment statistically confirmed the high effectiveness of the constructor. $t(118) = 6.94$, $p = 0.001$; Cohen’s $d = 1.28$ (“very large effect”). The internal consistency coefficient of the constructor tests was $\alpha = 0.87$.

4. The model is ready for integration into digital platforms. It is technically ready for integration as a module into e-maktab.uz and Kundalik systems. Rejaboyev (2026)’s model of AI-based online education theoretically supports this direction.

5. The principle of adaptivity increases the differential capacity of assessment. The 3-parameter IRT algorithm is capable of differential assessment of the entire sample. This result aligns with the conclusions of Lee et al.

6. The constructor supports the “assessment for learning” paradigm. The testing process itself performs diagnostic and formative functions. This fully aligns with the concept of formative assessment.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

ARALASH TA'LIM RESURSLARI VOSITASIDA TALABALARNING KIBERIJTIMOIYLASHUVINI OPTIMALLASHTIRISHNING DIDAKTIK IMKONIYATLARINING DASTURIY TA'MINOTI

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Annotatsiya. *Ushbu maqolada raqamli transformatsiya sharoitida aralash ta'lim resurslari vositasida talabalarning kiberijtimoiylashuvini optimallashtirish masalalari tadqiq etilgan. Dasturiy ta'minot injiniringi (Software Engineering) misolida ta'lim sifatini oshirishning didaktik imkoniyatlari, tizimli tahlil usullari va zamonaviy tendentsiyalar yoritilgan. Shuningdek, maqolada aralash ta'limda talabalarni onlayn baholash modeli, kompetensiyalar iyerarxiyasi va o'qituvchilarning kasbiy rivojlanish o'lchamlari tahlil qilingan. Tadqiqot natijalari kiber sotsializatsiya jarayonida raqamli odob-axloq, hamkorlikdagi loyihalar va virtual ta'lim muhitini loyihalash bo'yicha uslubiy tavsiyalarni o'z ichiga oladi.*

Kalit so'zlar: *aralash ta'lim, kiberijtimoiylashuv, dasturiy ta'minot injiniringi, raqamli transformatsiya, Sanoat 4.0, didaktik imkoniyatlar, onlayn baholash, kasbiy rivojlanish, kiber sotsializatsiya.*

Abstract. *This article explores the optimization of students' cybersocialization through blended learning resources in the context of digital transformation. Using Software Engineering as a case study, it highlights didactic opportunities for improving educational quality, systematic analysis methods, and current industry trends. The paper also analyzes the online assessment model in blended learning, the hierarchy of competencies, and the dimensions of faculty professional development. The research findings include methodological recommendations for designing virtual learning environments, digital etiquette, and collaborative projects within the cybersocialization process.*

Keywords: *blended learning, cybersocialization, software engineering, digital transformation, Industry 4.0, didactic opportunities, online assessment, professional development, cyber socialization.Raqamli transformatsiyalar davrida insoniyatning intellektual salohiyatini shakllantirish jarayonlarida kompyuter ta'limi sifatini oshirishga tobora ko'proq e'tibor qaratilmoqda.*

Аннотация. *В данной статье исследуются вопросы оптимизации киберсоциализации студентов посредством ресурсов смешанного обучения в условиях цифровой трансформации. На примере программной инженерии (Software Engineering) освещены дидактические возможности повышения качества образования, методы системного анализа и современные тенденции. Также в статье анализируются модель онлайн-оценивания студентов в смешанном обучении, иерархия компетенций и измерения профессионального развития преподавателей. Результаты исследования включают методические рекомендации по проектированию виртуальной образовательной среды, цифровому этикету и совместным проектам в процессе киберсоциализации.*

Ключевые слова: *смешанное обучение, киберсоциализация, программная инженерия, цифровая трансформация, Индустрия 4.0, дидактические возможности, онлайн-оценивание, профессиональное развитие, киберсоциализация.*

Ushbu yondashuvlar Hisoblash mashinalari assotsiatsiyasi (ACM) va IEEE Kompyuter jamiyati (IEEE-CS) CC2020 Hisoblash o‘quv dasturlari hisobot seriyasining so‘nggi nashrida bayon etilgan Global hisoblash ta’limi paradigmalariga mos keladi. Ushbu hujjatda nazarda tutilgan bakalavriat dasturlari orasida dasturiy ta’minot injiniringi (SE) texnologik taraqqiyotning asosiga aylanib borayotgan asosiy fan hisoblanadi. Dasturiy ta'minotni ishlab chiqishga texnologiya, iste'molchilarning afzalliklari va bozor omillari kabi ko'plab omillar ta'sir qiladi. Aynan shuning uchun ham dasturiy ta’minot injiniringi texnik va texnologik dominantlarning muhandislik yondashuvlari, iqtisodiy toifalari va boshqaruv qoidalari bilan integratsiyalashuvi tufayli o'zining ko'p qirraliligi bilan boshqa o'quv fanlaridan sezilarli darajada farq qiladi. Sanoatda texnologiyalar sonining doimiy o'sishi tufayli kelgusi yillarda dasturiy ta'minotni ishlab chiqish tendentsiyalari ham o'sib boradi. Shuning uchun zamonaviy va innovatsion texnologiyalarni rivojlantirish uchun eng so'nggi tendentsiyalarni tushunish va dasturiy ta’minot injiniringning o'ziga xos xususiyatlarini hisobga olish kerak. Bu esa, o‘z navbatida, dasturiy ta’minot injiniringi ta’limi jarayonini tashkil etishda ma’lum qiyinchiliklarni keltirib chiqaradi va yondashuvlar, uslubiy yordam, metodlar va o‘quv vositalarini doimiy yangilab turishni talab qiladi. Shuning uchun ham tadqiqot mavzimizni dasturiy injiniring misolida ko'rib chiqish maqsadga muvofiqdir.

Jahon ilmiy adabiyotidagi muammoli tadqiqotlar tahlili shuni ko'rsatadiki, dasturiy ta'minot injiniringining rivojlanishiga zamonaviy sanoat tendentsiyalari, shuningdek, axborot texnologiyalari va dasturlash tendentsiyalari sezilarli darajada ta'sir qiladi[1]

Robototexnika va kibersotsializatsiya bilan ajralib turadigan sanoatning yangi darajasi – “Sanoat 4.0”ga o‘tish IT va dasturlash sohalarida yangi, ilgari ko‘rilmagan muammolar to‘lqinini olib keladi. Dasturiy ta'minot texnologiyalarini amaliyotda rivojlantirishning murakkabligi va tezkorligi sababli, dasturiy ta’minot to'g'risidagi bilimlarni egallash va bu sohada innovatsiyalarni qo'llash uchun asos zamonaviy texnologik jarayonlarni chuqur tushunish paradigmasiga e'tiborni o'zgartirish va professional ko'nikmalarni egallashga asoslangan bo'lishi kerak. Shubhasiz, bunday sharoitda oliy ta’limning tegishli standartlari va ta’lim sifatini ichki ta’minlash talablarda nazarda tutilgan oliy ta’lim muassasalarida tegishli axborot-ta’lim muhitini shakllantirmasdan turib, kerakli sinergik samaraga erishish mumkin emas. Bunday muhitni loyihalash va shakllantirishda

[1] K. T. Al-Sarayreh, K. Meridji, A. Abran, Software engineering principles: A systematic mapping study and a quantitative literature review, Engineering Science and Technology 24(3) (2021) 768–781

intellektualizatsiya vositalarini, ochiq ta'lim tamoyillarini va Evropa tadqiqot makonini joriy etish ustuvor vazifa bo'lishi kerak[2].

Ushbu jarayonga transdisipliner yondashuvni joriy etish maqsadga muvofiqdir, chunki u eng umumlashtirilgan va universal bo'lib, u intizomiy parchalanishning chegaralari va kamchiliklarini engib o'tadi, dunyo va munosabatlar haqida to'liqroq tasavvur beradi[3].

Shu bilan birga, bunday tizimlar asosida dasturiy ta’minot injiniringi sohasida o'quv faoliyati uchun muhitni yaratishning umumiy muammosi doirasida yuqorida qayd etilgan texnologik tendentsiyalarni aks ettirishi kerak bo'lgan axborot resurslarini shakllantirish vazifasi dolzarbdir. Ularga asoslanib, nafaqat samarali raqamli ta'lim mazmunini taqdim etish, balki ta'limni qo'llab-quvvatlashning eng yangi texnologik vositalarini tanlash va ulardan foydalanish mumkin bo'ladi.

Bunday kontent manbalaridan biri Scopus va Web of Science kabi xalqaro ilmiyometrik ma'lumotlar bazalarida ro'yxatga olingan jahon ilmiy hamjamiyatining nashrlari bo'lishi mumkin. Muayyan mavzu bo'yicha nima va kim tomonidan aytilganligi to'g'risida har tomonlama fikr berish uchun tizimli tekshirish usuli samaralidir. Maqsadli savol bo'yicha birlamchi tadqiqotlarni bunday yuqori darajadagi ko'rib chiqish, berilgan savolga tegishli barcha yuqori sifatli tadqiqot dalillarini aniqlaydi, tanlaydi, sintezlaydi va baholaydi. AT shu qadar tez o'zgarib, rivojlanar ekan, ushbu o'zgarishlar o'quv dasturlari va joriy sanoat kutilmalari o'rtasidagi tafovutga qanday ta'sir qilishini o'rganish uchun bunday tadqiqotlar doimiy ravishda takrorlanishi kerak.

Tadqiqot maqsadi raqamli transformatsiya sharoitida dasturiy ta’minot injiniringi misolida kompyuter ta’limi sifatini oshirishni ta’minlashning dolzarb muammolarini hal etishning axborot, texnologik va uslubiy usullarini izlash manbalarini tizimli o‘rganishdan iborat.

Tizimli sharhlar ma'lum bir mavzu bilan bog'liq empirik tadqiqotlarni birlashtirish va sintez qilish orqali dasturiy ta’minotning amaliyoti uchun foydali bilimlarni berishi mumkin. Tadqiqotimizda tahlillar natijasida olingan ma'lumotlardan foydalanilgan, ya'ni nashr etilgan tizimli sharhlarni tizimli ko'rib chiqish asosida ilmiy ishlarda ta'kidlanishicha, bunday jiddiyroq tadqiqotlardan foydalanish tizimli tahlil natijalariga ko'proq vakolat berishi va o'qitish xamda amaliyotga tegishli bo'lgan mustahkam empirik dalillarni yaratishga yordam beradi[4].

Shunday qilib, KT sohasida ta'limning ilmiy va uslubiy shartlari zamonaviy texnologik tendentsiyalarning ustuvor yo'nalishlari kontekstida keyingi tadqiqotlarni talab qiladi. Ushbu masalalarni o'rganishning kontseptual asoslari rivojlanib, ta'lim muhitining xususiyatlari doimiy ravishda rivojlanib bormoqda. Shuning uchun vazifaning dolzarbligi sifatli dasturiy mahsulotni loyihalash va ishlab chiqishda o'qitishning metodik tamoyillarida ushbu jarayonlarni hisobga olish va ularning ta'lim faoliyatida kengroq qamrab olinishini ta'minlashdan iborat.

Bu yuzaki tushunish uchun juda oddiy bo'lib tuyulsa-da, o'qitish faoliyati va ularning o'rganish va baholash bilan aloqasi aslida juda murakkab. O'qituvchi onlayn faoliyat va baholashlarni ishlab chiqishni boshlashdan oldin, u baholash kursni ishlab chiqish sxemasiga va uning tarkibiy qismlariga qanday mos kelishini yaxshi tushunishi kerak. O‘qituvchi ta’lim

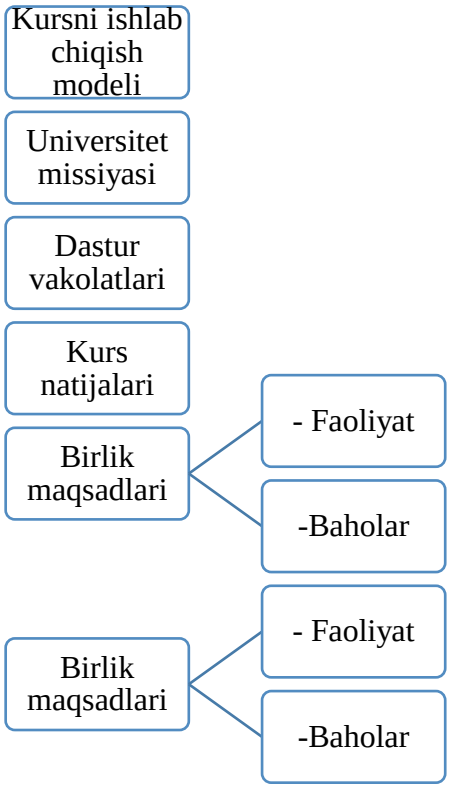
[2] V. Yu. Bykov, M. P. Shyshkina, The conceptual basis of the university cloud-based learning and research environment formation and development in view of the open science priorities, Information Technologies and Learning Tools 68(6) (2018) 1–19

[3] M. Rostoka, A. Guraliuk, G. Cherevychnyi, O. Vyhovska, I. Poprotskyi, N. Terentieva, Philosophy of a Transdisciplinary Approach in Designing an Open Information and Educational Environment of Institutions of Higher Education, Revista Romaneasca pentru Educatie Multidimensionala 13(3) (2021) 548-567.

[4] D. Budgen, P. Brereton, N. Williams, S. Drummond, The contribution that empirical studies performed in industry make to the findings of systematic reviews: A tertiary study, Information and software technology 94 (2018) 234–244

natijalarini, ularning o‘quv jarayonidagi ahamiyatini, rivojlanishini va ularga erishish yo‘llarini tushunishi kerak. Kurs dizaynini tashkil etuvchi komponentlar ko'pincha vakolatlar, natijalar va maqsadlar deb ataladi. Garchi onlayn ta’limda ko’pchilik atamalar xozirgi ta’lim tizimida o'qiyotganlarga tanish bo'lsa-da, o'qituvchilar ko'pincha ularni aniq farqlay olmaydilar. Biroq, bu atamalar o'rtasida farqlar mavjud va har birining bahosi boshqacha. Farqlar quyidagicha:

Maqsadlar: Talabalar, odatda, o'quv birligi oxirida nimani o'rganadilar Natijalar: Talabalar kurs oxirida nimani bilishi yoki qila olishi mumkin bo'ladi Kompetensiyalar: Talabalar bilim yoki ko'nikmalarni qanday namoyon qiladilar, odatda dars oxirida. o'quv dasturi uchtasi dastur darajasidan kursning birlik darajasigacha bo'lgan qurilish bloklari to'plamini tashkil qiladi. Vakolatlar asos bo'lib, ulardan kelib chiqadigan natijalar va maqsadlar. Quyidagi rasmda ushbu konfiguratsiya tasvirlangan.



1-rasm. Aralash ta’limda talabalarni onlayn baholash modeli

D.R.Garrison va T.Andersonlarning kitoblarida yozilishicha hozirgi vaqtda oliy ta'limda texnologik inqilob sodir bo'lmoqda. Elektron ta'limning o'sishi misli ko'rilmagan va eng avvalo, buzg'unchi sifatida tavsiflanadi. Ushbu o'z vaqtida va keng qamrovli kitob oliy ta'limda elektron ta'limni tushunish uchun izchil asosni taqdim etadi. Mualliflar elektron ta'limning texnologik, pedagogik va tashkiliy natijalarini o'rganish uchun ushbu sohadagi keng ko'lamli tadqiqotlariga tayanadi va eng muhimi, ular o'qituvchilar uchun elektron ta'limning to'liq imkoniyatlarini ro'yobga chiqarish uchun amaliy modellarni taqdim etadilar. Kitobning o'ziga xos xususiyati shundaki, mualliflar doimo rivojlanayotgan texnologiyalarning o'ziga xos xususiyatlariga kamroq e'tibor berishadi va ko'proq ushbu texnologiyalarni ta'lim nuqtai nazaridan tushunishni izlaydilar[5]

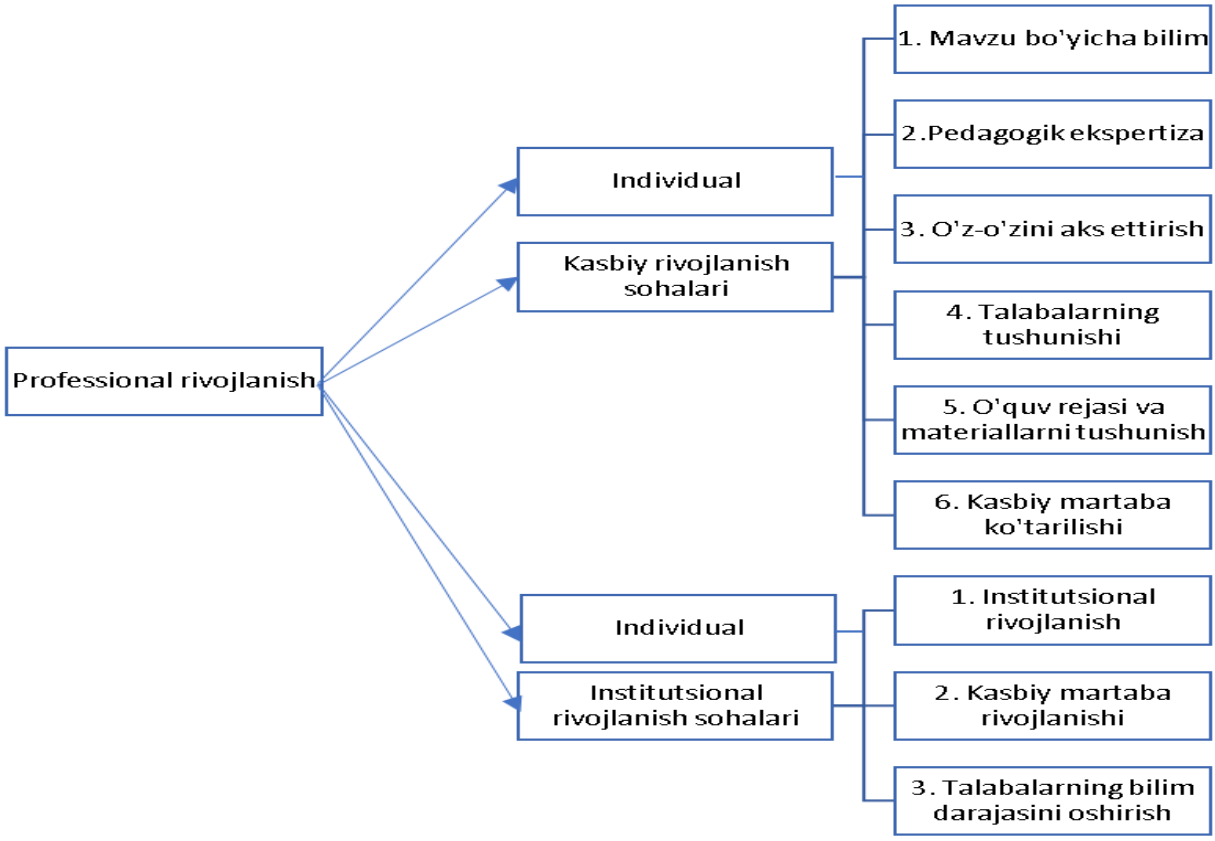
Curtis J. Bonk, Charles R. Graham, Jay Crosslarning kitobida yozilishicha keng qamrovli resurs global nuqtai nazardan aralash ta'limning eng so'nggi amaliyotlari va tendentsiyalarini ta'kidlaydi va muayyan aralash o'rganish holatlari uchun maqsadli ma'lumotlarni taqdim etadi. Biz

[5] Garrison, D. R., & Anderson, T. (2003). E–Learning in the 21st century: A framework for research and practice. London: Routledge/Falmer.117p.

yuzma-yuz ta'limni ish joyida, ko'proq rasmiy akademik sharoitlarda va harbiy xizmatda onlayn ta'lim bilan birlashtirgan o'rganish variantlariga misollar topamiz. Ushbu muhitlarda kitob haqiqiy dunyo amaliyotlariga qaratilgan va keng doiradagi ishtirokchilarni o'z ichiga oladi: trenerlar, maslahatchilar, professorlar, universitet prezidentlari, masofaviy ta'lim markazlari direktorlari, o'quv strateglari, ta'lim bo'yicha bosh menejerlar, bosh direktorlar, kanslerlar, dekanlar va global iste'dod xamda tashkiliy rivojlanish bo'yicha direktorlar. Bu xilma-xillik va kenglik aralash ta'lim muhitini loyihalashda mavjud imkoniyatlarning keng doirasini tushunishga yordam beradi[6].

Aralash ta’limda talabalarni onlayn baholash orqali kasbiy rovijlanishlarini xam o’rganamiz. Kasbiy rivojlanish dunyoning tez o'zgarishlari tufayli o'qituvchilarda doimiy yangilanishlar bo’lishi kerak, buning uchun ular qo'shimcha o'qituvchilar ma'lumotiga ega bo'lishlari va malaka oshirishlari kerak[7].

Kasbiy rivojlanishni "ta'limning murakkab, integratsiyalashgan jihatlari ustida ishlaydigan ta'sir va bilvosita aralashuv strategiyasi, bu jihatlar o‘ziga xos va individualdir” deb ta'kidlaydi. Ushbu kontseptsiyani to'ldirish uchun Richards va Farrell (2005) ta'kidlashicha, u "uzoq muddatli maqsadga xizmat qiladi va o'qituvchilar ular o'zlarining o'qituvchi sifatidagi tushunchalarini oshirishga yordam beradi. U ko'pincha mulohaza yuritish uchun asos sifatida o'qituvchi faoliyatining turli jihatlarini o'rganishni o'z ichiga oladi” Quyidagi rasmda kasbiy rivojlanish o'lchamlari ko'rsatilgan[8].



2-rasm. Kasbiy rivojlanish o’lchamlari.

[6] Curtis J. Bonk, Charles R. Graham, Jay Cross (Foreword by), Michael G. Moore . The Handbook of Blended Learning: Global Perspectives, Local Designs. ISBN: 978-1-118-42957-0 June 2012 Pfeiffer 640 Pages

[7] Freeman, D. (1989). Teacher training, development, and decision making: A model of teaching and related strategies for language teacher education. TESOL Quarterly, 23(1), 27. https://doi.org/10.2307/3587506

[8] Richards, J. C., & Farrell, T. S. (2005). Professional development for language teachers (1st ed.). Cambridge University Press.

Aralash ta’lim resurslari vositasida talabalarning kiberijtimoiylashuvini optimallashtirishning didaktik imkoniyatlari asosida kasbiy rivojlanishni oshirar ekanmiz, zamonaviy ta’limda kiber sotsializatsiyada qo'llaniladigan yondashuvlarni ko’rib chiqamiz:

- Shaxslar o'xshash qiziqishlari yoki tajribalarini baham ko'radigan boshqalar bilan bog'lanishi va muloqot qilishi mumkin bo'lgan onlayn jamoalar va forumlarni yaratish.

- G'oyalar, fikrlar va tajriba almashish imkonini beruvchi shaxslar o'rtasidagi muloqot va o'zaro munosabatlarni engillashtirish uchun ijtimoiy media platformalaridan foydalanish.

- Shaxsiy ma'lumotlarni himoya qilish va xavfsiz onlayn muhitni ta'minlash uchun maxfiylik sozlamalari va xavfsizlik choralarini amalga oshirish.

- Ta'lim va xamkor tashkilotlar orqali raqamli fuqarolikni targ'ib qilish, onlayn o'zaro munosabatlarda mas'uliyatli va axloqiy xulq-atvorni rag'batlantirish.

- Onlayn yordam guruhlari, maslahat xizmatlari va ruhiy salomatlik resurslari orqali hamdardlik va tushunishni rag'batlantirish.

- Raqamli makonda shaxslarga birgalikda ishlash va bilim va ko'nikmalarni almashish imkonini beruvchi hamkorlikdagi loyihalar va tadbirlarga ko'maklashish.

Aralash ta’lim resurslari vositasida talabalarning kiberijtimoiylashuvini optimallashtirishning didaktik imkoniyatlarida talabalarda aralash ta'limda kibersotsializatsiyada qo'llaniladigan omillar:

- Talabalar va o'qituvchilar o'rtasida real vaqt rejimida o'zaro aloqa va hamkorlik qilish imkonini beruvchi onlayn aloqa vositalari va platformalariga kirishni ta'minlash.

- Tengdoshlarning o'zaro ta'siri va ishtirokini rag'batlantirish uchun onlayn muhokama forumlari va guruh loyihalarini birlashtirish.

- Onlayn ta'lim tajribasini yaxshilash va ijtimoiy hamkorlikni rag'batlantirish uchun multimedia kontenti va interaktiv o'quv materiallarini integratsiyalash.

- Shaxs o'rganish dinamikasini taqlid qiluvchi virtual sinf muhitini joriy qilish, masalan, mashg'ulotlar xonalari, guruh faoliyati va hamkorlikdagi loyihalar.

- Virtual talabalar tashkilotlari, klublar va darsdan tashqari mashg‘ulotlar orqali jamiyat va birlik hissini tarbiyalash.

- Shaxsiy yordam va yo'l-yo'riq ko'rsatish uchun virtual ish soatlari va o'qituvchilar bilan yakkama-yakka sessiyalarni taklif qilish.

- Ijobiy va hurmatli onlayn ta'lim muhitini targ'ib qilish uchun raqamli etiket va mas'uliyatli onlayn xatti-harakatlar bo'yicha treninglar va resurslarni taqdim etish.

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OLIY TA'LIM MUASSASALARIDA KORPORATIV BOSHQARUV MADANIYATINI RIVOJLANTIRISHNING TASHKILIY-PEDAGOGIK SHART-SHAROITLARI

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Annotatsiya. *Maqolada oliy ta'lim muassasalarida korporativ boshqaruv madaniyatini rivojlantirishning tashkiliy-pedagogik shart-sharoitlari ko'rib chiqilgan. Scopus va Web of Science xalqaro ma'lumotlar bazalarida indekslanuvchi ilmiy nashrlar, shuningdek, korporativ madaniyat va universitet boshqaruviga bag'ishlangan tadqiqotlar tahlili asosida oliy ta'lim tizimida korporativ muhitning shakllanishiga ta'sir etuvchi omillar aniqlangan. Tadqiqot davomida ushbu omillar boshqaruv jarayonlariga ta'sir qilish xususiyatiga ko'ra tizimlashtirilgan. Korporativ boshqaruv madaniyatining rivojlanishi tashkiliy, psixologik, institutsional va pedagogik omillarning o'zaro ta'siri bilan belgilanadi. Akademik muhitning o'ziga xos jihatlari va ta'lim jarayoni ishtirokchilarining qadriyat yo'nalishlarini hisobga olmay, alohida boshqaruv mexanizmlarini takomillashtirish hisobiga korporativ madaniyatning barqaror rivojlanishini ta'minlab bo'lmasligi asoslab berilgan. Tadqiqotning amaliy ahamiyati shundaki, olingan natijalardan oliy ta'lim muassasalarida korporativ boshqaruvni takomillashtirish dasturlarini ishlab chiqishda foydalanish mumkin.*

Kalit so'zlar: *korporativ boshqaruv, korporativ madaniyat, oliy ta'lim, universitet, tashkiliy madaniyat, universitet boshqaruvi, akademik muhit.*

Abstract. *The article examines organizational and pedagogical conditions influencing the development of corporate governance culture in higher education institutions. The study is based on the analysis of scientific publications indexed in the Scopus and Web of Science databases, as well as research devoted to corporate culture and university management. The factors affecting the formation of a corporate environment in higher education institutions were identified and systematized according to the nature of their influence on governance processes. The findings indicate that the development of corporate governance culture is determined by the interaction of organizational, psychological, institutional and pedagogical factors. The study argues that sustainable development of corporate culture cannot be achieved solely through the improvement of management mechanisms without considering the specific features of the academic environment and the value orientations of participants in the educational process. The practical significance of the research lies in the possibility of applying the proposed systematization when designing programs aimed at improving corporate governance in higher education institutions.*

Keywords: *corporate governance, corporate culture, higher education, university management, organizational culture, academic environment.*

Аннотация. *В статье рассматриваются организационно-педагогические условия развития культуры корпоративного управления в высших образовательных учреждениях. На основе анализа научных публикаций, индексируемых в международных базах данных Scopus и Web of Science, а также исследований, посвященных корпоративной культуре и управлению университетами, выявлены факторы, оказывающие влияние на формирование корпоративной среды в системе высшего образования. В ходе исследования проведена систематизация выявленных факторов по характеру их воздействия на процессы управления. Установлено, что развитие культуры корпоративного управления определяется взаимодействием организационных, психологических, институциональных и педагогических факторов. Обосновано, что устойчивое развитие корпоративной культуры невозможно обеспечить за счет совершенствования отдельных управленческих механизмов без учета особенностей академической среды и ценностных установок участников образовательного процесса. Практическая значимость исследования заключается в возможности использования полученных результатов при разработке программ совершенствования корпоративного управления в высших образовательных учреждениях.*

Ключевые слова: *корпоративное управление, корпоративная культура, высшее образование, университет, организационная культура, управление университетом, академическая среда.*

Kirish

So‘nggi o‘n yilliklarda oliy ta’lim tizimi tub o‘zgarishlar davrini boshdan kechirmoqda. Universitetlarni moliyalashtirish modellari o‘zgarmoqda, akademik muxtoriyat kengaymoqda, talabalar, o‘qituvchilar va tadqiqot resurslari uchun raqobat kuchaymoqda. Shu bois ta’lim tashkilotlarini boshqarish masalalari asta-sekin faqat ma’muriy tartib-taomillar doirasidan chiqib bormoqda. Universitetning o‘zgarishlarga moslashish, barqaror rivojlanishni ta’minlash va akademik hamjamiyat yaxlitligini saqlash qobiliyatini belgilovchi ichki mexanizmlar tadqiqotchilar e’tiborini tobora ko‘proq o‘ziga tortmoqda [6].

Korporativ boshqaruv madaniyati ana shunday mexanizmlardan biridir. Bugungi kunda u shunchaki tashkiliy me’yorlar yoki boshqaruv an’analari majmuyi sifatida qaralmayapti. Gap qadriyatlar tizimi, o‘zaro munosabat modellari, qaror qabul qilish qoidalari hamda xodimlarning tashkilot maqsadlari va kelajagi haqidagi tasavvurlarini o‘z ichiga olgan ancha murakkab hodisa xususida bormoqda [1,4].

Tashkiliy madaniyat muammosi xorijiy ilmiy adabiyotlarda keng yoritilgan. Jumladan, E. Sheyn har qanday tashkilotning barqarorligi ko‘p jihatdan uning a’zolari o‘rtasida umumiy bo‘lgan chuqur, tayanch qarashlar va qadriyatlar bilan belgilanishini ta’kidlaydi. Muallifning fikricha, aynan ular xodimlarning xulq-atvoriga rasmiy qoidalar va yo‘riqnomalarga qaraganda ancha kuchliroq ta’sir ko‘rsatadi [1]. K. Kameron va R. Kuinn tashkiliy madaniyatni tashkilot faoliyatining samaradorligini hamda uning tashqi muhit o‘zgarishlariga javob bera olish qobiliyatini belgilovchi omil sifatida qaraydi [3]. G. Xofstede esa madaniy xususiyatlarning

tashkilotlar faoliyatiga ta’sirini o‘rganar ekan, boshqaruv amaliyotini shakllantirishda qadriyatli yo‘nalishlarning muhimligini alohida uqtiradi [4].

Shu bilan birga, ilmiy nashrlar tahlili shuni ko‘rsatadiki, aksariyat tadqiqotlar yo tashkiliy madaniyatning umumiy masalalariga, yo universitetlarni boshqarishning ayrim jihatlariga qaratilgan. Oliy ta’lim muassasalarida korporativ boshqaruv madaniyati rivojlanishini ta’minlaydigan shart-sharoitlar esa ancha kam hollarda maxsus tahlil predmetiga aylanadi. Bu, ayniqsa, bir vaqtning o‘zida universitet ichida shakllanib, uning keyingi rivojlanishiga ta’sir ko‘rsatadigan omillarni kompleks o‘rganishda yaqqol ko‘zga tashlanadi.

Amalda vaziyat bundan ham murakkabroq ko‘rinadi. Strategik rivojlanish dasturlari, zamonaviy tashkiliy tuzilmalar va rasman mustahkamlangan korporativ qadriyatlar mavjud bo‘lgan taqdirda ham, turli universitetlardagi natijalar bir xil bo‘lmaydi. Bizningcha, ayrim ta’lim tashkilotlari barqaror boshqaruv muhitini va xodimlarning yuqori darajadagi jalb etilganligini ancha tez shakllantirsa, boshqalari o‘zgarishlarga qarshilik, xodimlarning past motivatsiyasi va ichki kommunikatsiyalarning tarqoqligiga duch keladi. Bu holat korporativ boshqaruv madaniyatining rivojlanishi alohida boshqaruv qarorlari bilan emas, balki o‘zaro bog‘liq shart-sharoitlar va omillar majmui bilan belgilanadi, deb taxmin qilishga asos bo‘ladi.

Shu munosabat bilan quyidagi ilmiy savol yuzaga keladi: oliy ta’lim muassasalarida korporativ boshqaruv madaniyatining rivojlanishiga qanday tashkiliy-pedagogik shart-sharoitlar hal qiluvchi ta’sir ko‘rsatadi va ular o‘zaro qanday bog‘liqlikda bo‘ladi?

Ushbu tadqiqotning maqsadi oliy ta’lim muassasalarida korporativ boshqaruv madaniyatining rivojlanishiga ta’sir etuvchi omillarni aniqlash va tizimlashtirishdan, shuningdek, ularning shakllanishidagi tashkiliy, psixologik, institutsional va pedagogik shart-sharoitlarni ajratib ko‘rsatishdan iborat.

Tadqiqot materiallari va metodlari

Scopus va Web of Science xalqaro ma’lumotlar bazalarida indekslangan ilmiy nashrlar, shuningdek, oliy ta’limda korporativ madaniyat, korporativ boshqaruv va boshqaruv tizimlarini rivojlantirish masalalariga bag‘ishlangan monografiya va dissertatsiyalar tadqiqot materiallari bo‘lib xizmat qildi. Manbalarni tanlashda ularning mavzuga oidligi, ilmiy ahamiyati va tadqiqot predmetiga muvofiqligi hisobga olindi.

Tadqiqot uch bosqichda olib borildi. Birinchi bosqichda korporativ madaniyatning mohiyati, uning tarkibiy qismlari va tashkilot boshqaruvi tizimidagi o‘rniga bag‘ishlangan ilmiy nashrlar tahlil qilindi. Ikkinchi bosqichda oliy ta’lim muassasalarini boshqarish xususiyatlari va universitetlarda korporativ muhitni shakllantirish mexanizmlari ko‘rib chiqilgan ishlar o‘rganildi. Uchinchi bosqichda aniqlangan omillar korporativ boshqaruv madaniyatining rivojlanishiga ta’siri xususiyatiga ko‘ra tizimlashtirildi va tasniflandi.

Belgilangan maqsadga erishish uchun ilmiy adabiyotlarni tahlil qilish, qiyosiy tahlil, umumlashtirish, tizimlashtirish va ma’lumotlarni guruhlash usullaridan foydalanildi. Tizimli yondashuv korporativ boshqaruv madaniyatini universitetning ichki jarayonlari va tashqi institutsional muhit o‘zaro ta’sirining natijasi sifatida ko‘rib chiqish imkonini berdi. O‘tkazilgan tahlil natijasida korporativ boshqaruv madaniyatining rivojlanishiga ta’sir ko‘rsatuvchi omillar to‘rtta guruhga ajratildi: tashkiliy, psixologik, institutsional va pedagogik.

Tadqiqot natijalari

Ilmiy nashrlar tahlili shuni ko‘rsatadiki, universitetda korporativ boshqaruv madaniyati, odatda, me’yoriy hujjatlar yoki oliy ta’lim muassasalarining rivojlanish strategiyalarida aks ettirilganidan ko‘ra ancha ko‘proq omillar ta’sirida shakllanadi. Aksariyat hollarda asosiy e’tibor

boshqaruv tuzilmasi, vakolatlarni taqsimlash yoki ayrim boshqaruv tartib-taomillarini takomillashtirishga qaratiladi. Biroq bunday yondashuv jarayonning faqat tashqi jihatinigina ko‘rish imkonini beradi, xolos.

Turli tadqiqotlar natijalarini taqqoslaganda bir jihat e’tiborni tortadi. Mualliflar turli atamalardan foydalansalar-da, boshqaruvning xilma-xil modellarini o‘rgansalar-da va universitetlarni bir-biriga o‘xshamaydigan sharoitlarda ko‘rib chiqsalar-da, muammolar majmuyi ko‘p jihatdan o‘xshashligicha qoladi. Deyarli har doim gap ichki muloqot sifati, ta’lim jarayoni ishtirokchilari o‘rtasidagi ishonch darajasi, xodimlarning tashkiliy o‘zgarishlarni qo‘llab-quvvatlashga tayyorligi, shuningdek, akademik muhit va tashqi institutsional talablar ta’siri haqida boradi.

Dastlab aniqlangan omillar ro‘yxati ancha katta bo‘lib chiqdi. Ularning ayrimlari bir-birini takrorlar, ayrimlari esa faqat ifodalanishi bilangina farq qilar edi. Shu sababli, keyingi bosqichda ular mazmuni va boshqaruv jarayonlariga ta’sir etish xususiyatiga ko‘ra guruhlashtirildi.

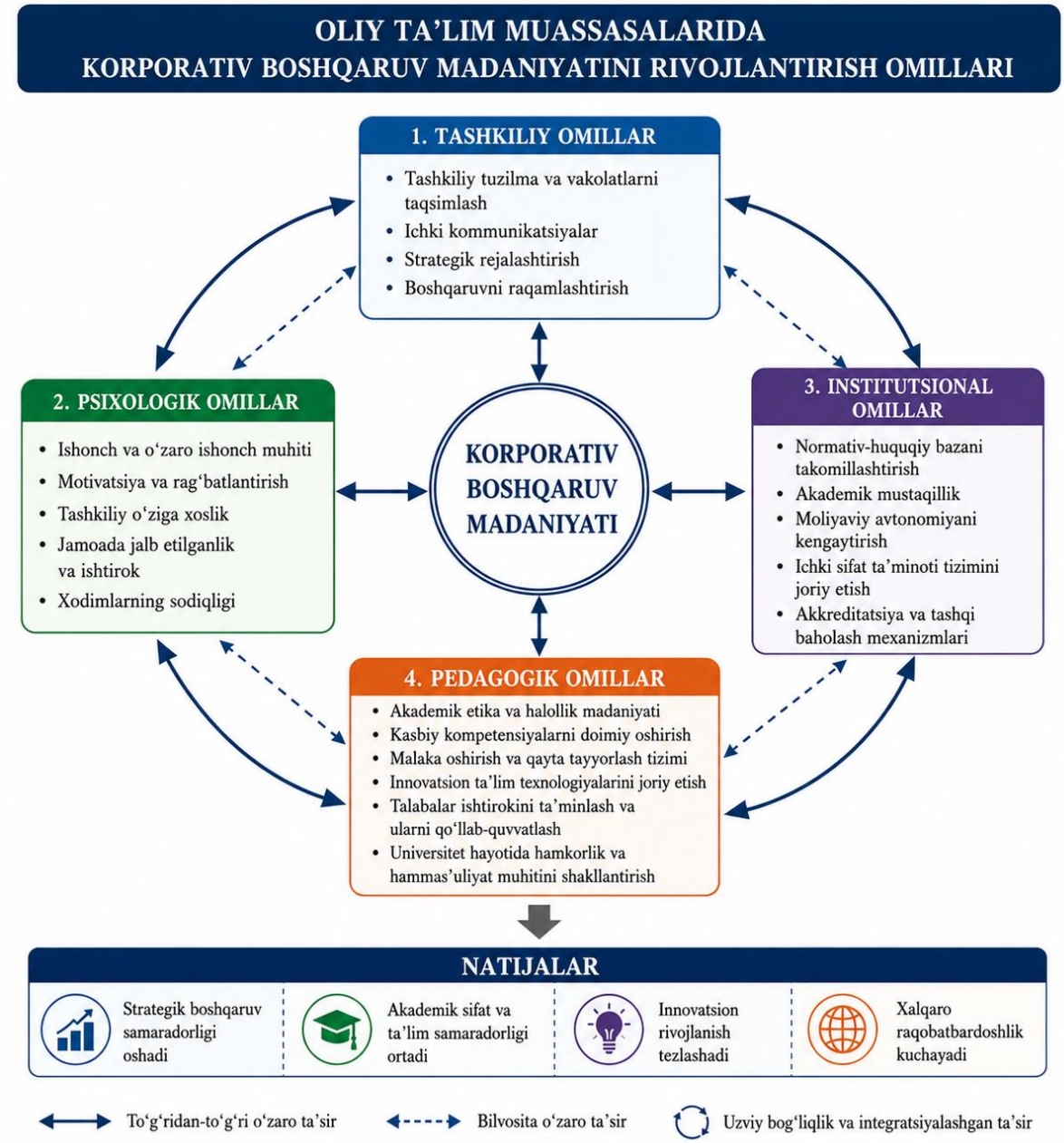
Natijada omillarning to‘rtta guruhi ajratib olindi: tashkiliy, psixologik, institutsional va pedagogik.

Tashkiliy omillar guruhi eng ko‘zga tashlanadigani hisoblanadi. Aynan shu guruh universitetlarni boshqarishga oid tadqiqotlarda boshqalariga qaraganda ko‘proq tilga olinadi. Bularga tashkiliy tuzilmaning xususiyatlari, kommunikatsiya tizimi, qaror qabul qilish mexanizmlari, strategik rejalashtirish va boshqaruv jarayonlarining raqamlashtirilganlik darajasi kiradi. Shu bilan birga, tahlillar shuni ko‘rsatdiki, rasmiy jihatdan yo‘lga qo‘yilgan boshqaruv tizimining mavjudligi hali barqaror korporativ madaniyat shakllanishini kafolatlamaydi. Bundan tashqari, ayrim hollarda haddan tashqari qat’iy tartibga solish xodimlarning tashabbuskorligini pasaytirishi va bo‘linmalar o‘rtasidagi gorizontal hamkorlikni cheklashi mumkin.

Psixologik omillar ham kam ahamiyat kasb etmadi. Bir qarashda ular unchalik sezilmaydigandek tuyuladi, chunki ularni miqdoriy jihatdan o‘lchash qiyin. Shunga qaramay, ko‘plab ilmiy ishlarda aynan shu guruh korporativ madaniyat yetukligining o‘ziga xos ko‘rsatkichi sifatida qaraladi. Gap ishonch, tashkiliy o‘zlikni anglash, xodimlarning jalb etilganligi, universitetning strategik maqsadlarini amalga oshirishda qatnashishga tayyorlik haqida bormoqda. Agar xodimlar o‘zlarini faqat ayrim funksiyalarning ijrochilari deb bilsa, boshqaruv qarorlarining sifati qanday bo‘lishidan qat’i nazar, yagona korporativ muhitni shakllantirish qiyinlashadi.

Institutsional omillar alohida e’tiborga loyiqdir. So‘nggi yillarda universitetlarning akademik mustaqilligi kengayishi va oliy ta’limni boshqarishga doir yondashuvlar o‘zgarishi natijasida ularning ahamiyati yanada ortdi. Bunga me’yoriy-huquqiy baza, akkreditatsiya mexanizmlari, sifatni baholash tizimlari talablari, shuningdek, davlat, ish beruvchilar va jamiyatning umidlari o‘z ta’sirini ko‘rsatadi. Bunday holda korporativ madaniyat nafaqat ichki jarayonlar, balki muayyan qoida va cheklovlarni belgilab beruvchi tashqi muhit ta’sirida ham rivojlanadi.

Fikrimizcha, universitetlar uchun eng o‘ziga xos omillar guruhi bu – pedagogik omillardir. Oliy ta’lim muassasasining aksariyat boshqa tashkilotlardan farqi aynan shu yerda namoyon bo‘ladi. Korporativ madaniyat faqat boshqaruv jarayonida emas, balki kundalik ta’limiy hamkorlik davomida ham shakllanadi. Akademik etika, o‘qituvchining kasbiy madaniyati, innovatsiyalarga munosabati, bilim almashishga tayyorligi hamda talabalarning universitet hayotiga jalb etilishi asta-sekin tashkilot umumiy qadriyatlar tizimining bir qismiga aylanib boradi.



1-rasm. Oliy ta’lim muassasalarida korporativ boshqaruv madaniyatini rivojlantirish omillarining o‘zaro bog‘liqlik modeli.

Mazkur model oliy ta’lim muassasalarida korporativ boshqaruv madaniyatini rivojlantirishga ta’sir etuvchi asosiy omillar va ularning o‘zaro integratsiyalashgan aloqalarini aks ettiradi. Modelning markazida “Korporativ boshqaruv madaniyati” joylashgan bo‘lib, u to‘rtta asosiy omillar guruhi — tashkiliy, psixologik, institutsional va pedagogik omillar ta’sirida shakllanadi (1-rasm).

Tashkiliy omillar boshqaruv tuzilmasi, vakolatlarni taqsimlash, ichki kommunikatsiyalar, strategik rejalashtirish hamda boshqaruvni raqamlashtirish jarayonlarini qamrab oladi. Psixologik omillar esa jamoada ishonch muhitini shakllantirish, motivatsiyani kuchaytirish, xodimlarning jalb etilganligi va tashkilotga sodiqligini ta’minlash bilan tavsiflanadi. Institutsional omillar normativ-huquqiy baza, akademik va moliyaviy muxtoriyat, sifatni ta’minlash hamda akkreditatsiya mexanizmlarini o‘z ichiga oladi. Pedagogik omillar esa akademik etika, kasbiy kompetentlik,

malaka oshirish, innovatsion ta’lim texnologiyalarini joriy etish va talabalar faolligini rivojlantirishga yo‘naltirilgan.

Modelda omillar o‘rtasidagi ikki tomonlama va ko‘p yo‘nalishli bog‘liqliklar ularning o‘zaro ta’sirda faoliyat yuritishini ko‘rsatadi. Ushbu omillarning uyg‘unlashuvi natijasida korporativ boshqaruv madaniyati rivojlanib, strategik boshqaruv samaradorligining oshishi, ta’lim sifati va akademik samaradorlikning yaxshilanishi, innovatsion rivojlanishning jadallashishi hamda universitetning xalqaro raqobatbardoshligining kuchayishi kabi natijalarga erishiladi.

Shunday qilib, model korporativ boshqaruv madaniyatini rivojlantirishni alohida omillar yig‘indisi emas, balki o‘zaro bog‘langan va bir-birini to‘ldiruvchi yaxlit tizim sifatida talqin etadi. Bu esa oliy ta’lim muassasalarini boshqarishda tizimli yondashuvni qo‘llash zarurligini asoslaydi.

Muhokama

Olingan natijalar, umuman olganda, korporativ madaniyat tashkilotni boshqarishning qo‘shimcha bir unsuri emas, balki uning barqarorligi va rivojlanishining omillaridan biri ekanligi to‘g‘risidagi ilmiy adabiyotlarda keng tarqalgan qarashga mos keladi. Shu bilan birga, nashrlar tahlili qiziqarli bir jihatni ko‘rsatadi. Aksariyat tadqiqotchilar korporativ madaniyatni yo tashkiliy xulq-atvor prizmasi orqali, yo qadriyatlar va me’yorlar tizimi orqali ko‘rib chiqadi. Bizningcha, universitet muhiti uchun bunday izohning o‘zi endi yetarli emas.

E. Sheynning ta’kidlashicha, tashkilot madaniyati vaqt o‘tishi bilan jamoa a’zolarining odatiy idrok va xulq-atvor modeliga aylanadigan chuqur tasavvurlar darajasida shakllanadi. Bu yondashuv nima sababdan turli universitetlarda bir xil boshqaruv qarorlari turlicha natijalarga olib kelishini izohlash imkonini beradi [1]. Rasman olganda, boshqaruv tuzilmasi o‘xshash, qoidalar deyarli bir xil bo‘lishi mumkin, biroq odamlar o‘rtasidagi o‘zaro munosabatlarning xususiyati turlicha bo‘lib qolaveradi. Aftidan, korporativ madaniyatning yashirin boshqaruv mexanizmi sifatidagi ta’siri aynan shunda namoyon bo‘ladi.

K. Kameron va R. Kuinn ham shunga o‘xshash pozitsiyani egallab, tashkilot samaradorligini tashkiliy madaniyatning ustuvor turi bilan bog‘laydi [3]. Biroq universitetlar misolida vaziyat ancha murakkabroq ko‘rinadi. Agar tijorat tashkiloti uchun samaradorlikning asosiy mezoni ko‘pincha iqtisodiy natija hisoblansa, oliy ta’lim muassasasi uchun akademik obro‘, ta’lim sifati, ilmiy faollik va o‘zgarishlarga moslashish qobiliyati birdek muhimdir. Shu sababli, oliy ta’lim muassasasida korporativ boshqaruv madaniyati ko‘p qatlamli xususiyat kasb etadi va uni faqatgina boshqaruv samaradorligini oshirish vositasi sifatida qarash mumkin emas.

G. Hofstedening tashkiliy xulq-atvor xususiyatlarini qadriyatlar va madaniy kontekst bilan bog‘lagan yondashuvi ham diqqatga sazovordir [4]. O‘tkazilgan tadqiqot doirasida bu kuzatuv o‘zining qo‘shimcha tasdig‘ini topdi. Tahlillar shuni ko‘rsatdiki, universitetning korporativ madaniyati rivojlanishi ko‘p jihatdan nafaqat ichki boshqaruv jarayonlari, balki kengroq institutsional sharoitlar, jumladan, akademik muhit an’analari, boshqaruvning milliy xususiyatlari hamda ta’lim siyosati talablari bilan ham belgilanadi.

Ayniqsa, bevosita oliy ta’lim sohasida olib borilgan tadqiqotlar alohida e’tiborga loyiq. Masalan, O. B. Betina korporativ madaniyatni oliy o‘quv yurtidagi tashkiliy xulq-atvorni boshqarish vositasi sifatida ko‘rib chiqadi [6]. Bu xulosa asosli ko‘rinsa-da, tahlillarimiz natijalari ushbu tushunchani biroz kengaytirish imkonini beradi. Korporativ madaniyat nafaqat xodimlarning xulq-atvoriga, balki universitet muhitidagi qaror qabul qilish mexanizmlariga, muloqot xususiyatiga, innovatsiyalarga bo‘lgan munosabatga va hatto talabalarning ta’lim muassasasi hayotiga jalb etilganlik darajasiga ham ta’sir ko‘rsatadi.

Shunga o‘xshash fikrni L. S. Pepanyanning asarida ham uchratish mumkin. U zamonaviy universitetning boshqaruv salohiyatini uning korporativ madaniyati rivojlanish darajasi bilan bog‘laydi [7]. Shu bilan birga, bizningcha, gap mustaqil resurs sifatidagi madaniyatning o‘zi haqida emas, balki universitetning turli omillar guruhlari o‘rtasidagi muvozanatni saqlay olish qobiliyati haqida ketmoqda. Kuchli tashkiliy tuzilma jamoa ichidagi ishonch taqchilligining o‘rnini bosa olmaydi. Rivojlangan motivatsiya tizimi esa aniq strategik yo‘nalishlar bo‘lmaganda samara bermaydi. Xuddi shuningdek, akademik muxtoriyatning o‘zi yetuk korporativ muhit shakllanishini kafolatlamaydi.

Qizig‘i shundaki, zamonaviy nashrlarning aksariyatida asosiy e’tibor universitetni boshqarishning tashkiliy jihatlariga qaratilmoqda. Raqamlashtirish, strategik rejalashtirish, boshqaruv tuzilmasini takomillashtirish kabi masalalar so‘nggi yillardagi tadqiqotlarda chindan ham salmoqli o‘rin egallayapti. Biroq, o‘tkazilgan tahlillar shuni ko‘rsatmoqdaki, tashkiliy mexanizmlar korporativ madaniyat rivojining bevosita sababidan ko‘ra, ko‘proq uning zaruriy sharti sifatida namoyon bo‘lar ekan. Boshqacha aytganda, zamonaviy boshqaruv tizimining mavjudligi korporativ madaniyatni shakllantirish uchun imkoniyat yaratadi, lekin uni o‘z-o‘zidan ta’minlab qo‘ymaydi.

Shu nuqtayi nazardan, psixologik va pedagogik omillar alohida ahamiyat kasb etadi. Bizningcha, aynan shu omillar universitetning rasman e’lon qilingan qadriyatlarni kundalik muloqotning real me’yorlariga aylantirish qobiliyatini belgilab beradi. Agar xodimlar tashkilotning strategik maqsadlarini o‘ziniki deb bilmasa, talabalar esa o‘zlarini akademik hamjamiyatning bir qismi sifatida his qilmasa, korporativ madaniyat amaldagi mexanizmdan ko‘ra shunchaki bir hujjatligicha qolaveradi.

Demak, tadqiqot natijalari oliy ta’lim muassasalaridagi korporativ boshqaruv madaniyatini tashkiliy, psixologik, institutsional va pedagogik omillarning murakkab o‘zaro ta’siri mahsuli sifatida qarashga imkon beradi. Ajratib ko‘rsatilgan guruhlarning hech biri mustaqil ustuvor ahamiyatga ega emas. Qolaversa, faqat bitta yo‘nalishni rivojlantirishga urinish muqarrar ravishda cheklangan samara beradi. Zamonaviy universitet sharoitida korporativ madaniyatning barqaror rivojlanishi faqatgina boshqaruv qarorlari, akademik qadriyatlar, kasbiy munosabatlar va institutsional muhit bir-biridan alohida emas, balki o‘zaro bog‘liqlikda ishlay boshlagandagina mumkin bo‘ladi.

Xulosa

O‘tkazilgan tadqiqot shuni ko‘rsatdiki, oliy ta’lim muassasalarida korporativ boshqaruv madaniyatini rivojlantirish alohida boshqaruv mexanizmlarini takomillashtirish yoki yangi tashkiliy amaliyotlarni joriy etishdan ko‘ra ancha murakkabroq jarayondir. Barqaror korporativ muhit boshqaruv, ijtimoiy, institutsional va pedagogik jarayonlarning o‘zaro kesishuvida shakllanadi va ularning har biri universitet taraqqiyotiga o‘z hissasini qo‘shadi.

Ilmiy adabiyotlar tahlili korporativ boshqaruv madaniyatiga ta’sir etuvchi omillarni o‘zaro bog‘liq bo‘lgan to‘rtta guruhga: tashkiliy, psixologik, institutsional va pedagogik guruhlarga ajratish mumkinligini ko‘rsatdi. Bunda ularning ta’siri yakka holda namoyon bo‘lmaydi. Bir sohadagi o‘zgarishlar muqarrar ravishda universitet muhitining boshqa unsurlariga ham ta’sir ko‘rsatib, korporativ madaniyatning rivojlanish imkoniyatlarini kengaytiradi yoki, aksincha, cheklaydi.

Eng muhim xulosa shundaki, korporativ boshqaruv samaradorligi rasmiy tartib-qoidalar, strategik hujjatlar yoki zamonaviy tashkiliy tuzilmalarning mavjudligi bilan emas, balki ko‘proq

universitetning barcha ta’lim jarayoni ishtirokchilari uchun yagona qadriyatlar muhitini shakllantira olish qobiliyati bilan belgilanadi. Aynan shunday holatda korporativ madaniyat faqat me’yoriy vazifani bajarishdan to‘xtab, tashkilotni rivojlantirishning amaliy vositasiga aylanadi.

Fikrimizcha, olingan natijalarning amaliy ahamiyati shundaki, oliy ta’lim muassasalarida korporativ boshqaruvni takomillashtirish dasturlarini ishlab chiqishda omillarning taklif etilgan ushbu tizimidan foydalanish mumkin. Ajratib ko‘rsatilgan omillar guruhlari korporativ madaniyat rivojini tashkiliy, institutsional va pedagogik darajalarda muvofiqlashtirilgan sa’y-harakatlarni talab etuvchi kompleks boshqaruv vazifasi sifatida qarash imkonini beradi.

Zamonaviy sharoitda aynan shunday yondashuv universitetning ichki jarayonlari barqarorligini hamda uning akademik qadriyatlar va strategik rivojlanish yo‘nalishlarini saqlagan holda tashqi muhit o‘zgarishlariga moslashish qobiliyatini ta’minlay oladi.

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KOMPETENSIYAVIY YONDASHUV ASOSIDA ASTRONOMIYA FANINI O'QITISHDA DASTURIY-METODIK TA'MINOT SAMARADORLIGINI PEDAGOGIK TAJRIBA-SINOV ASOSIDA BAHOLASH

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Annotatsiya. *Mazkur maqolada oliy ta'lim muassasalarida astronomiya fanini kompetensiyaviy yondashuv asosida o'qitishda ishlab chiqilgan dasturiy-metodik ta'minotning pedagogik samaradorligi tajriba-sinov ishlari asosida tahlil qilingan. Tadqiqot davomida bo'lajak o'qituvchilarning kasbiy kompetensiyalarini rivojlantirishga qaratilgan uch turdagi topshiriqlar hamda bilimga yo'naltirilgan, amaliy faoliyat va ilmiy-tadqiqotga yo'naltirilgan, mustaqil ishga yo'naltirilgan hamda kuzatuv-reflektiv baholash mezonlari ishlab chiqildi. Tajriba va nazorat guruhlari natijalari summativ baholash asosida o'rganilib, Styudent t-kriteriyasi yordamida matematik-statistik tahlil qilindi. Hisoblash natijalariga ko'ra, barcha mezonlar bo'yicha tajriba guruhining o'rtacha ko'rsatkichlari nazorat guruhiga nisbatan yuqori ekanligi hamda ishonch oralig'ining kesishmasligi metodikaning statistik jihatdan ishonchliligini tasdiqladi. Pedagogik tajriba-sinov yakunlariga ko'ra, ishlab chiqilgan dasturiy-metodik ta'minot astronomiya fanini kompetensiyaviy yondashuv asosida o'qitish samaradorligi oshganligi aniqlandi.*

Kalit so'zlar: *astronomiya ta'limi, kompetensiyaviy yondashuv, raqamli ta'lim, dasturiy-metodik ta'minot, pedagogik tajriba-sinov, matematik-statistik tahlil, Styudent t-kriteriyasi, kasbiy kompetensiya, summativ baholash, raqamli texnologiyalar, oliy ta'lim, pedagogik samaradorlik.*

Kirish. Raqamlashtirish jarayoni ta'lim tizimining barcha bosqichlariga chuqur kirib bormoqda va kompetensiyaviy yondashuv raqamli ta'lim muhitida alohida o'rin egallamoqda. Bu sohada olib borilayotgan ishlar global miqyosda ta'lim tizimlarining modernizatsiyasiga va yangi pedagogik metodologiyalarni ishlab chiqishga yo'naltirilgan. Yevropa Ta'lim Fondi (European Education Foundation) ko'plab ta'lim va taraqqiyot dasturlarida (Erasmus) ta'lim tizimini rivojlantirishni maqsad qiladi[1,2,3,4,12].

Pedagogik tadqiqotlarni tashkil etish – bu pedagogik faoliyatni modellashtirishga asoslanadi. Bunday tadqiqotlarni o'tkazishda asosiy maqsad – ta'lim samaradorligini oshirishdir [5,6,7]. Tadqiqotchi tomonidan yillar davomida olib borilgan, chuqur o'rganilgan, tahlil qilingan va amaliyotga joriy etilgan ilmiy ishlar natijasi orqali bu maqsad amalga oshiriladi.Tadqiqot natijalari orqali ilmiy izlanishlarning dolzarbligi, ularning ta'lim samaradorligiga qo'shgan hissasi

aniq foiz ko‘rsatkichlari bilan tahlil qilinadi. Bu esa tadqiqot natijalari asosida yaratilgan ilmiy asoslangan yondashuvlarning samaradorligini isbotlab beradi [8,9,10,11].

Asosiy qism. Raqamli ta’lim sharoitida kompetensiyaviy yondashuv asosida astronomiya fanini o‘qitishning dasturiy metodik ta’minotini takomillashtirishga yo‘naltirilgan tajriba-sinov ishlarida Nizomiy nomidagi O‘zbekiston milliy pedagogika universiteti, Qo‘qon davlat pedagogika instituti va Termiz davlat pedagogika instituti bo‘yicha “fizika va astronomiya” yo‘nalishi talabalari tanlab olindi. Tanlab olingan yo‘nalish talabalari tajriba va nazorat guruhlariga ajratilib, jami 361 (O’ZMPU148), QDPI(115), TDPI(98) nafarni tashkil etdi. Tajriba-sinov ishlari natijalar bilimga yo‘naltirilgan, ijodiy va amaliy faoliyatga yo‘naltirilgan, mustaqil faoliyatga yo‘naltirilgan hamda kuzatuv-reliktiv harakatga yo‘naltirilgan mezonlar bo‘yicha olib borildi. Ular o‘quv fanining asosiy mazmunini o‘zlashtirish darajasini baholashga xizmat qilgdi. Ijodiy va amaliyotga yo‘naltirilgan baholash mezonlari esa bu talabaning mavjud bilim asosida yangi g‘oya, tushuncha, izoh yoki yechim yaratish qobiliyatini aniqlovchi, ilmiy tafakkur va ijodiy fikrlashni namoyon etuvchi mezonlardir. Ular talabaning kontseptual tafakkuri, mantiqiy fikrlashi va bilimlar o‘rtasidagi bog‘liqliklarni aniqlash salohiyatini baholashi ko‘rsatilgan. Amaliyotga yo‘naltirilgan baholash mezonlari — bu talabaning o‘zlashtirilgan bilim va ko‘nikmalarni amaliy vazifalarda, real yoki simulyatsiyalangan muhitda qo‘llay olish darajasini aniqlovchi mezonlardir. Ular faoliyatga tayyorlik, kasbiy kompetensiyalar va integrativ yondashuvni baholashga xizmat qiladi. Mustaqil faoliyatga yo‘naltirilgan mezonlar talabaning o‘z-o‘zini boshqarish, o‘z bilimini o‘zlashtirish va mas’uliyatli yondashuvni namoyon etadi. Mustaqil manbalarni tahlil qilib, yangi ma’lumotlarni umumlashtiradi. Kuzatuv va reliktiv baholashga yo‘naltirilgan baholash mezonlari esa talabalarning kuzatuv kompetensiyasini rivojlantirish, faoliyatini tahlil qilish va xulosalar chiqarishga xizmat qiladi.

Tajriba sinov ishlarida talabalarning raqamlashtirilgan ta’lim sharoiti kasbiy pedagogik tayyorgarligini aniqlash va tadqiqotda ilgari surilgan g‘oyalar asosida takomillashtirish maqsadida dasturiy-metodik ta’minot vositasida kompetensiyaviy yondashuv asosida astronomiya fanini o‘qitish samaradorligini aniqlash uchun 1-tur astronomik bilimlarni aniqlashtirishga mo‘ljallangan topshiriqlar, 2-tur fanni o‘qitishda raqamli texnologiyalardan foydalanish va ularni loyihalashtirishga oid topshiriqlar va 3-tur integrativ kompetensiyaviy qobiliyatlarini aniqlashga oid topshiriqlar ishlab chiqildi va ularning har biri bilimga yo‘naltirilgan, amaliy faoliyat va ilmiy tadqiqotgayo‘naltirilgan, mustaqil ishga yo‘naltirilgan va kuzatuv va reliktiv baholashga yo‘naltirilganlik mezonlari asosida baholash bo‘yicha dastlabki natijalar olindi.

1-jadval. Tur topshiriqlarining mezonlar bo‘yicha summativ baholash natijalari

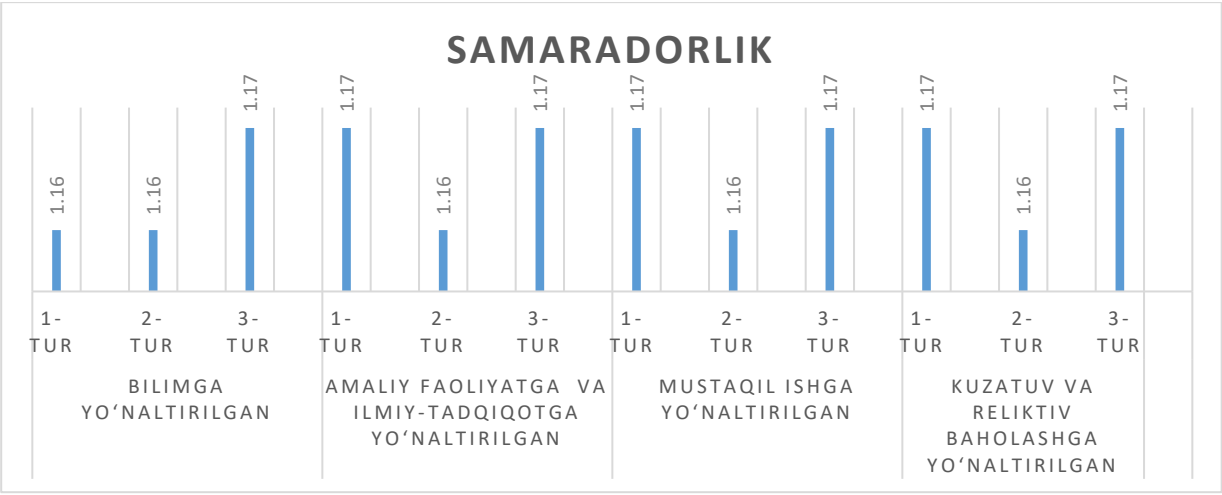
Mezonlar	Topshiriqlar	Guruhlar	soni	Darajalar			
				Interfaol	Faol	Reaktiv	Passiv
bilimga yo‘naltirilgan	1- tur -astronomik bilimlarni aniqlashtirishga mo‘ljallangan	TG	180	42	100	38	0
		NG	181	18	54	101	8
	2-tur fanni o‘qitishda raqamli texnologiyalardan foydalanish va ularni loyihalashtirishga oid	TG	180	45	100	35	0
		NG	181	21	53	101	6
	3-tur integrativ kompetensiyaviy qobiliyatlarini aniqlashga oid	TG	180	52	101	27	0
		NG	181	24	52	102	3
amaliy faoliyatga va ilmiy-tadqiqotga yo‘naltirilgan	1- tur -astronomik bilimlarni aniqlashtirishga mo‘ljallangan	TG	180	45	97	38	0
		NG	181	20	52	98	11
	2-tur fanni o‘qitishda raqamli texnologiyalardan foydalanish va ularni loyihalashtirishga oid	TG	180	46	98	36	0
		NG	181	22	50	104	5
	3-tur integrativ kompetensiyaviy qobiliyatlarini aniqlashga oid	TG	180	49	105	26	0
		NG	181	24	53	101	3
mustaqil ishga yo‘naltirilgan	1- tur -astronomik bilimlarni aniqlashtirishga mo‘ljallangan	TG	180	46	104	30	0
		NG	181	21	55	99	6
	2-tur fanni o‘qitishda raqamli texnologiyalardan foydalanish va ularni loyihalashtirishga oid	TG	180	45	109	26	0
		NG	181	22	55	101	3
	3-tur integrativ kompetensiyaviy qobiliyatlarini aniqlashga oid	TG	180	51	110	19	0
		NG	181	24	56	98	3
kuzatuv va reliktiv baholashga yo‘naltirilgan	1- tur -astronomik bilimlarni aniqlashtirishga mo‘ljallangan	TG	180	43	101	36	0
		NG	181	19	55	98	9
	2-tur fanni o‘qitishda raqamli texnologiyalardan foydalanish va ularni loyihalashtirishga oid	TG	180	46	101	33	0
		NG	181	22	54	98	7
	3-tur integrativ kompetensiyaviy qobiliyatlarini aniqlashga oid	TG	180	51	107	22	0
		NG	181	24	58	96	3

Ushbu umumilashtirilgan sonli ma’lumotlarni ishonchliligini va to‘g‘riligini tekshirish maqsadida Styudent kriteriyasidan foydalanib, matematik-statistik tahlil etilgan (2-jadval).

2-jadval. Tur topshiriqlarining mezonlar bo‘yicha summativ baholash natijalarining statistik tahlili

Mezonlar	Topshi-riqlar	Guruhlar	o‘rtacha qiymat	Sama-radorlik	Styudent kriteriysi	Kritik qiymat	Ishonch oralig‘i		Xulosa
bilimga yo‘naltirilgan	1- tur	Tajriba	4,02	1,16	6,46	1,96	3,92	4,12	H1
		Nazorat	3,45				3,35	3,56	
	2-tur	Tajriba	4,06	1,16	6,38	1,96	3,96	4,15	H1
		Nazorat	3,49				3,38	3,6	
	3-tur	Tajriba	4,14	1,17	6,87	1,96	4,04	4,23	H1
		Nazorat	3,54				3,43	3,64	
amaliy faoliyatga va ilmiy-tadqiqotga yo‘naltirilgan	1- tur	Tajriba	4,04	1,17	6,6	1,96	3,94	4,14	H1
		Nazorat	3,45				3,34	3,56	
	2-tur	Tajriba	4,06	1,16	6,36	1,96	3,96	4,15	H1
		Nazorat	3,49				3,38	3,6	
	3-tur	Tajriba	4,13	1,17	6,72	1,96	4,04	4,22	H1
		Nazorat	3,54				3,43	3,65	
mustaqil ishga yo‘naltirilgan	1- tur	Tajriba	4,09	1,17	6,68	1,96	3,99	4,18	H1
		Nazorat	3,5				3,39	3,61	
	2-tur	Tajriba	4,11	1,16	6,66	1,96	4,01	4,2	H1
		Nazorat	3,53				3,42	3,64	
	3-tur	Tajriba	4,18	1,17	7,19	1,96	4,09	4,27	H1
		Nazorat	3,56				3,45	3,67	
kuzatuv va reliktiv baholashga yo‘naltirilgan	1- tur	Tajriba	4,04	1,17	6,5	1,96	3,94	4,14	H1
		Nazorat	3,46				3,35	3,57	
	2-tur	Tajriba	4,07	1,16	6,43	1,96	3,98	4,17	H1
		Nazorat	3,5				3,39	3,61	
	3-tur	Tajriba	4,16	1,17	6,83	1,96	4,07	4,25	H1
		Nazorat	3,57				3,46	3,68	

Talabalarning tajriba va nazorat guruhlarini dasturiy-metodik ta’minot vositasida kompetensiyaviy yondashuv asosida astronomiya fanini o‘qitish samaradorligini aniqlash bo‘yicha tasjribadan keyingi barcha tur topshiriqlarning mezonlar bo‘yicha tajriba sinov ishlaridan keyingi olingan natijalarning samaradorligini to‘g‘riligi tasdiqlandi.



1-rasm. Tur topshiriqlarining mezonlar bo‘yicha o‘zlashtirish samaradorligi

Natijalardan ko‘rinadiki, talabalarni dasturiy-metodik ta’minot vositasida kompetensiyaviy yondashuv asosida astronomiya fanini o‘qitish samaradorligini aniqlash bo‘yicha yakuniy bosqichidagi natijalar tajriba va nazorat guruhlarining o‘rtacha o‘zlashtirish ko‘rsatkichlari bilan taqqoslaganda samaradorlik ko‘rsatkichi 1-tur astronomik bilimlarni aniqlashtirishga mo‘ljallangan topshiriqlarning mezonlar asosida bilimga yo‘naltirilgan bo‘yicha 1,17(17,%) barobarga, amaliy faoliyatga va ilmiy-tadqiqotga yo‘naltirilgan bo‘yicha 1,17 (17 %) barobarga, mustaqil ishga yo‘naltirilgan bo‘yicha 1,17(17%) barobarga va kuzatuv va reliktiv baholashga yo‘naltirilgan bo‘yicha 1,17(17%) barobarga yuqori ekanligi aniqlandi.

2-tur fanni o‘qitishda raqamli texnologiyalardan foydalanish va ularni loyihalashtirishga oid topshiriqlarning mezonlar asosida bilimga yo‘naltirilgan bo‘yicha 1,16(16%) barobarga, amaliy faoliyatga va ilmiy-tadqiqotga yo‘naltirilgan bo‘yicha 1,15(15%) barobarga, mustaqil ishga yo‘naltirilgan bo‘yicha 1,16(16%) barobarga va kuzatuv va reliktiv baholashga yo‘naltirilgan bo‘yicha 1,15(15%) barobarga yuqori ekanligi aniqlandi.

3-tur integrativ kompetensiyaviy qobiliyatlarini aniqlashga oid topshiriqlarning mezonlar asosida bilimga yo‘naltirilgan bo‘yicha 1,18(18%) barobarga, amaliy faoliyatga va ilmiy-tadqiqotga yo‘naltirilgan bo‘yicha 1,16(16%) barobarga, mustaqil ishga yo‘naltirilgan bo‘yicha 1,17(17%) barobarga va kuzatuv va reliktiv baholashga yo‘naltirilgan bo‘yicha 1,16(16%) barobarga yuqori ekanligi aniqlandi, ishonch oraliqlarining bir biri bilan kesishmasligi olib borilgan tadqiqotning ishonchli va aniqligi matematik statistik usullar orqali isbotlandi.

Pedagogik tajriba-sinov ishlari natijalari ishlab chiqilgan dasturiy-metodik ta’minot vositasida kompetensiyaviy yondashuv asosida astronomiya fanini o‘qitish metodikasining samaradorligini statistik jihatdan ishonchli ravishda tasdiqladi. Tadqiqot davomida bilimga yo‘naltirilgan, amaliy faoliyat va ilmiy-tadqiqotga yo‘naltirilgan, mustaqil ishga yo‘naltirilgan hamda kuzatuv-reflektiv baholash mezonlari bo‘yicha tajriba va nazorat guruhlari natijalari qiyosiy tahlil qilindi. Tahlil natijalariga ko‘ra, 1-tur astronomik bilimlarni aniqlashtirishga mo‘ljallangan topshiriqlar bo‘yicha barcha mezonlarda o‘rtacha 17%, 2-tur raqamli texnologiyalardan foydalanish va ularni loyihalashtirishga oid topshiriqlar bo‘yicha 15–16 %, 3-tur integrativ kompetensiyalarni aniqlashga oid topshiriqlar bo‘yicha esa 16–18 % samaradorlik o‘sishi kuzatildi. Ayniqsa, integrativ kompetensiyalarni shakllantirishga qaratilgan topshiriqlarda talabalar natijalarining sezilarli darajada yaxshilangani ishlab chiqilgan metodikaning kasbiy kompetensiyalarni rivojlantirishdagi amaliy ahamiyatini ko‘rsatdi. Natijalar Styudent t-kriteriyasi asosida matematik-statistik tahlil qilinib, barcha holatlarda hisoblangan t qiymatlari kritik qiymatdan yuqori ekanligi hamda tajriba va nazorat guruhlari ishonch oraliqlarining o‘zaro kesishmasligi aniqlandi. Bu esa kuzatilgan farqlarning tasodifiy emasligini va tadqiqot natijalarining ishonchlilik darajasida statistik jihatdan ahamiyatli ekanligini tasdiqladi.

Xulosa. Umuman olganda, ishlab chiqilgan dasturiy-metodik ta’minot talabalarning astronomik bilimlarini mustahkamlash, raqamli texnologiyalarni ta’lim jarayoniga samarali integratsiya qilish, mustaqil ta’lim kompetensiyalarini rivojlantirish hamda reflektiv faoliyat ko‘nikmalarini shakllantirishda yuqori pedagogik samaradorlikni ta’minladi. Tadqiqot natijalari mazkur metodikani oliy ta’lim muassasalarida astronomiya fanini kompetensiyaviy yondashuv asosida o‘qitish amaliyotiga joriy etish maqsadga muvofiqligini asoslaydi.

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MEHNAT BOZORIDA KASBIY TA'LIM VA MALAKANI OSHIRISH ORQALI ISH BILAN TA'MINLASH STRATEGIYALARI

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Annotatsiya. *Inson kapitalini rivojlantirish masalasi bugungi globallashuv davrida har qachongidan ham dolzarb ahamiyat kasb etmoqda. Chunki jahon iqtisodiyoti bilim va innovatsiyalarga asoslangan bosqichga o'tayotgan bir paytda, mamlakatning raqobatbardoshligi uning tabiiy resurslari bilan emas, balki aholisining intellektual salohiyati va malakasi bilan belgilanmoqda. Shu bilan birga, sun'iy intellekt va avtomatlashtirish texnologiyalarining jadal rivojlanishi mehnat bozorida tub o'zgarishlarni yuzaga keltirib, an'anaviy kasblarning qisqarishiga va yangi, yuqori malakali mutaxassislarga bo'lgan ehtiyojning keskin oshishiga sabab bo'lmoqda. Bu esa ishchi kuchining doimiy ravishda qayta tayyorlanishi va o'z bilimlarini yangilab borishini taqozo etadi.*

Kalit so'zlar: *Inson kapitali, Mehnat salohiyati, Intellektual resurs, Ta'lim tizimi, Malaka va ko'nikmalar, Sog'liqni saqlash, Mehnat bozori, Bandlik, Iqtisodiy o'sish, Raqobatbardoshlik, Innovatsiya.*

Abstract. *In the context of globalization, the development of human capital has become increasingly critical. As the global economy shifts towards a knowledge-and-innovation-driven model, national competitiveness hinges on the intellectual potential and skills of the population rather than natural resources. Furthermore, the rapid advancement of artificial intelligence and automation is reshaping the labor market, diminishing traditional occupations while intensifying the demand for highly skilled professionals. This dynamic necessitates the ongoing retraining and continuous upskilling of the workforce.*

Keywords: *Human Capital, Labor Potential, Intellectual Resource, Education System, Qualifications and Skills, Healthcare, Labor Market, Employment, Economic Growth, Competitiveness, Innovation.*

Аннотация. *В условиях глобализации развитие человеческого капитала приобретает критическое значение. Поскольку мировая экономика переходит к модели, основанной на знаниях и инновациях, конкурентоспособность страны зависит от интеллектуального потенциала и навыков населения, а не от природных ресурсов. Более*

того, быстрое развитие искусственного интеллекта и автоматизации трансформирует рынок труда, сокращая традиционные профессии и усиливая спрос на высококвалифицированных специалистов. Эта динамика требует постоянной переподготовки и непрерывного повышения квалификации рабочей силы.

Ключевые слова: *Человеческий капитал, Трудовой потенциал, Интеллектуальный ресурс, Система образования, Квалификация и навыки, Здравоохранение, Рынок труда, Занятость, Экономический рост, Конкурентоспособность, Инновации.*

Kirish Har qanday jamiyatning iqtisodiy qudrati va ijtimoiy barqarorligi uning tabiiy boyliklari yoki geografik joylashuvi bilan emas, balki eng avvalo, aholisining salohiyati bilan o‘lchanadi. Ushbu salohiyatni ifodalovchi inson kapitali tushunchasi bugungi kunda davlatlar rivojlanishining asosiy strategik resursi sifatida e’tirof etiladi. Inson kapitali — bu shunchaki mehnatga layoqatli aholi soni emas, balki ularning ta’lim darajasi, kasbiy malakasi, to‘plagan tajribasi, jismoniy va ruhiy sog‘lig‘i hamda mehnat bozorida o‘z salohiyatini ro‘yobga chiqara olish imkoniyatlarining yig‘indisidir [4].

So‘nggi o‘n yilliklarda globallashuv va texnologik taraqqiyot shiddati ortib borayotgan bir paytda, an’anaviy ishlab chiqarish omillari (yer, kapital) o‘rnini bilim va innovatsiyaga asoslangan iqtisodiyot egallamoqda. Aynan shu sharoitda mamlakatlarning raqobatbardoshligi bevosita ularning inson kapitaliga kiritayotgan sarmoyasiga bog‘liq bo‘lib qoldi. Inson kapitali rivojlangan davlatlar nafaqat iqtisodiy o‘sishning yuqori sur’atlariga erishmoqda, balki ijtimoiy tengsizlikni qisqartirish, aholi bandligini ta’minlash va iqtisodiy zarbalarga chidamlilikni oshirishda ham muvaffaqiyat qozonmoqda.

Inson kapitalini shakllantirish va rivojlantirish esa o‘z-o‘zidan yuz bermaydigan, murakkab va ko‘p qirrali jarayondir. Bu jarayon davlat va jamiyatning kompleks yondashuvini talab qiladi. Avvalo, ta’lim tizimi— bu poydevor hisoblanadi. Sifatli va hamma uchun ochiq bo‘lgan ta’lim orqali yosh avlod nafaqat zamonaviy bilim va ko‘nikmalarga ega bo‘ladi, balki mustaqil fikrlash va umrbod o‘rganish qobiliyatini ham shakllantiradi [2].

Biroq, inson o‘z bilimini mehnat bozorida qo‘llay olishi uchun uning sog‘lom bo‘lishi muhim. Shu bois, sog‘liqni saqlash tizimi inson kapitalining ajralmas tarkibiy qismidir. Sog‘lom avlodgina yuqori mehnat unumdorligiga erishib, iqtisodiyotga faol hissa qo‘sha oladi. Shu bilan birga, huquqiy tizim va mehnat munosabatlarini tartibga soluvchi mexanizmlar ham muhim rol o‘ynaydi. Inson huquqlari kafolatlangan, adolatli mehnat sharoitlari yaratilgan va tadbirkorlik erkinligi ta’minlangan muhitdagina inson o‘z salohiyatini to‘liq namoyon qila oladi [5]. Nihoyat, iqtisodiyotning o‘zi ham bu kapitalni talab qilishi va undan unumli foydalana olishi kerak. Barqaror iqtisodiy siyosat yangi ish o‘rinlari yaratish, innovatsion tarmoqlarni rivojlantirish va malakali kadrlarga bo‘lgan talabni shakllantirish orqali inson kapitalini amaliyotga tatbiq etadi [1].

Maqsad: Bugungi kunda iqtisodiy va ijtimoiy rivojlanishning asosiy omillaridan biri-inson kapitali hisoblanadi. Mehnat bozorida samarali ishlab chiqarish va iqtisodiy o‘sishni ta’minlashda kadrlar salohiyatining rivojlantirilishi muhim ahamiyatga ega. Shu bois, kasbiy ta’lim va malakani oshirish orqali inson kapitalini shakllantirish va rivojlantirish, shuningdek, aholini ish bilan ta’minlash masalasi zamonaviy iqtisodiy va ijtimoiy strategiyalarda markaziy o‘rinni egallaydi.

Mavjud tajribalar va ilmiy tadqiqotlar shuni ko‘rsatadiki, kasbiy ta’lim va malakani oshirish nafaqat ishchi kuchining malakali bo‘lishiga, balki mehnat bozorida raqobatbardoshlikni

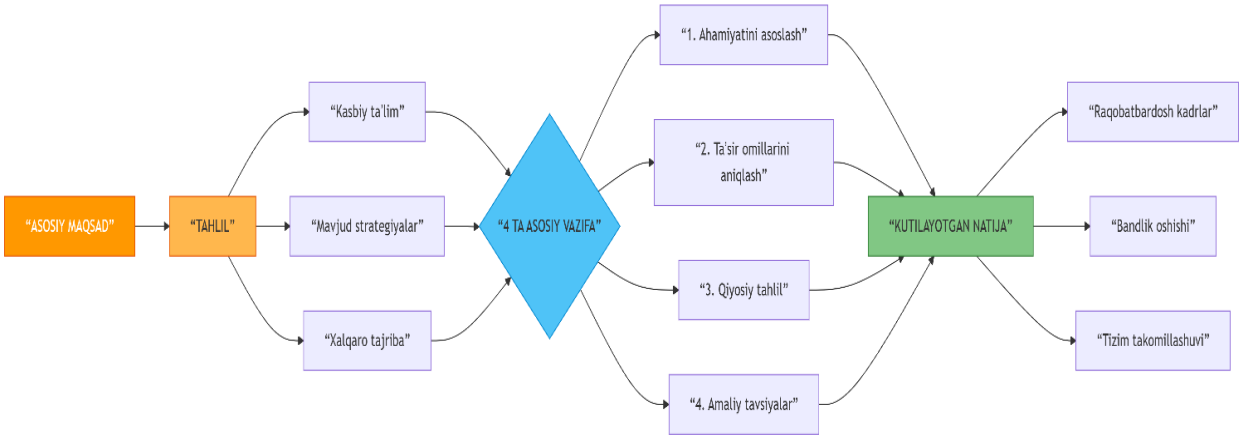
oshirishga ham xizmat qiladi. Shu bois, ushbu maqola orqali maqsad — kasbiy ta’lim va malaka oshirishning mehnat bozoridagi inson kapitalini rivojlantirishdagi strategik ahamiyatini kompleks tahlil qilish, shu yo‘sinda samarali ish bilan ta’minlash mexanizmlarini aniqlash va ularni takomillashtirish bo‘yicha amaliy tavsiyalarni ishlab chiqishdan iborat.

Bu maqsad quyidagi vazifalar orqali amalga oshiriladi:

Kasbiy ta’lim va malaka oshirishning iqtisodiy va ijtimoiy ahamiyatini o‘rganish;

Mehnat bozorida inson kapitalini rivojlantirishga ta’sir etuvchi asosiy strategik omillarni aniqlash;

Mavjud strategiyalarni tahlil qilish va ularning samaradorligini baholash;



Amaliy tavsiyalar orqali ish bilan ta’minlash va kasbiy rivojlanish samaradorligini oshirish imkoniyatlarini taqdim etish.

O‘rganilganlik darajasi: Mazkur mavzu bo‘yicha ilmiy adabiyotlar 1960-yillardan boshlab shakllana boshlagan. G. Bekker (1964) tomonidan asos solingan inson kapitali nazariyasi ta’lim va mehnat bozori o‘rtasidagi bog‘liqlikning nazariy asosini yaratdi. Keyinchalik 1970-yillarda signal nazariyasi va segmentlashgan mehnat bozori nazariyalari paydo bo‘lib, ular ta’limning ish haqiga ta’sirini turlicha izohladi. So‘nggi yillarda esa individual va institutsional yondashuvlarni birlashtiruvchi integrativ konsepsiyalar shakllanmoqda.

Xalqaro miqyosdagi empirik tadqiqotlar, xususan, Ye. Xanushek va hamkasblari (2017) tomonidan o‘tkazilgan PIAAC ma’lumotlari tahlili shuni ko‘rsatdiki, kasbiy ta’limning samaradorligi yoshga bog‘liq ravishda farqlanadi: yoshlik davrida kasbiy ta’lim afzalroq bo‘lsa, keksa yoshda umumiy ta’lim afzalligi kuzatiladi. Gryonning va Kriyesi (2022) tadqiqotlariga ko‘ra, amaliy kasbiy ta’lim mehnat bozoriga kirishda barqarorlikni ta’minlaydi, biroq umumiy bilim va ko‘nikmalar uzoq muddatli yuqori martaba o‘sishi uchun hal qiluvchi ahamiyatga ega [7].

Rivojlanayotgan mamlakatlarda kasbiy ta’lim samaradorligi bo‘yicha bir qator randomizatsiyalangan nazorat sinovlari o‘tkazilgan (Attanasio va boshq, 2011; Blattman va boshq., 2014; Bandiyera va boshq., 2020). Osiyo mamlakatlaridan Koreya Respublikasi tajribasi (Shim va boshq., 2020) yosh, jins, ta’lim soatlari va ta’lim mazmuni kabi omillar bandlikka sezilarli ta’sir ko‘rsatishini aniqlagan [9]. Germaniya kabi rivojlangan mamlakatlarda esa kompaniyalar malakali ishchilar tanqisligidan shikoyat qilayotgani bilan birga, 2022-yilda 68 868 ta kompaniya ta’lim o‘rinlarini to‘ldira olmagan (Bellmann va Xelmrich, 2026).

Mavzuning o‘rganilganlik darajasi tahlili shuni ko‘rsatadiki, nazariy asoslar va rivojlangan mamlakatlar tajribasi yuqori darajada o‘rganilgan bo‘lsa, rivojlanayotgan mamlakatlar, xususan, Markaziy Osiyo va O‘zbekiston kontekstida tadqiqotlar yetarli emas. Post-pandemiya davrida

kasbiy ta’lim transformatsiyasi, sun’iy intellektning ta’siri, yashil iqtisodiyotga o‘tish sharoitida strategiyalar va norasmiy sektor bilan bog‘liq masalalar istiqbolli tadqiqot yo‘nalishlari bo‘lib qolmoqda. Bu esa mavzuning dolzarbligini va qo‘shimcha ilmiy izlanishlar olib borish zaruratini ko‘rsatadi.

Natijalar: Olib borilgan nazariy va tahliliy tadqiqotlar kasbiy ta’lim va malaka oshirish tizimi mehnat bozorida inson kapitalini rivojlantirishning muhim strategik omillaridan biri ekanligini ko‘rsatdi. Tadqiqot jarayonida xalqaro tajribalar, ilmiy adabiyotlar va mehnat bozoridagi zamonaviy tendensiyalar tahlil qilinib, quyidagi asosiy natijalarga erishildi.

Birinchidan, inson kapitalini rivojlantirishda ta’lim tizimining hal qiluvchi o‘rni aniqlandi. Tahlillar shuni ko‘rsatdiki, zamonaviy iqtisodiyot sharoitida mehnat bozorida muvaffaqiyatli faoliyat yuritish uchun nafaqat nazariy bilim, balki amaliy ko‘nikmalar ham katta ahamiyatga ega. Shu nuqtayi nazardan kasbiy ta’lim tizimi yoshlarni mehnat bozori talablariga mos ravishda tayyorlashda asosiy mexanizmlardan biri hisoblanadi. Ta’lim jarayonida amaliy mashg‘ulotlar, ishlab chiqarish amaliyoti va korxonalar bilan hamkorlikni kuchaytirish orqali mutaxassislarning kasbiy kompetensiyalarini shakllantirish imkoniyati kengayadi.

Ikkinchidan, malaka oshirish va qayta tayyorlash dasturlari aholining mehnat bozoridagi raqobatbardoshligini oshirishda muhim vosita ekanligi aniqlandi. Ilmiy manbalar va xalqaro tadqiqotlar tahlili shuni ko‘rsatdiki, texnologiyalar tez rivojlanayotgan sharoitda ishchi kuchining doimiy ravishda bilim va ko‘nikmalarini yangilab borishi zarur. Bu esa umrbod ta’lim konsepsiyasini amalga oshirishni talab qiladi. Malaka oshirish kurslari va kasbiy qayta tayyorlash dasturlari ishsizlik darajasini kamaytirish va yangi ish o‘rinlarini egallash imkoniyatlarini kengaytirishga xizmat qiladi.

Uchinchidan, kasbiy ta’lim muassasalari va mehnat bozori o‘rtasidagi hamkorlikning ahamiyati aniqlandi. Tahlillar shuni ko‘rsatadiki, ko‘p hollarda ta’lim muassasalarida tayyorlanayotgan kadrlar mehnat bozoridagi real talablarga to‘liq mos kelmaydi. Shu sababli ta’lim muassasalari, ish beruvchilar va davlat organlari o‘rtasidagi institutsional hamkorlikni kuchaytirish muhim hisoblanadi. Dual ta’lim tizimini joriy etish, ishlab chiqarish amaliyotini kengaytirish va korxonalar ishtirokida o‘quv dasturlarini ishlab chiqish orqali bu muammoni hal etish mumkin.

To‘rtinchidan, inson kapitaliga investitsiya kiritish iqtisodiy o‘sish va ijtimoiy barqarorlikni ta’minlashda muhim omil ekanligi asoslandi. Tahlillar shuni ko‘rsatadiki, ta’lim, sog‘liqni saqlash va kasbiy tayyorgarlik sohalariga yo‘naltirilgan sarmoyalar mehnat unumdorligini oshirishga va iqtisodiy rivojlanish sur’atlarini tezlashtirishga xizmat qiladi. Inson kapitali rivojlangan mamlakatlarda iqtisodiy barqarorlik darajasi yuqori bo‘lib, innovatsiyalarni joriy etish jarayoni ham tez kechadi.

Beshinchidan, raqamli texnologiyalar va innovatsion ta’lim usullarini joriy etish kasbiy ta’lim samaradorligini sezilarli darajada oshirishi aniqlandi. Onlayn ta’lim platformalari, raqamli resurslar va masofaviy ta’lim imkoniyatlari aholining keng qatlamlarini ta’lim jarayoniga jalb qilish imkonini beradi. Bu esa ayniqsa chekka hududlarda yashovchi aholi uchun ta’lim imkoniyatlarini kengaytirishda muhim ahamiyatga ega.

Oltinchidan, mehnat bozoridagi o‘zgarishlar inson kapitalini rivojlantirish strategiyalarini doimiy ravishda yangilab borishni talab qilishi aniqlandi. Sun’iy intellekt, avtomatlashtirish va raqamli iqtisodiyotning rivojlanishi ayrim an’anaviy kasblarning qisqarishiga, yangi kasblar va mutaxassisliklarga bo‘lgan talabning ortishiga olib kelmoqda. Shu sababli ta’lim tizimi mehnat bozoridagi o‘zgarishlarga tez moslashuvchi mexanizmlarni ishlab chiqishi zarur.

Umuman olganda, tadqiqot natijalari kasbiy ta’lim va malaka oshirish tizimini takomillashtirish orqali inson kapitalini samarali rivojlantirish mumkinligini ko‘rsatdi. Bu esa aholi bandligini oshirish, mehnat bozoridagi muvozanatni ta’minlash va mamlakat iqtisodiyotining barqaror rivojlanishiga xizmat qiladi.

Xulosa: Olib borilgan tadqiqot natijalari shuni ko‘rsatadiki, inson kapitali zamonaviy jamiyatning iqtisodiy o‘sishi, ijtimoiy barqarorligi va raqobatbardoshligini belgilovchi asosiy strategik resurs hisoblanadi. Mehnat bozorida yuz berayotgan jadal o‘zgarishlar, texnologik transformatsiya va sun’iy intellektning keng joriy etilishi an’anaviy kasblarga bo‘lgan talabni kamaytirib, yuqori malakali, moslashuvchan va doimiy rivojlanishga tayyor mutaxassislarga ehtiyojni kuchaytirmoqda. Bu esa kasbiy ta’lim va malaka oshirish tizimining strategik ahamiyatini yanada oshiradi.

Tahlillar shuni ko‘rsatdiki, kasbiy ta’lim nafaqat yoshlarni mehnat bozoriga tayyorlash, balki ishchi kuchining raqobatbardoshligini oshirish, ishsizlikni kamaytirish va iqtisodiy o‘sishni ta’minlashda ham muhim vositadir. Shu bilan birga, malaka oshirish va qayta tayyorlash dasturlari aholining mehnat bozoridagi o‘zgarishlarga moslashish imkoniyatini kengaytiradi. Ushbu jarayonlarning muvaffaqiyati esa ta’lim muassasalari, ish beruvchilar va davlat o‘rtasidagi samarali hamkorlikka bevosita bog‘liq.

Xalqaro tajribalar, jumladan, Germaniya, Koreya Respublikasi va boshqa rivojlangan mamlakatlar misolida ko‘rilganidek, dual ta’lim tizimi, amaliy ko‘nikmalarga asoslangan o‘quv dasturlari va umrbod ta’lim konsepsiyasi inson kapitalini rivojlantirishda yuqori natijalar bermoqda. Rivojlanayotgan mamlakatlar, xususan, O‘zbekiston uchun ham mazkur yondashuvlarni milliy sharoitlarga moslashtirgan holda joriy etish dolzarb vazifa bo‘lib qolmoqda.

Shuningdek, raqamli texnologiyalarni ta’lim jarayoniga faol joriy etish, onlayn platformalar va masofaviy ta’lim imkoniyatlaridan keng foydalanish aholining barcha qatlamlari, jumladan, chekka hududlarda yashovchi fuqarolar uchun ta’lim olish imkoniyatlarini kengaytiradi. Bu esa ijtimoiy tengsizlikni kamaytirish va inson kapitalidan samarali foydalanishga xizmat qiladi.

Xulosa qilib aytganda, kasbiy ta’lim va malaka oshirish orqali inson kapitalini rivojlantirish nafaqat iqtisodiy o‘sishning, balki ijtimoiy barqarorlik va farovonlikning ham asosiy omilidir. Bu yo‘nalishdagi strategik yondashuvlarni takomillashtirish, ta’lim sifatini oshirish va mehnat bozori ehtiyojlariga mos kadrlar tayyorlash tizimini shakllantirish mamlakatning uzoq muddatli rivojlanish strategiyasining ustuvor yo‘nalishlaridan biri bo‘lishi lozim.

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THE IMPORTANCE OF PEDAGOGICAL APPROACHES AND MODERN TEACHING METHODS IN ARCHITECTURAL EDUCATION

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Abstract. *This article examines how the integration of classical pedagogical theories and contemporary digital tools enhances the development of professional competencies among future architects. Architectural education possesses unique characteristics, combining technical knowledge, artistic and aesthetic understanding, creative thinking, and practical skills. The study addresses the following research question: How can established educational theories and innovative technologies be synthesized to improve the quality of architectural pedagogy? The paper discusses the fundamental principles of pedagogy in architectural education, including visual learning, practice-oriented instruction, the development of independent thinking, project-based learning, and the application of digital technologies. Drawing on published case-study evidence on Building Information Modeling (BIM) and Virtual Reality (VR) in design education, the paper argues that digital tools improve learning outcomes only when integrated within the studio sequence rather than taught as stand-alone technical subjects, and concludes with recommendations for curriculum design.*

Keywords: *architectural education; pedagogical approaches; professional competence; project-based learning; creative thinking; innovative technologies; BIM; 3D modeling; practical training; reflective practice; experiential learning.*

Introduction

Architecture plays a vital role in creating safe, functional, and aesthetically pleasing environments for society. Modern architects must develop not only technical expertise but also creativity, analytical thinking, and a nuanced understanding of social needs. Rapid advances in construction technologies and digitalization require higher education institutions to adopt innovative pedagogical approaches alongside traditional teaching methods. Unlike many technical disciplines, architectural education integrates theoretical knowledge with creative practice. Students study architectural history, construction systems, urban planning, composition, and design while simultaneously developing the ability to generate independent and innovative design solutions.

This article addresses a central research question: How can the integration of classical pedagogical frameworks and emerging digital methodologies be optimized to foster professional competence and creative thinking in architectural students? By synthesizing insights from

educational psychology, design theory, and technology studies, and by drawing on published case studies of digital-tool adoption, this paper argues that effective architectural pedagogy must bridge reflective practice, experiential learning, and digital literacy and that the pedagogical value of any given technology depends on how it is embedded in the studio curriculum rather than on the technology itself.

Theoretical Framework: Pedagogy and Architectural Education

Pedagogy studies the objectives, content, methods, and forms of education, and provides the conceptual tools through which a discipline organizes its teaching practice (Azizkhojayeva, 2006). Within architectural education, pedagogy not only organizes the learning process but also promotes students' personal and professional development. The instructor's role extends beyond transmitting knowledge; it includes guiding students toward independent inquiry, critical analysis, idea generation, and justification of design decisions.

Key pedagogical principles in architectural education include visual learning through drawings, physical models, photographs, 3D models, and case studies; practice-oriented instruction through design projects and model making; and an individualized approach that recognizes differences in students' creative abilities and learning styles. These principles align closely with the educational theories of several foundational scholars.

Jan Amos Comenius emphasized the principle of visual learning, arguing that knowledge is acquired more effectively through observation and practical experience than through verbal instruction alone (Keatinge, 1896). In architectural education, this principle manifests in the extensive use of drawings, physical models, and site visits to develop spatial understanding.

Lev Vygotsky highlighted the importance of collaboration between teachers and students, introducing the concept of the Zone of Proximal Development (ZPD), which describes the distance between what a learner can do independently and what they can achieve with guidance (Vygotsky, 1997). In the design studio, instructors act as mentors who scaffold student learning, providing support that is gradually removed as competence develops.

Jean Piaget stressed active learning and independent exploration as the foundation of cognitive development (Piaget, 2001). Architectural education mirrors this constructivist approach by requiring students to engage actively with design problems rather than passively receive information.

Benjamin Bloom's taxonomy explains the progression from knowledge acquisition to analysis, evaluation, and creation, reflecting students' development from basic drawing skills to complex architectural design (Bloom, 1956). This hierarchical model provides a useful framework for structuring curricula that gradually increase in cognitive demand.

Donald Schön (1983) introduced the concept of reflective practice, arguing that professionals generate knowledge through reflection-in-action — a continuous dialogue between what they are doing and what the situation demands. In architectural education, the design studio serves as the primary site of reflective practice, where students engage in a reflective conversation with the situation as they sketch, model, and revise their designs.

David Kolb's (1984) experiential learning theory offers a complementary framework. Kolb posits that learning occurs through a four-stage cycle: concrete experience, reflective observation, abstract conceptualization, and active experimentation. The architectural design process closely follows this cycle: students encounter a design brief (concrete experience), analyze precedents and site conditions (reflective observation), develop conceptual strategies (abstract conceptualization), and test solutions through drawings and models (active experimentation).

Modern Teaching Methods in Architecture

Contemporary architectural education increasingly combines traditional instruction with innovative educational technologies. Project-based learning enables students to analyze architectural problems independently and develop functional, structural, and aesthetic solutions. This method fosters critical thinking, problem-solving abilities, and interdisciplinary awareness.

Studio-based learning creates an environment where instructors act as mentors, while students present, discuss, and refine their ideas through structured critique sessions. The studio model, derived from the atelier tradition, remains the cornerstone of architectural pedagogy. It facilitates peer learning, collaborative problem-solving, and the development of professional communication skills. Critique sessions, or design juries, provide formative feedback and encourage students to articulate and defend their design decisions.

Practical training, model making, graphic assignments, and spatial modeling develop professional competencies and spatial imagination. These hands-on activities bridge the gap between abstract theory and material reality, helping students understand the physical implications of their design choices.

Digital Technologies, BIM, and Interdisciplinary Collaboration

Digital technologies have become indispensable in modern architectural education. Computer-aided design (CAD) software, Building Information Modeling (BIM), and 3D modeling improve students' digital competencies and prepare them for professional practice. BIM provides an integrated digital environment for architectural, structural, and engineering systems, allowing comprehensive project analysis and clash detection before construction begins.

The BIM Handbook (Sacks et al., 2018) underscores that BIM is not merely a software tool but a paradigm shift in how buildings are designed, constructed, and managed. In educational contexts, BIM fosters interdisciplinary collaboration by enabling students from architecture, structural engineering, and construction management programs to work within a shared digital model. This collaborative approach mirrors real-world project teams and prepares graduates for integrated practice.

Virtual Reality (VR), augmented reality (AR), and advanced computer graphics further expand educational opportunities. Alizadehsalehi, Hadavi, and Huang (2019) tested a VR-based design and construction learning environment and found that it improved students' ability to identify spatial, scale, and constructability issues compared with conventional two-dimensional representation, addressing a longstanding limitation of drawing-based architectural pedagogy. Parametric design tools and computational modeling similarly introduce students to algorithmic thinking and performance-based design, expanding the creative possibilities of the discipline.

Evidence from Practice: Case Studies of Digital Pedagogy

Institutional case studies indicate that the pedagogical benefit of digital tools depends heavily on how they are integrated into the curriculum. Ahmed, McGough, and Austin (2013) documented Coventry University's phased adoption of BIM across its Department of Civil Engineering, Architecture and Building, and found that successful integration depended less on software procurement than on retraining faculty and redesigning assessment criteria around collaborative, model-based deliverables.

Abdelhameed (2018) examined a King Saud University design studio in which BIM was adopted as the primary tool for final-year students to develop architectural, structural, and MEP design simultaneously, and found that its principal pedagogical value lay in making the interdependence between design disciplines visible to students in real time. A longitudinal case

study at a Thai architecture school by Laovisutthichai, Srihiran, and Lu (2023) reached a related conclusion: treating BIM as a stand-alone technical subject, separate from the core design studio, was largely ineffective and reinforced student perceptions that BIM constrains creativity, whereas embedding BIM modules within the studio sequence allowed technical and design skills to develop concurrently. Read together with the VR evidence above, these cases suggest that digital tools function as pedagogical amplifiers of studio-based, reflective learning rather than as substitutes for it.

Developing Creative Thinking

Creativity is one of the defining characteristics of the architectural profession. Therefore, architectural education should encourage students to generate original ideas, undertake experimental projects, analyze historical and contemporary architectural examples, and develop innovative architectural concepts. These activities foster creative potential and prepare graduates for complex professional challenges.

Bryan Lawson's (2006) research on design cognition reveals that designers engage in a distinctive mode of thinking that balances analytical reasoning with intuitive exploration. Architectural pedagogy should nurture both modes by providing structured problems that require logical analysis while allowing sufficient freedom for creative experimentation.

An individualized approach to teaching recognizes that creativity manifests differently across students. Some students excel in conceptual thinking, while others demonstrate strength in technical resolution or material innovation. Effective pedagogy accommodates these differences through flexible assignments and diverse assessment criteria.

Limitations

This paper synthesizes theoretical literature with a small number of published case studies rather than presenting new empirical data, and the case studies reviewed are drawn from a limited set of institutional contexts (the United Kingdom, Saudi Arabia, and Thailand) whose findings may not generalize to all architecture programs. Future research combining classroom-level outcome data with the theoretical framework developed here would strengthen the causal claims made about pedagogical effectiveness.

Conclusion and Recommendations

The effective implementation of pedagogical approaches is essential for educating highly qualified and creative architects. Architectural education should extend beyond technical knowledge by fostering aesthetic appreciation, spatial reasoning, independent thinking, and creativity. Project-based learning, studio education, practical training, digital technologies, and BIM contribute significantly to improving educational quality — but, as the case-study evidence reviewed above shows, only when these tools are embedded within the studio sequence rather than delivered as isolated technical instruction.

Three recommendations follow. First, BIM, VR, and related digital tools should be taught within core design studios rather than as separate technical courses, since stand-alone instruction is both less effective and more likely to be perceived by students as constraining creativity. Second, faculty development in digital tools should precede any expansion of student-facing technical requirements, since institutional case studies consistently identify instructor preparation, not software access, as the binding constraint on successful adoption. Third, assessment criteria should be redesigned around collaborative, model-based deliverables that make interdisciplinary interdependence visible to students, rather than around individually authored drawings alone.

The integration of classical pedagogical theories — visual learning, social constructivism, active learning, reflective practice, and experiential learning — with contemporary digital tools creates a robust framework for architectural education. By bridging theory and practice, mentorship and autonomy, tradition and innovation, architectural schools can prepare professionals capable of responding to the complex demands of contemporary society.

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ДИФФЕРЕНЦИАЛЬНЫЙ СОЦИАЛЬНО-ПСИХОЛОГИЧЕСКИЙ АНАЛИЗ ПРОФЕССИОНАЛЬНЫХ ДЕФОРМАЦИЙ В IT-СРЕДЕ

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Аннотация. *Статья посвящена дифференциальному социально-психологическому анализу профессиональных деформаций и эмоционального выгорания специалистов в IT-индустрии. На основе триангуляции нейрокогнитивных исследований, качественного анализа дискуссий в профессиональных сообществах (Stack Exchange) и профессиографического метода изучена специфика трёх категорий специалистов: разработчиков ПО (Backend / Frontend / Fullstack), системных и инфраструктурных инженеров (SysAdmin / DevOps / SRE) и инженеров по обеспечению качества (QA/QC). Выявлены ключевые средовые стрессоры, преобладающие когнитивные искажения, механизмы психологической защиты и дифференцированные формы выгорания для каждой группы. Установлено, что для разработчиков ПО основным фактором деформации выступает фрагментация внимания (context switching) и невидимость интеллектуального труда; для системных инженеров - дежурства on-call и антиципаторная тревога; для QA/QC-инженеров - структурная асимметрия ответственности при отсутствии контроля над сроками и снижение бдительности (vigilance decrement). Сформулированы прикладные рекомендации по профилактике выгорания и оптимизации рабочих процессов с учётом специфики ролей.*

Ключевые слова: *профессиональные деформации, эмоциональное выгорание, IT-специалисты, когнитивные искажения, context switching, on-call, QA/QC, DevOps, SRE, хронификация, алекситимия, компенсаторная гиперформализация.*

Abstract. *The article presents a differential socio-psychological analysis of occupational deformations and emotional burnout among IT industry specialists. Based on the triangulation of neurocognitive research, qualitative analysis of professional community discussions (Stack Exchange), and professiographic analysis, the study examines three distinct practitioner categories: software developers (Backend / Frontend / Fullstack),*

system/infrastructure engineers (SysAdmin / DevOps / SRE), and quality assurance engineers (QA/QC). Key environmental stressors, dominant cognitive biases, psychological defense mechanisms, and specific burnout manifestations are identified for each group. Software developers are primarily affected by continuous context switching and the invisibility of intellectual output; infrastructure engineers suffer from on-call duties and chronic anticipatory anxiety; while QA/QC engineers face structural responsibility-control asymmetry and vigilance decrement. Applied recommendations are formulated to mitigate burnout and optimize organizational workflows tailored to each role.

Keywords: *professional deformation, emotional burnout, IT specialists, cognitive biases, context switching, on-call, QA/QC, DevOps, SRE, chronification, alexithymia, compensatory hyperformalization.*

В условиях современной технологической гонки стратегическая устойчивость организаций, разрабатывающих программное обеспечение, всё чаще определяется не пропускной способностью серверов, а психофизиологическими лимитами «человеческого процессора». В индустрии, где объем кодовой базы (LoC) в критических узлах превышает 150 млн строк[9], когнитивная нагрузка на специалиста достигает своего физиологического предела. Статистика «остаточных дефектов» остается пугающе стабильной на протяжении десятилетий: от 1 до 15 ошибок на KLoC[10], что указывает на фундаментальный разрыв между сложностью систем и адаптивными возможностями человеческого мозга.

Современная IT-среда характеризуется формированием особого типа субъекта труда - «индивид-цифровая среда», где программный код и технические средства становятся неотъемлемой частью профессиональной идентичности специалиста. Рассмотрим три типа данных:

- нейрокогнитивные исследования восприятия сложности кода [1], которые демонстрируют, что декодирование кода задействует зоны, ответственные за рабочую память и торможение импульсивных реакций, то есть предъявляет системную нагрузку на исполнительные функции мозга;

- корпус качественных данных из профессиональных сообществ (Stack Exchange) о выгорании и «плохих днях» разработчиков (выгорание определяется как психологическая проблема, характеризующаяся эмоциональным истощением, деперсонализацией и снижением ощущения личной эффективности на рабочем месте);

- профессиографический и стилевой анализ когнитивных паттернов пользователей цифровой среды [3, 5].

Такое триангулирование позволяет развести три уровня анализа:

1. Уровень когнитивной архитектуры деятельности - как мозг специалиста буквально обрабатывает сложность и неопределённость системы;

2. Уровень средовых стрессоров - организационные и технологические паттерны, порождающие хронический дистресс;

[9]McConnell S. C. (1993). Code complete: A practical handbook of software construction.Redmond, WA: Microsoft Press.

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Sandu I., Salceanu A., Bejenaru O. (2018). New approach of the customer defects per lines of code metric in automotive SW development applications. J. Phys.1065. 10.1088/1742-6596/1065/5/052006

3. Уровень личностной переработки стресса - защитные механизмы, коммуникативные стратегии и итоговые формы выгорания.

Специфика IT-среды как психосоциального контекста определяется тремя структурными факторами, общими для всех трёх категорий, но по-разному их фрустрирующими: экстремально высокой скоростью технологического обновления (перманентная угроза профессиональной некомпетентности), опосредованностью труда цифровым интерфейсом (дефицит невербальной обратной связи и «эффект чёрного ящика» результата) и культурой перманентной измеримости (метрики, спринты, SLA, инцидент-репорты), формирующей трансформацию восприятия времени и пространства в «профессиограмме» цифрового субъекта [3].

Проведем профильный психологический анализ по категориям. Для разработчиков программного обеспечения (Backend / Frontend / Fullstack developers) несовпадение объективной цикломатической сложности кода и субъективно переживаемой когнитивной нагрузки является основой когнитивных искажений и установок: разработчик систематически недооценивает или переоценивает сложность в зависимости от структуры логических ветвлений, что создаёт почву для двух противоположных искажений - иллюзии контроля («я вижу всю систему целиком») и синдрома самозванца при столкновении с чужим, непрозрачно организованным кодом. Перфекционизм здесь принимает форму эстетизации кода («чистая архитектура» как самоцель), что коррелирует с обсуждениями выгорания на Stack Exchange [2], где пользователи описывают навязчивое переписывание рабочих решений. Гиперответственность проявляется в персонализации багов production-среды как личностного провала, а не системного риска.

Как основной источник стрессоров и деформаций можем рассматривать фрагментацию внимания: непрерывное переключение между контекстом и задачами, пересмотр и анализ написанного кода (код-ревью) является одним из наиболее часто упоминаемых триггеров «плохого дня» наравне с неработающими инструментами и заблокированными зависимостями (blocked dependencies).

Вторичным стрессором является «невидимость» интеллектуального труда: качественная архитектурная работа не имеет немедленного визуального артефакта, в отличие от, например, дизайна, что обесценивает труд в глазах нетехнического менеджмента и порождает хроническую потребность в валидации через код-ревью.

Разумеется, имеются и защитные механизмы, где доминирует интеллектуализация, то есть превращение эмоционального конфликта (например, отвергнутый pull request) в чисто техническую дискуссию о стандартах кода. Часто наблюдается эмоциональное отстранение от продукта («я пишу код, а не решаю проблемы пользователя»), защищающее от тревоги за конечный результат, которым разработчик не управляет полностью. Все это отражается в коммуникации индивида. Типичный паттерн - избегание прямого конфликта через технические аргументы («пассивно-агрессивный комментарий в PR» вместо личного разговора), сложности с делегированием, обусловленные убеждением, что «только я знаю, где спрятана сложность» (форма гиперконтроля, укоренённая в реальном факте фрагментарности знания о legacy-коде).

В случае системных инженеров и инженеров инфраструктуры продуктов (SysAdmin / DevOps / SRE) доминирующим когнитивным искажением представляется катастрофизация ситуаций, то есть профессиональная норма «всё сломается в самый неподходящий момент» рационально обоснована практикой, но при хронизации

превращается в тревожное ожидание катастрофы даже в стабильные периоды (гипербдительность). Гиперответственность здесь максимальна и институционализирована через SLA и error budget - личная метрика (uptime, MTTR) буквально становится численным выражением профессиональной состоятельности.

Ключевой и наиболее специфичный для этой категории профессионалов стрессор - дежурства on-call, разрушающие циркадные ритмы и создающую состояние «условной готовности», при котором даже отсутствие инцидента не даёт полноценного восстановления (антиципаторная тревога).

Второй стрессор, это резкий контраст между рутинной невидимой поддерживающей работой и краткими периодами экстремальной интенсивности при критических инцидентах, что формирует специфический паттерн «дисрегуляции возбуждения», когда организм не успевает адаптироваться между состояниями монотонии и острого стресса.

Для защиты от стрессоров вырабатывается рационализация инцидентов («это была не моя зона ответственности»), которая сочетается с эмоциональным дистанцированием от последствий сбоев для конечных пользователей, это психологически необходимая защита при работе с абстрактными, обезличенными системными метриками. При хронификации возможна алекситимия, тоесть снижение способности идентифицировать собственное эмоциональное состояние вследствие постоянного подавления тревоги ради оперативного реагирования на инцидент.

При коммуникации типичен гиперконтроль (нежелание передавать доступ или процедуры другим членам команды, «bus factor» как результат не только организационной, но и личностной динамики) и лаконичный, инструментальный стиль коммуникации во время инцидентов, который вне контекста может восприниматься как холодность или отстранённость.

Еще одна категория разработчиков - это инженеры по обеспечению качества, или QA/QC-инженеры. Для этой категории в качестве когнитивных искажений специфичен «синдром привратника»: гипертрофированное чувство единоличной ответственности за качество релиза при объективно ограниченном влиянии на процесс разработки. В сочетании с распространённой организационной культурой обвинения QA за пропущенные дефекты («Stop Blaming QA», как отмечается в производных от Obi и др. работах [4]) формируется хронический синдром самозванца иного типа, чем у разработчиков: не «я недостаточно компетентен технически», а «меня считают виновным по умолчанию».

Конечно же, для этой категории ключевым стрессором является структурная асимметрия власти: QA обнаруживает проблему, но не управляет сроками и приоритетами её исправления, что порождает хроническую фрустрацию контроля. Второй стрессор, как было отмечено Джумагуловой и ее соавторами [3] применительно к цифровым субъектам в целом, но особенно выраженный у QA, - рутинизация внимания (повторяющееся тестирование по чек-листам) при требовании сохранять постоянную бдительность к аномалиям - состояние, близкое к «vigilance decrement» в инженерной психологии.

Здесь в качестве защиты часто наблюдается компенсаторная гиперформализация (избыточная документация багов как способ снять с себя ответственность за субъективность оценки) и пассивная агрессия в баг-трекерах - форма выражения фрустрации в отсутствие легитимного канала прямого влияния на приоритизацию.

При коммуникациях наблюдается избегание прямой конфронтации с разработчиками через формализованные каналы (тикеты вместо личного разговора), при

этом внутри QA-команды существует повышенная солидарность и совместное совладание («мы против дедлайнов»), защищающая от индивидуализации вины.

Результаты анализа сведены в единую таблицу и приложены (табл.1).

Таблица 1

Сравнительная матрица категорий

Категория	Ключевой стрессор	Доминирующая защита	Форма выгорания	Уровень риска
Разработчики ПО	Континуальный context switching, «невидимость» интеллектуального труда	Интеллектуализация, эмоциональное отстранение от продукта	Редукция личных достижений (обесценивание собственного вклада)	средний
Системные инженеры (SysAdmin, DevOps, SRE)	On-call дежурства, контраст рутины и критических инцидентов	Рационализация, эмоциональное дистанцирование, риск алекситимии	Эмоциональное истощение (хроническая антиципаторная тревога)	высокий
QA/QC-инженеры	Асимметрия ответственности без контроля над сроками, «vigilance decrement»	Гиперформализация, пассивная агрессия в тикетах	Деперсонализация (циничное отношение к продукту и коллегам)	средний-высокий

Исходя из рассмотренных особенностей можно сформулировать несколько рекомендаций для каждой категории сотрудников.

1. Разработчикам ПО рекомендуется:

– ввести защищённые «deep work»-блоки без прерываний (митингов, пинков в мессенджерах) и учитывать частоту переключений контекста как организационную, а не личную метрику эффективности;

– внедрить практику видимой атрибуции архитектурных решений (документация «почему», а не только «что»), чтобы компенсировать невидимость интеллектуального вклада.

2. Для системных инженеров (SysAdmin, DevOps, SRE) предпочтительно:

– формализовать восстановительное время после дежурства (обязательный отгул/сдвиг графика после ночного инцидента) как политику, а не индивидуальную договорённость;

– распределять экспертизу через регулярные ротации и парную поддержку (снижение bus factor), что одновременно снижает гиперконтроль и институциональный риск.

3. QA/QC-инженерам следует:

– формализовать полномочия QA в процессе приоритизации багов (право голоса в планировании спринта, а не только фиксация дефектов постфактум), устраняя структурную асимметрию ответственности и контроля;

– производить ротацию типов задач между рутинным регрессионным тестированием и исследовательским тестированием для профилактики снижения бдительности (vigilance decrement).

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

MEHNAT BOZORIDA KASBIY TA'LIM VA MALAKANI OSHIRISH ORQALI ISH BILAN TA'MINLASH STRATEGIYALARI

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Annotatsiya. *Maqolada tibbiy ta'limning raqamli transformatsiyasining zamonaviy yo'nalishlari va tibbiyot oliy o'quv yurtlari talabalarining raqamli tayyorgarligini belgilovchi omillar ko'rib chiqilgan. Tadqiqotning maqsadi ta'lim jarayonini raqamlashtirishga oid zamonaviy yondashuvlarni tahlil qilish va ularni tibbiyot universitetlarida raqamli ta'lim muhitini tashkil etish amaliyoti bilan qiyoslashdan iborat. Tadqiqot ikki bosqichda o'tkazildi. Birinchi bosqichda EMU va Profi universitetlarining raqamli ta'lim muhiti tahlil qilindi, ikkinchisida esa tibbiy ta'limning raqamli transformatsiyasi va talabalarning raqamli tayyorgarligiga bag'ishlangan ilmiy tadqiqotlar qiyosiy tahlildan o'tkazildi. Tadqiqot natijasida tibbiyot oliy o'quv yurtlarining ta'lim va tashkiliy faoliyatida raqamli texnologiyalardan foydalanishning asosiy yo'nalishlari, raqamli ta'lim muhiti samaradorligiga ta'sir etuvchi omillar aniqlandi. Shuningdek, raqamli transformatsiya muvaffaqiyati raqamli infratuzilmaning kompleks rivojlanishi, ta'lim jarayoni ishtirokchilarining raqamli kompetensiyalari hamda bo'lajak tibbiyot mutaxassislarini amaliyotga yo'naltirilgan holda tayyorlashni saqlab qolish bilan belgilanadi.*

Kalit so'zlar: *raqamli transformatsiya, tibbiy ta'lim, raqamli ta'lim muhiti, raqamli tayyorgarlik, raqamli kompetensiyalar, tibbiyot universiteti.*

Abstract. *The article examines current directions in the digital transformation of medical education and the factors influencing the digital readiness of medical students. The study aims to analyze contemporary approaches to the digitalization of the educational process and compare them with the practice of organizing digital learning environments in medical universities. The research was conducted in two stages. The first stage involved an analysis of the digital educational environments of EMU and Profi universities, while the second stage focused on a comparative analysis of recent studies addressing digital transformation in medical education and students' digital readiness. The findings identify the main areas of digital technology implementation in educational and administrative activities, determine the key factors affecting the effectiveness of digital learning environments, and demonstrate that successful digital transformation depends on the integrated development of digital infrastructure, digital competencies of educational stakeholders, and the preservation of practice-oriented medical training.*

Keywords: *digital transformation, medical education, digital learning environment, digital readiness, digital competencies, medical university.*

Аннотация. *В статье рассматриваются современные направления цифровой трансформации медицинского образования и факторы, определяющие цифровую готовность студентов медицинских вузов. Цель исследования заключается в анализе современных подходов к цифровизации образовательного процесса и сопоставлении их с практикой организации цифровой образовательной среды медицинских университетов. Исследование проводилось в два этапа. На первом этапе выполнен анализ цифровой образовательной среды университетов EMU и Profi, на втором — проведен сравнительный анализ научных исследований, посвященных цифровой трансформации медицинского образования и цифровой готовности студентов. В результате исследования определены основные направления использования цифровых технологий в образовательной и организационной деятельности медицинских вузов, выявлены факторы, влияющие на эффективность цифровой образовательной среды, а также установлено, что успешность цифровой трансформации определяется комплексным развитием цифровой инфраструктуры, цифровых компетенций участников образовательного процесса и сохранением практико-ориентированной подготовки будущих медицинских специалистов.*

Ключевые слова: *цифровая трансформация, медицинское образование, цифровая образовательная среда, цифровая готовность, цифровые компетенции, медицинский университет.*

Kirish

So‘nggi yillar tibbiyot ta’limi tizimida muhim o‘zgarishlar davri bo‘ldi. Raqamli texnologiyalarning rivojlanishi nafaqat bilim berish usullarini, balki butun ta’lim jarayonini tashkil etishni ham bosqichma-bosqich o‘zgartirdi. Elektron platformalar, ta’limni boshqarish tizimlari, bulutli servislar, videokonferensaloqa vositalari va raqamli ta’lim resurslari aksariyat tibbiyot universitetlarining kundalik faoliyatining bir qismiga aylandi [5,7,11].

Bu jarayonlar, ayniqsa, pandemiya davrida sezilarli darajada tezlashdi. Ta’lim jarayonining uzluksizligini ta’minlash zarurati masofaviy ta’lim shakllariga tezkor o‘tishni taqozo qildi. Natijada ko‘plab ta’lim muassasalari qisqa muddatlarda raqamli yechimlarni joriy etishga, shu bilan birga o‘qituvchilar va talabalar o‘rtasidagi an’anaviy hamkorlik modellarini qayta qurishga majbur bo‘ldi. Bu bosqich raqamli texnologiyalarning imkoniyatlarini ham, ularni tibbiyot ta’limida qo‘llashning mavjud cheklovlarini ham ko‘rsatdi [3,6,9].

Raqamli ta’lim muhitining kengayishi bilan birga ta’lim jarayoni ishtirokchilariga qo‘yiladigan talablar ham o‘zgardi. Talabalarning raqamli savodxonligi, elektron resurslardan mustaqil foydalana olishi, raqamli muhitda ishlashi va axborot texnologiyalari vositasida o‘zaro munosabat o‘rnatishi muhim ahamiyat kasb etdi. O‘qituvchilarning ta’limni tashkil etishda raqamli vositalarni qo‘llashga tayyorligi ham muhim omilga aylandi [10].

Shu bilan birga, raqamli transformatsiya universitetlarning ichki boshqaruv jarayonlariga ham ta’sir ko‘rsatdi. Elektron hujjat aylanishi, o‘quv jarayonini kuzatib boruvchi raqamli platformalar va axborot tizimlaridan foydalanish ta’limga oid ma’lumotlarning katta qismini

markazlashgan holda qayta ishlashga imkon berdi. Bunda bunday yechimlarning samaradorligi bevosita ta’lim muassasasining raqamli yetuklik darajasiga hamda foydalanuvchilarning yangi texnologiyalar bilan ishlashga tayyorligiga bog‘liqdir [6].

Mazkur tadqiqot tibbiyot ta’limining raqamli transformatsiyasini turli jihatdan o‘rganuvchi ikkita ilmiy ish natijalarini tizimlashtirishga bag‘ishlangan. Birinchi nashrda tibbiyot ta’limini raqamlashtirishning o‘ziga xos jihatlari, imkoniyatlari va mavjud cheklovlari tahlil qilingan. Ikkinchi ishda esa tibbiyot oliy o‘quv yurtlari talabalarining ta’lim jarayonining raqamli transformatsiyasiga tayyorgarligiga ta’sir etuvchi omillar ko‘rib chiqilgan. Ushbu tadqiqotlarni birgalikda tahlil qilish tibbiyot universitetlarining raqamli rivojlanishidagi bugungi holat haqida tasavvur hosil qilish imkonini beradi.

Materiallar va uslublar. Tadqiqot izchil ikki bosqichda olib borildi. Birinchi bosqichda EMU University va Profi University universitetlarining raqamli ta’lim muhiti qiyosiy tahlil qilindi. Universitetlarning rasmiy raqamli xizmatlari, elektron ta’lim muhitining tuzilmasi, o‘quv jarayonini tashkil etish vositalari, talabalar uchun axborot xizmatlari hamda ta’limiy va ma’muriy faoliyatni raqamli qo‘llab-quvvatlash unsurlari tahlil obyektlari bo‘ldi.

Ikkinchi bosqichda tibbiy ta’limning raqamli transformatsiyasi va tibbiyot oliy o‘quv yurtlari talabalarining raqamli tayyorgarligi omillariga bag‘ishlangan zamonaviy ilmiy tadqiqotlar tahlil etildi. Ish davomida ilmiy adabiyotlarni tahlil qilish, qiyosiy tahlil, ilmiy ma’lumotlarni umumlashtirish va tizimlashtirish usullaridan foydalanildi. Bu tibbiyot universitetlarining raqamli transformatsiyasining asosiy yo‘nalishlarini aniqlash, eng keng tarqalgan raqamli ta’lim texnologiyalarini belgilash, shuningdek, talabalarning raqamli ta’lim muhitida o‘qishga tayyorligiga ta’sir ko‘rsatuvchi asosiy omillarni aniqlash imkonini berdi.

Yakuniy bosqichda tadqiqotning har ikkala yo‘nalishi natijalari o‘zaro qiyoslandi. Bu universitetdagi raqamli transformatsiya amaliyotining zamonaviy ilmiy yondashuvlarga qay darajada mos kelishini aniqlash, mavjud raqamli ta’lim muhitining kuchli tomonlarini ochib berish va uni yanada takomillashtirish yo‘nalishlarini belgilab olishga imkon berdi.

Tadqiqot natijalari. Tadqiqotning birinchi bosqichida O‘zbekiston Respublikasidagi ikkita nodavlat oliy ta’lim muassasasi — EMU University va Profi University’ning raqamli ta’lim muhitini tashkil etish holati tahlil qilindi. Tahlil universitetlarning rasmiy veb-saytlari va ta’lim platformalarida joylashtirilgan ma’lumotlar, shuningdek, qo‘llaniladigan raqamli ta’lim xizmatlari hamda ta’lim jarayonini tashkil etish to‘g‘risidagi ochiq manbalar asosida o‘tkazildi.

O‘tkazilgan tahlil natijalari shuni ko‘rsatdiki, har ikkala universitet ham raqamli texnologiyalarni ta’lim faoliyatini rivojlantirishning asosiy omillaridan biri sifatida qaraydi. Tashkiliy tuzilma va tayyorlov yo‘nalishlaridagi farqlarga qaramasdan, ikkala holatda ham raqamli ta’lim muhiti talabalar, professor-o‘qituvchilar va universitet ma’muriyati o‘rtasidagi uzluksiz o‘zaro aloqani ta’minlashga yo‘naltirilgan.

EMU University’da raqamli transformatsiya zamonaviy tibbiyot universitetini rivojlantirish strategiyasining bir qismi sifatida amalga oshirilmoqda. Rasmiy manbalarda ta’limning zamonaviy usullaridan foydalanish, xalqaro hamkorlikni rivojlantirish, o‘quv va klinik laboratoriyalarni jihozlash, shuningdek, ta’lim jarayonini qo‘llab-quvvatlashni ta’minlovchi raqamli ta’lim muhitini yaratishga alohida e’tibor qaratilgan. Universitet abituriyentlar qabulini tashkil etish, talabalarni xabardor qilish va o‘quv faoliyatini yuritish uchun elektron xizmatlardan

faol foydalanadi. Bundan tashqari, universitet talabalarning akademik faoliyatini qo‘llab-quvvatlash uchun HEMIS tizimidan foydalanadi.

Profi University’da raqamli yechimlar, eng avvalo, ta’lim xizmatlarining ommabopligini ta’minlashga hamda talabaning hujjat topshirishidan boshlab, o‘qish davrida u bilan hamkorlik qilishgacha bo‘lgan to‘liq hayotiy siklini qo‘llab-quvvatlashga yo‘naltirilgan. Rasmiy veb-saytda hujjatlarni elektron tarzda topshirish, abituriyentlar uchun axborot xizmatlari, talabalarga mo‘ljallangan bo‘limlar, raqamli aloqa kanallari hamda ta’lim jarayonini boshqarishning axborot tizimlari bilan integratsiya elementlari joriy etilgan. Shuningdek, universitet talabalarning akademik faoliyatini yuritishda HEMIS tizimidan foydalanadi.

Qiyosiy tahlil shuni ko‘rsatadiki, tashkiliy xususiyatlaridan qat’i nazar, ikkala universitet ham raqamli ta’lim muhitini yaratishda o‘xshash yondashuvni qo‘llaydi. Uning negizida elektron axborot resurslari, raqamli kommunikatsiya xizmatlari, ta’lim jarayonini qo‘llab-quvvatlash vositalari hamda talabalarning akademik faoliyatini boshqarish tizimlari yotadi. Bu kabi tizimli yondashuv talabalarning o‘quv materiallari, dars jadvallari, axborot byulletenlari va ma’muriy xizmatlardan doimiy foydalanish imkoniyatini ta’minlaydi.

Shu bilan birga, tahlillar raqamli ta’lim muhitini rivojlantirish alohida raqamli platformalarni joriy etish bilangina cheklanib qolmasligini ko‘rsatdi. Har ikki universitetda ham raqamli servislarni asosiy ta’lim va boshqaruv jarayonlariga integratsiya qilishga intilish kuzatilmoqda. Bunday yondashuv universitetning raqamli transformatsiyasini zamonaviy tushunishga mos keladi: bunda raqamli texnologiyalar mustaqil texnik yechimlar sifatida qo‘llanmasdan, ta’lim tashkilotining yagona boshqaruv tizimining bir qismiga aylanadi.

Olingan natijalar o‘rganilayotgan universitetlarda raqamli ta’lim muhitining asosiy elementlari allaqachon shakllantirilgan degan xulosaga kelish imkonini beradi. Shu bilan birga, amaliyot tahlili raqamli transformatsiya samaradorligini va talabalarning raqamli texnologiyalardan foydalanishga tayyorligini qanday omillar belgilashini to‘liq tushuntirib bera olmaydi. Shu munosabat bilan tadqiqotning ikkinchi bosqichida tibbiyot ta’limining raqamli transformatsiyasi va talabalarning raqamli tayyorgarligiga bag‘ishlangan zamonaviy ilmiy nashrlar tahlil qilindi.

Tibbiyot oliy ta’lim muassasalari faoliyatida raqamli texnologiyalar. Bugungi kunda tibbiy ta’limning raqamli transformatsiyasi universitet faoliyatining barcha asosiy yo‘nalishlarini qamrab oluvchi kompleks jarayondir. Bu o‘zgarishlar o‘quv jarayonini tashkil etish, ta’lim jarayoni ishtirokchilarining o‘zaro muloqoti, axborotni saqlash va o‘quv faoliyatini qo‘llab-quvvatlash kabi sohalarga daxldordir. Raqamlashtirishning eng keng tarqalgan yo‘nalishlaridan biri elektron ta’lim platformalarini joriy etish bo‘ldi. Ular o‘quv materiallarini joylashtirish, talabalarning mustaqil ishini tashkil etish, test sinovlarini o‘tkazish, topshiriqlar bajarilishini nazorat qilish hamda o‘qituvchilar va talabalar o‘rtasida axborot almashish uchun qo‘llaniladi.

Masofaviy ta’lim tizimlari muhim o‘rin egallaydi. Ular ma’ruzalar, seminar mashg‘ulotlari, maslahatlar va bilimlarni joriy nazorat qilishni masofaviy shaklda o‘tkazish imkonini beradi. O‘zaro aloqani tashkil etish uchun videokonferensaloqa vositalari, jamoaviy ishlashga mo‘ljallangan raqamli servislar va elektron aloqa kanallaridan foydalaniladi. Ta’lim jarayonida, shuningdek, videoma’ruzalar, interaktiv taqdimotlar, elektron kutubxonalar, raqamli ma’lumotlar bazalari, o‘quv videomateriallari va virtual ta’lim resurslaridan ham keng foydalanilmoqda.

Klinik fanlarni o‘rganishda raqamli texnologiyalardan foydalanish raqamli transformatsiyaning alohida yo‘nalishi hisoblanadi. Bunda gap o‘quv maqsadlarida muayyan

klinik vaziyatlarni qayta yaratish imkonini beradigan virtual simulyatorlar, raqamli modellar va vizualizatsiya texnologiyalari haqida bormoqda.

Raqamli texnologiyalar ta’lim faoliyatidan tashqari, universitetning tashkiliy jarayonlarini qo‘llab-quvvatlash uchun ham faol qo‘llanadi. Elektron axborot tizimlari o‘quv hujjatlarining saqlanishini, ta’lim materiallarining boshqarilishini va ta’lim jarayoni ishtirokchilarining axborot bilan ta’minlanishini kafolatlaydi.

Hozirgi kunda raqamli ta’lim platformalari o‘qituvchilar va talabalar o‘rtasidagi o‘zaro hamkorlikning asosiy muhitiga aylangan. Bunda raqamli ta’lim muhiti o‘quv jarayonining amalga oshirilishini ta’minlaydigan texnik infratuzilma, axborot xizmatlari va raqamli vositalar majmuyi sifatida qaraladi.

Talabalarning raqamli tayyorgarligi omillari

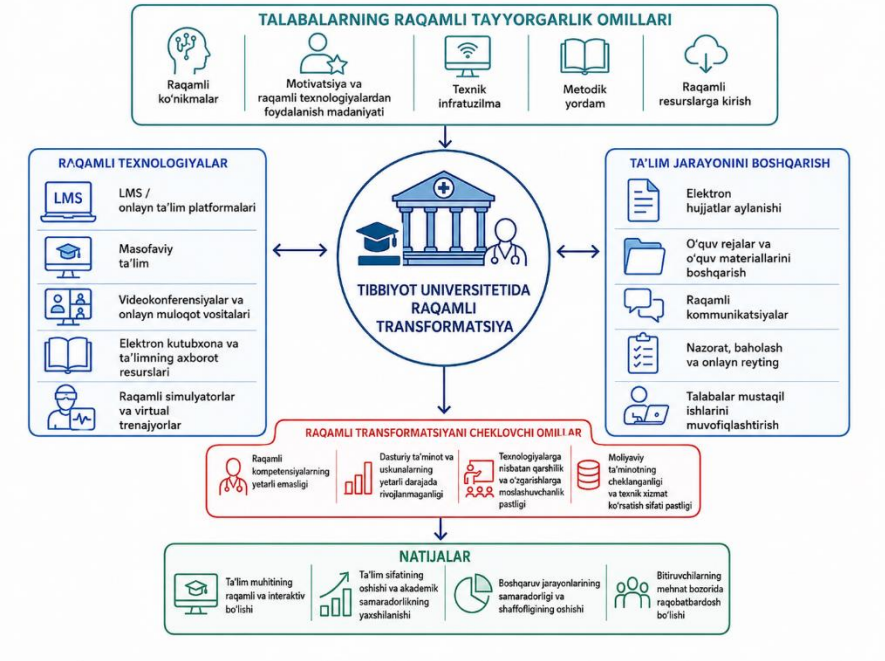
Tibbiyot ta’limini raqamli transformatsiya qilishning asosiy masalalaridan biri — tibbiyot mutaxassisliklari talabalarining raqamli ta’lim muhitida o‘qishga tayyorgarligiga ta’sir etuvchi omillarni aniqlashdan iborat. Raqamli tayyorgarlik deganda, ta’lim oluvchilarga o‘quv faoliyatida raqamli texnologiyalardan samarali foydalanish imkonini beradigan shart-sharoitlar majmuyi tushuniladi.

Individual omillar qatoriga raqamli texnologiyalarni egallash darajasi, axborot tizimlaridan foydalanish tajribasi, raqamli vositalar bilan ishlashdagi o‘ziga ishonch hamda yangi dasturiy mahsulotlarni mustaqil o‘zlashtirish qobiliyati kiradi.

Motivatsion jihatga alohida e’tibor qaratilmoqda. O‘tkazilgan tahlillar talabalarning raqamli texnologiyalarga nisbatan ijobiy munosabati ularning o‘quv jarayonida elektron ta’lim resurslaridan foydalanishga tayyorligi yuqori ekanligi bilan bog‘liqligini ko‘rsatadi.

Tashkiliy omillar va ta’lim muhiti omillari alohida guruhni tashkil etadi. Tashkiliy omillar sirasiga texnik vositalarning mavjudligi, internet aloqasi sifati, zamonaviy ta’lim platformalarining borligi, foydalanuvchilarni texnik qo‘llab-quvvatlash va universitet raqamli infratuzilmasining barqarorligi kiradi. O‘z navbatida, ta’lim muhiti talabalarni metodik jihatdan qo‘llab-quvvatlash sifati, raqamli materiallarning ochiqligi, elektron kurslarning mantiqiy tuzilishi hamda o‘qituvchilar tomonidan raqamli vositalardan muntazam foydalanilishi bilan belgilanadi.

Raqamli texnologiyalarni muvaffaqiyatli qo‘llash ta’lim jarayoni barcha ishtirokchilarining raqamli madaniyatini rivojlantirishni taqozo etadi. Texnik ko‘nikmalar bilan bir qatorda axborot savodxonligi, elektron resurslar bilan ishlash qobiliyati va axborot xavfsizligi talablariga rioya qilishning ahamiyati ortib bormoqda. Shunday qilib, raqamli tayyorgarlik ta’lim tashkilotining texnik imkoniyatlari, o‘quvchilarning individual xususiyatlari va o‘quv jarayonini tashkil etishning o‘ziga xos jihatlarini o‘z ichiga oluvchi bir qancha o‘zaro bog‘liq omillar ta’sirida shakllanadi(1-rasmga qarang).



1-rasm. Talabalarning raqamli tayyorgarlik omillari.

Raqamlashtirishning ta’lim jarayonini boshqarishga ta’siri. Tadqiqot natijalariga ko‘ra, raqamli texnologiyalarning joriy etilishi tibbiyot universitetlarida ta’lim faoliyatini tashkil etishni o‘zgartirmoqda. Elektron ta’lim platformalari o‘quv materiallari, dars jadvallari, topshiriqlar va joriy nazorat natijalarini markazlashgan holda joylashtirish uchun foydalaniladi. Bu o‘qituvchilar va talabalar uchun yagona axborot muhitini ta’minlaydi.

Ta’limni boshqarish tizimlari o‘quv materiallarini taqsimlash, oraliq sinovlarni o‘tkazish, bajarilgan topshiriqlarni yig‘ish va o‘qitish natijalarini saqlashni tashkillashtirish imkonini beradi. Ta’lim jarayonida raqamli kommunikatsiya vositalari: elektron pochta, o‘rnatilgan xabar almashish vositalari, videokonferensaloqa platformalari va jamoaviy ishlash servislaridan keng foydalaniladi. Bu an’anaviy auditoriya mashg‘ulotlari va elektron ta’lim resurslarini o‘zida mujassam etgan aralash ta’limni tashkil etishga imkon yaratadi.

Bugungi kunda raqamli ta’lim muhiti zamonaviy tibbiyot universitetlari faoliyat yuritishining zaruriy sharti sifatida qaralmoqda. Bunda raqamli servislardan foydalanish imkoniyati va ularning ta’lim jarayoniga integratsiyalashuvi muhim o‘rin tutadi. Elektron platformalar o‘quv materiallari, raqamli kutubxonalar, test topshiriqlari va qo‘shimcha ta’lim resurslaridan kecha-yu kunduz foydalanish imkoniyatini ta’minlaydi.

Raqamli transformatsiyaning muammolari va cheklovlari. Raqamli texnologiyalarning jadal rivojlanishiga qaramay, ularning tibbiy ta’limda qo‘llanishi hamon bir qator cheklovlarga duch kelmoqda. Avvalo, raqamli texnologiyalar tibbiyot mutaxassislarini tayyorlashning an’anaviy usullarini to‘liq o‘rnini bosa olmaydi. Amaliy mashg‘ulotlar, klinik ko‘nikmalarni shakllantirish va bemorlar bilan bevosita ishlash yuzma-yuz muloqotni taqozo etadi.

Ayrim kasbiy kompetensiyalarni egallashda virtual ta’lim resurslarining imkoniyatlari cheklanganligini ham hisobga olish muhim. Shu sababli, raqamli simulyatorlar hozirda an’anaviy klinik tayyorgarlikka muqobil emas, balki uni to‘ldiruvchi vosita sifatida ko‘rilmoqda.

O‘qituvchilar va talabalarning raqamli savodxonlik darajasi turlicha ekani alohida muammo bo‘lib qolmoqda. Yangi texnologiyalarni o‘zlashtirish qo‘shimcha ta’lim olishni va raqamli kompetensiyalarni doimiy yangilab borishni talab qiladi. Talabalarning raqamli

tayyorgarligini cheklovchi omillar sirasiga texnik infratuzilmaning yetarlicha rivojlanmagani, raqamli resurslardan foydalanish imkoniyatining cheklangani, axborot texnologiyalarini egallash darajasidagi tafovutlar va raqamli vositalardan foydalanishga bo‘lgan motivatsiyaning turlichaligi kiradi.

Ta’lim muassasasi tomonidan ko‘rsatiladigan tashkiliy yordam ham muhim ahamiyat kasb etadi. Zarur texnik va metodik ko‘mak bo‘lmasa, raqamli texnologiyalardan foydalanish samaradorligi pasayadi. Shu sababli, tibbiy ta’limning raqamli transformatsiyasini muvaffaqiyatli amalga oshirish uchun zamonaviy raqamli infratuzilma, foydalanuvchilarning tayyorgarligi hamda o‘qitishning amaliyotga yo‘naltirilgan xususiyatini saqlab qolish birdek muhimdir.

Muhokama

O‘tkazilgan tahlil shuni ko‘rsatadiki, bugungi kunda tibbiyot universitetlarining raqamli transformatsiyasi elektron ta’lim platformalarini joriy etishdangina iborat bo‘lmay, bundan ancha kengroq miqyosda rivojlanmoqda. Agar dastlab raqamlashtirish asosan masofaviy ta’limga o‘tish bilan bog‘langan bo‘lsa, hozirgi vaqtda u universitetning o‘quv faoliyatini tashkil etishdan tortib, boshqaruv qarorlarini qabul qilishni qo‘llab-quvvatlashgacha bo‘lgan deyarli barcha jarayonlarni qamrab olmoqda. Aynan shuning uchun ham raqamli texnologiyalarni shunchaki texnik vosita sifatida ko‘rib chiqish endi yetarli emas [1,3].

Olingan natijalar, umuman olganda, raqamli transformatsiyani ta’lim muhitining kompleks o‘zgarishi sifatida ko‘rib chiquvchi tadqiqotchilarning xulosalariga mos keladi. Xususan, Car va hammualliflarining ishida raqamli texnologiyalar ayrim raqamli xizmatlardan foydalanish orqali emas, balki ta’lim jarayoniga tizimli integratsiya qilingandagina tibbiy ta’lim samaradorligini oshirishi ta’kidlanadi [5]. Shunga o‘xshash yondashuv Ivanchuk va Plashchevaning tadqiqotlarida ham kuzatiladi, ularda raqamlashtirish tibbiyot universitetining ta’lim, ilmiy va ma’muriy jarayonlarini qamrab oluvchi strategiya sifatida talqin etiladi [2].

Shu bilan birga, o‘tkazilgan tahlil yana bir qonuniyatga e’tibor qaratish imkonini beradi. Ko‘pgina tadqiqotlarda asosiy urg‘u universitetlarning raqamli infratuzilmasini rivojlantirishga qaratiladi, inson omili esa ko‘pincha ikkinchi darajali masala sifatida qaraladi. Biroq, olingan natijalar buning aksini ko‘rsatmoqda. Hatto zamonaviy ta’lim platformalari mavjud bo‘lganda ham, raqamli muhit samaradorligi ko‘p jihatdan talabalarning o‘zlari o‘quv jarayonida raqamli vositalardan foydalanishga qay darajada tayyor ekanliklariga bog‘liq bo‘ladi [3,9].

Shu jihatdan bizning xulosalarimiz Althubaiti va hammualliflari natijalariga mos keladi. Mualliflar raqamli tayyorgarlik darajasi nafaqat raqamli ko‘nikmalar, balki kompyuter xavotiri, raqamli texnologiyalardan foydalanish jadalligi va elektron ta’limdagi o‘z muvaffaqiyatini subyektiv baholash bilan ham chambarchas bog‘liqligini ko‘rsatib bergan. Bunda raqamli tayyorgarlik axborot qidirish ko‘nikmalari, raqamli ilovalardan foydalanish, axborot almashish va raqamli xabardorlik kabi bir nechta o‘zaro bog‘liq komponentlar yig‘indisi sifatida qaraladi [4].

Qizig‘i shundaki, bunday xulosalar ko‘p jihatdan mualliflarning o‘zlari tayangan dastlabki tadqiqotlar natijalarini tasdiqlaydi. Masalan, Hong va Kim raqamli tayyorgarlikni talabalarning faol akademik o‘zaro munosabatlari sharti sifatida ko‘rsa, Händel va hammualliflari raqamli tayyorgarlik darajasini o‘quvchilarning pandemiya davrida ta’lim muhitiga muvaffaqiyatli moslashishi bilan bog‘laydi. Bu ishlar raqamli kompetensiyalarni rivojlantirish nafaqat alohida texnologiyalarni o‘zlashtirishga, balki umuman ta’lim faoliyati sifatiga ham ta’sir ko‘rsatishini taxmin qilish imkonini beradi [8,7].

Tibbiy ta’limni raqamlashtirish chegaralari masalasi alohida e’tiborga sazovordir. Olingan natijalar aynan shu jihat eng munozarali masalalardan biri bo‘lib qolayotganini ko‘rsatadi.

Raqamli platformalar keng tarqalganiga qaramay, bo‘lajak shifokorlarning an’anaviy klinik tayyorgarligini to‘liq almashtirish imkonsiz. Bunday yondashuv Ivanchuk va Plashcheva [2] tomonidan keltirilgan bir qator tadqiqotlar xulosalariga hamohangdir. Xususan, O‘Doherty va hammualliflari, Nimavat va hammualliflarining ishlari, shuningdek, virtual borliq texnologiyalaridan foydalanish bo‘yicha tadqiqotlar shuni ko‘rsatadiki, raqamli yechimlar ta’lim imkoniyatlarini sezilarli darajada kengaytirsa-da, bemorlar bilan bevosita ishlash jarayonida shakllanadigan kasbiy ko‘nikmalarning butun majmuini qayta yarata olmaydi [10,11].

Fikrimizcha, bugungi kunda aynan an’anaviy klinik tayyorgarlik va zamonaviy raqamli texnologiyalarning uyg‘unligi tibbiy ta’limni rivojlantirishning eng maqbul yo‘nalishi hisoblanadi. Amaliy mashg‘ulotlarni raqamli vositalar bilan to‘liq almashtirishga urinishlar kutilgan natijani berishi dargumon. Ularning o‘zaro bir-birini to‘ldirishi ancha istiqbolli ko‘rinadi. Bunda raqamli xizmatlar tayyorgarlik ko‘rish, klinik vaziyatlarni modellashtirish va ta’lim jarayonini qo‘llab-quvvatlash uchun qo‘llanilsa, kasbiy kompetensiyalarni shakllantirish esa real klinik amaliyot sharoitida davom ettiriladi.

Xulosa qilib aytganda, o‘tkazilgan tahlil tibbiyot universitetida raqamli transformatsiyaning muvaffaqiyati joriy etilgan texnologiyalar soni bilan emas, balki ta’lim muassasasining raqamli infratuzilma, o‘qituvchilar va talabalarning tayyorgarlik darajasi, uslubiy ta’minot hamda tibbiy ta’limning amaliyotga yo‘naltirilganligini yagona tizimga birlashtira olish qobiliyati bilan belgilanadi, degan xulosaga kelish imkonini beradi. Fikrimcha, aynan shunday yondashuv nafaqat universitetni texnologik jihatdan yangilash, balki bo‘lajak tibbiyot mutaxassislarini tayyorlash sifatini oshirishni ham ta’minlay oladi.

Xulosa

O‘tkazilgan tadqiqot shuni ko‘rsatadiki, tibbiy ta’limning raqamli transformatsiyasi nafaqat o‘qitish texnologiyalarini, balki tibbiyot universitetining butun ta’lim faoliyatini tashkil etishni o‘zgartirishdan iborat izchil jarayondir. Bugungi kunga kelib, raqamli yechimlar ta’lim muhitining ajralmas qismiga aylanib, o‘quv jarayonini boshqarish, o‘qituvchilar va talabalar o‘rtasidagi o‘zaro hamkorlik, shuningdek, ta’lim resurslaridan foydalanish uchun yangi imkoniyatlar yaratmoqda.

Tadqiqot shuni ko‘rsatdiki, raqamli transformatsiyaning samaradorligi joriy etilgan raqamli texnologiyalar soniga emas, balki ulardan foydalanish sharoitlariga bog‘liq ekan. Bunda talabalarning raqamli tayyorgarlik darajasi, universitetning raqamli infratuzilmasi sifati, ta’lim jarayonining uslubiy ta’minlanishi hamda o‘qituvchilarning zamonaviy raqamli vositalarni qo‘llashga tayyorligi alohida ahamiyat kasb etadi. Aynan shu omillarning uyg‘unligi raqamli ta’lim muhitidan samarali foydalanish uchun zamin yaratadi.

Shu bilan birga, tadqiqot natijalari raqamli imkoniyatlarning kengayishi tibbiy ta’limning amaliyotga yo‘naltirilgan tabiatini saqlab qolish zaruratini yo‘qqa chiqarmasligini ko‘rsatmoqda. Bo‘lajak shifokorlarni tayyorlash avvalgidek klinik tafakkurni shakllantirish, amaliy ko‘nikmalarni rivojlantirish va bemorlar bilan bevosita muloqot qilishni talab etadi. Shu sababli, raqamli texnologiyalarga an’anaviy ta’lim shakllarining o‘rnini bosuvchi emas, balki ularni to‘ldirib, ta’lim jarayoni sifatini oshiradigan vosita sifatida qarash lozim.

O‘tkazilgan tahlil, shuningdek, tibbiyot universitetlarining raqamli transformatsiyasini yanada rivojlantirish kompleks yondashuvni talab etishini ko‘rsatadi. Texnik infratuzilmani takomillashtirish bilan birga, o‘qituvchilar va talabalarning raqamli kompetensiyalarini rivojlantirishga, raqamli ta’lim resurslarini mukammallashtirishga, o‘quv jarayonini uslubiy

jihatdan qo‘llab-quvvatlashga hamda raqamli yechimlarni universitetni boshqarish tizimiga integratsiya qilishga e’tibor qaratish zarur.

Olingan natijalardan tibbiyot universitetlarining raqamli transformatsiyasi yo‘nalishlarini yanada rivojlantirish, raqamli ta’lim muhitini takomillashtirish hamda raqamlashtirish sharoitida ta’lim xizmatlarini samaraliroq ko‘rsatishni ta’minlovchi mexanizmlarni shakllantirishda foydalanish mumkin.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

JAMOATCHILIK NAZORATINI TASHKIL ETISH BO'YICHA MILLIY VA XALQARO TAJRIBALAR

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Annotatsiya. *Maqolada umumiy o'rta ta'lim maktablarida jamoatchilik nazoratini tashkil etishning O'zbekiston tajribasi hamda Angliya, Finlyandiya va Yaponiya amaliyotlari qiyosiy tahlil qilingan. Milliy modelning huquqiy asoslari jamoatchilik monitoringi, muhokamasi, eshituvi, axborot olish va jamoatchilik kengashlari faoliyati bilan bog'liq holda yoritilgan. Angliya tajribasida boshqaruv organining strategik va hisobdorlik funksiyalari, Finlyandiyada mahalliy avtonomiya va o'zini o'zi baholash, Yaponiyada esa Community School hamda School Management Council orqali maktab–oila–hudud hamkorligi ajratib ko'rsatilgan. Qiyoslash natijasida xorijiy mexanizmlarni bevosita ko'chirish emas, balki vakolatlar aniqligi, vakillik, dalillarga asoslangan muhokama, kuzatiladigan qaror va yopiq qayta aloqa siklini milliy sharoitga moslashtirish zarurligi asoslangan.*
Kalit so'zlar: *jamoatchilik nazorati, milliy tajriba, xalqaro tajriba, maktab boshqaruvi, jamoatchilik kengashi, hisobdorlik, o'zini o'zi baholash, ijtimoiy sheriklik .*

Abstract. *The article comparatively analyzes national experience in Uzbekistan and selected practices in England, Finland, and Japan for organizing public oversight in general secondary schools. Uzbekistan's legal framework is examined through public monitoring, deliberation, hearings, access to information, and public councils. The English model highlights the strategic leadership and accountability functions of governing bodies; the Finnish model emphasizes local autonomy and school self-evaluation; and the Japanese model links schools, families, and local communities through Community Schools and School Management Councils. The comparison shows that foreign mechanisms should not be copied mechanically. Their transferable elements-clear authority, representative participation, evidence-informed deliberation, traceable decisions, and a closed feedback cycle-need institutional and cultural adaptation to Uzbekistan's school governance system.*
Keywords: *public oversight, national experience, international experience, school governance, public council, accountability, self-evaluation, social partnership.*

Аннотация. *В статье проведён сравнительный анализ опыта Узбекистана, Англии, Финляндии и Японии по организации общественного контроля в*

общеобразовательных школах. Национальная модель рассмотрена во взаимосвязи с общественным мониторингом, обсуждением, слушанием, доступом к информации и деятельностью общественных советов. В английской практике выделены стратегическая и подотчётная функции органа управления, в Финляндии - местная автономия и самооценка школы, в Японии - сотрудничество школы, семьи и местного сообщества посредством Community School и School Management Council. Обосновано, что зарубежные механизмы не следует переносить механически: национальной системе необходимо адаптировать ясность полномочий, представительность, обсуждение на основе доказательств, прослеживаемость решений и замкнутый цикл обратной связи.

Ключевые слова: *общественный контроль, национальный опыт, международный опыт, управление школой, общественный совет, подотчётность, самооценка, социальное партнёрство.*

Ta’lim tizimida jamoatchilik nazorati fuqarolik ishtirokining alohida ko‘rinishi bo‘lib, u maktab faoliyatining ochiqligi, ta’lim-tarbiya natijalari, resurslardan foydalanish va boshqaruv qarorlarining jamoat manfaatlariga muvofiqligini kuzatish imkonini beradi. Biroq mazkur institut turli mamlakatlarda bir xil shaklda tashkil etilmaydi. Ayrim tizimlarda mustaqil boshqaruv kengashi ustuvor bo‘lsa, boshqalarida mahalliy avtonomiya, maktabning o‘zini o‘zi baholashi yoki hududiy hamkorlik mexanizmi yetakchi o‘rin tutadi.

Xalqaro tajribani o‘rganishdan maqsad tayyor tashkiliy shaklni ko‘chirish emas. Har qanday mexanizm muayyan huquqiy tizim, davlat va mahalliy boshqaruv vakolatlari, maktab avtonomiyasi, kasbiy ishonch hamda fuqarolik ishtiroki madaniyati doirasida ishlaydi. Shu sababli samarali qiyoslash tashqi shaklni emas, uning qanday muammoni hal qilishi, kimga vakolat berishi, qanday axborotdan foydalanishi va qarorga qanday ta’sir ko‘rsatishini aniqlashni talab qiladi.

O‘zbekiston Respublikasi Konstitutsiyasida fuqarolarning davlat va jamiyat ishlarini boshqarishda ishtirok etishi uchun umumiy huquqiy asos belgilangan [1]. “Ta’lim to‘g‘risida”gi Qonun ta’lim sohasidagi davlat siyosati, ta’lim tashkilotlari faoliyati, monitoring va sifat nazoratining asosiy qoidalarini belgilaydi [2]. Mazkur normalar maktab faoliyati bo‘yicha jamoatchilikka tushunarli ma’lumot taqdim etish va manfaatdor tomonlar fikrini boshqaruv tahliliga kiritish uchun umumiy zamin yaratadi.

“Jamoatchilik nazorati to‘g‘risida”gi Qonunda murojaat va so‘rovlar, jamoatchilik muhokamasi, eshituvi, monitoringi, ekspertizasi hamda jamoatchilik fikrini o‘rganish kabi shakllar nazarda tutilgan [3]. Bu shakllar ta’lim tizimida alohida-alohida tadbir emas, yagona jarayon sifatida qo‘llanishi kerak: muammo haqida signal olinadi, axborot tekshiriladi, manfaatdor tomonlar bilan muhokama qilinadi, taklif shakllantiriladi va vakolatli tuzilmaning javobi hamda ijrosi kuzatiladi.

O‘zbekiston Respublikasi Prezidentining 2018-yil 4-iyuldagi PQ-3837-son qarori davlat organlari huzuridagi jamoatchilik kengashlarining namunaviy vazifalari, huquqlari va faoliyat tartibini belgilashga xizmat qildi [4]. Ushbu kengashlar maktab boshqaruv organining aynan o‘zi emas. Shunga qaramay, tarkibning vakilligi, kun tartibini shakllantirish, axborot so‘rash, rahbar hisobotini eshitish va tavsiyalar ijrosini kuzatish kabi protsessual elementlar maktab darajasidagi jamoatchilik ishtirokini tartibga solishda metodik ahamiyatga ega.

Milliy tajribaning kuchli tomoni jamoatchilik nazoratining shakllari qonuniy jihatdan belgilanganidadir. Asosiy rivojlantirish nuqtasi esa ushbu shakllarni maktabning sifatni boshqarish

sikli bilan bog‘lashdir. Agar muhokama qaror protokoliga, qaror mas’ul va muddatga, ijro esa qayta baholashga ulanmasa, jamoatchilik nazorati rasmiy tadbir yoki shikoyatlarga javob berish amaliyoti darajasida qolishi mumkin.

UNESCOning ta’limdagi hisobdorlikka bag‘ishlangan global hisobotida hukumat, maktab, o‘qituvchi, ota-ona, xalqaro tashkilot va xususiy sektor kabi subyektlarning mas’uliyati o‘zaro bog‘liq ekani ta’kidlanadi [5]. Mazkur yondashuvda faqat maktab rahbari yoki pedagogni javobgar qilish yetarli emas: har bir subyektning vazifasi, qaror vakolati, axborot manbai va javob berish imkoniyati aniqlashtirilishi kerak. Aks holda javobgarlik bir tomonga yuklanadi, ta’sir vakolati esa boshqa tomonda qoladi.

Angliyada mahalliy hokimiyatga qarashli maktablar uchun boshqaruv organining roli strategik yetakchilik va huquqiy mas’uliyat bilan bog‘langan. Department for Education tashkilotining 2026-yilda yangilangan qo‘llanmasi boshqaruv organining vazifalari va qonuniy javobgarligini bir manbada tizimlashtiradi [6]. Mazkur modelda kengash kundalik operativ boshqaruvni amalga oshirmaydi; u maktabning strategik yo‘nalishi, rahbariyat hisobdorligi va resurslardan oqilona foydalanish ustidan nazoratni ta’minlaydi.

Bu tajribaning metodik ahamiyati kengash vakolatining aniq chegaralanganidadir. Kengash direktorni almashtirmaydi va pedagogning dars metodikasiga bevosita aralashmaydi. Uning nazorati strategik maqsad, tasdiqlangan siyosat, xavf, moliyaviy barqarorlik va natijalar dinamikasiga qaratiladi. A’zolarning kompetensiyasi, manfaatlar to‘qnashuvini boshqarish, majlis bayonnomasi va qaror ijrosini kuzatish hisobdorlikning protsessual asosini tashkil etadi.

1-jadval

Jamoatchilik nazoratini tashkil etish modellarining qiyosiy tavsifi

Mamlakat yoki yondashuv	Institutsional tayanch	Yetakchi mexanizm	O‘zbekiston uchun moslashtiriladigan jihat
O‘zbekiston	Qonuniy shakllar, davlat organlari huzuridagi jamoatchilik kengashlari	Axborot so‘rovi, monitoring, muhokama, eshituv va taklif	Maktab darajasidagi jarayonlarni yagona qayta aloqa sikliga birlashtirish
Angliya	Mahalliy hokimiyatga qarashli maktablarning boshqaruv organi	Strategik yetakchilik, rahbariyat faoliyati va resurslar bo‘yicha hisobdorlik	Kengash vazifasi, a’zolar kompetensiyasi va qaror protokolini aniq belgilash
Finlyandiya	Mahalliy avtonomiya, maktabning o‘zini o‘zi baholashi	Ichki baholash, ishonch va rivojlantiruvchi qayta aloqa	Nazoratni jazolashdan ko‘ra maktabni takomillashtirishga yo‘naltirish
Yaponiya	Community School va School Management Council tizimi	Ota-ona va hudud vakillarini maktab boshqaruvi bilan bog‘lash	Mahalla resurslari, ko‘ngillilar va maktab ehtiyojlarini muvofiqlashtirish
UNESCO yondashuvi	Ko‘p subyektli hisobdorlik	Vazifa, axborot, javob berish va natijani baholashning uyg‘unligi	Har bir subyektning vakolati va javobgarlik chegarasini oldindan belgilash

Finlyandiya ta’lim boshqaruvida mahalliy va maktab darajasidagi avtonomiya yuqori bo‘lib, sifatni ta’minlashda o‘zini o‘zi baholash muhim o‘rin tutadi. OECD tahliliga ko‘ra, Finlyandiya maktablarida o‘quv dasturi bo‘yicha avtonomiya va maktabning o‘z faoliyatini baholashi keng tarqalgan, tashqi baholash esa nisbatan kamroq qo‘llanadi [7]. Bu holat nazoratning markazida jazolovchi tekshiruv emas, kasbiy mas’uliyat va uzluksiz takomillashtirish turishini ko‘rsatadi.

Mazkur modelda jamoatchilik ishtiroki rasmiy tekshiruvchi rolidan ko‘ra, maktab faoliyati haqida qayta aloqa beruvchi va mahalliy ehtiyojni ifodalovchi sherik sifatida namoyon bo‘ladi. Maktab va ta’lim tashkilotchisi ma’lumotni o‘z rivojlanishi uchun ishlatadi; pedagogik jamoaga ishonch saqlanadi, lekin natijani tahlil qilish majburiyati bekor qilinmaydi. Demak, ishonch hisobdorlikning aksi emas, balki aniq ma’lumot va kasbiy refleksiya bilan qo‘llab-quvvatlanadigan boshqaruv shartidir.

O‘zbekiston sharoitida o‘zini o‘zi baholashni jamoatchilik nazoratiga qarama-qarshi qo‘yish emas, ularni birlashtirish zarur. Maktab o‘z bahosini dalillar bilan taqdim etadi, ota-ona va jamoatchilik vakillari ma’lumotning tushunarliligi hamda ehtiyojlarga mosligini muhokama qiladi, yakuniy xulosa esa rivojlantirish rejasiga kiritiladi. Bunda tashqi fikr kasbiy ekspertiza o‘rnini egallamasligi, o‘zini o‘zi baholash esa muammolarni yashirish vositasiga aylanmasligi kerak.

Yaponiyaning Community School yondashuvi ota-onalar va mahalliy aholi imkoniyatlarini maktab boshqaruvi bilan bog‘lashga qaratilgan. MEXT hujjatlarida School Management Council tizimini kengaytirish, maktab faoliyatini manfaatdor tomonlar ishtirokida baholash, hudud resurslari bilan maktab ehtiyojlarini muvofiqlashtirish hamda ko‘ngillilar ishtirokini qo‘llab-quvvatlash vazifalari belgilangan [8]. Bu model nazoratni faqat kamchilik aniqlash emas, bolalar ta’limini butun hamjamiyat tomonidan qo‘llab-quvvatlash vositasi sifatida ko‘radi.

Yaponiya tajribasining muhim tomoni - talab va resursni bir mexanizmda bog‘lash. Maktab muammosi jamoatchilikka ma’lum qilinadi, lekin hamjamiyat faqat tanqidchi sifatida qolmaydi: mutaxassis, ko‘ngilli, madaniy yoki ijtimoiy resurs taklif qiladi. Natijada jamoatchilik nazorati ijtimoiy sheriklik bilan to‘ldiriladi. Bu yondashuv ta’lim-tarbiya sifatini oshirishda “kim aybdor?” savolidan “muammoni birgalikda qanday hal qilamiz?” savoliga o‘tishni ta’minlaydi.

Mazkur element O‘zbekistondagi mahalla instituti imkoniyatlari bilan uyg‘unlashishi mumkin. Biroq mahallaning ishtiroki umumiy chaqiriq yoki tadbir tashkil etish bilan cheklanmasligi kerak. Maktab ehtiyoji, zarur yordam turi, mas’ul tomon, muddat va natija mezoni oldindan belgilanib, hamkorlik yakuni qayta baholanishi lozim. Shundagina hududiy resurs pedagogik maqsadga xizmat qiladi.

Qiyosiy tahlil barcha modellarda ochiqlik, vakillik, hisobdorlik va qayta aloqa mavjudligini, biroq ularning institutsional nisbatlari farqlanishini ko‘rsatdi. O‘zbekistonda jamoatchilik nazoratining huquqiy shakllari keng belgilangan; Angliyada kengashning strategik vakolati va huquqiy javobgarligi kuchli; Finlyandiyada avtonomiya va o‘zini o‘zi baholash ustuvor; Yaponiyada esa maktab va mahalliy hamjamiyatning birgalikdagi faoliyati markaziy o‘rin tutadi.

Shu sababli “kengash tashkil etildi” yoki “ochiq hisobot o‘tkazildi” degan faktning o‘zi samaradorlik mezoni bo‘la olmaydi. Institutsional shakl boshqaruv natijasiga olib kelishi uchun besh bog‘lanish zarur: vakillik asosida muammo aniqlanishi; ma’lumotning tekshirilishi; muhokamaning qaror bilan yakunlanishi; qarorda mas’ul, muddat va indikator ko‘rsatilishi; ijro natijasining jamoatchilikka qayta taqdim etilishi.

Xorijiy tajribani moslashtirishda huquqiy muvofiqlik, tashkiliy imkoniyat va pedagogik xavfsizlik birgalikda hisobga olinishi kerak. Masalan, kengashga strategik savol berish vakolati berilishi mumkin, ammo individual o‘quvchi bahosi yoki pedagogning metodik tanlovini ommaviy ovozga qo‘yish mumkin emas. Ochiqlik umumlashtirilgan va tushunarli axborotni anglatadi; shaxsiy ma’lumotlarni e’lon qilishni emas.

O‘zbekiston maktablari uchun moslashtirish yo‘nalishlari:

Birinchi yo‘nalish - maktab darajasidagi jamoatchilik ishtirokining aniq reglamentini ishlab chiqish. Unda subyektlar tarkibi, saylash yoki tavsiya etish tartibi, vakolat muddati, manfaatlar to‘qnashuvi, ko‘rib chiqiladigan masalalar, maxfiy axborot chegarasi va qarorlarning maslahat yoki majburiy xususiyati aniq ko‘rsatilishi zarur.

Ikkinchi yo‘nalish - jamoatchilik nazoratini sifat ko‘rsatkichlari bilan bog‘lash. Ochiq hisobot tadbirlar ro‘yxatidan iborat bo‘lmasligi, balki davomat, xavfsizlik, tarbiyaviy muhit, ota-onalar va o‘quvchilar fikri, murojaatlarni ko‘rib chiqish muddati hamda rivojlantirish rejasi ijrosi bo‘yicha dinamikani ko‘rsatishi kerak. Har bir indikatorning ta’rifi, manbai va cheklovi oldindan e’lon qilinadi.

Uchinchi yo‘nalish - kengash a’zolari va jamoatchilik vakillarining kompetensiyasini rivojlantirish. Ta’lim sifati indikatorlarini talqin qilish, dalil va fikrni ajratish, etik muloqot, bola huquqlari, shaxsiy ma’lumotlarni himoya qilish hamda qarorni protokollashtirish bo‘yicha qisqa o‘quv moduli tashkil etilishi lozim. Kompetensiyasiz ishtirok faol ozchilik bosimi yoki noto‘g‘ri xulosalarga olib kelishi mumkin.

To‘rtinchi yo‘nalish - raqamli va an’anaviy qayta aloqa kanallarini bir reyestrda birlashtirish. Onlayn murojaat, yozma taklif, ota-onalar yig‘ilishi va yuzma-yuz qabuldan kelgan masalalar yagona tasnif asosida qayd etiladi. Jamoatchilik uchun murojaatning shaxsiy mazmuni emas, muammo toifasi, ko‘rib chiqish holati, qabul qilingan qaror va umumlashtirilgan natija ochiq bo‘lishi maqsadga muvofiq.

Taklif etilgan yo‘nalishlar nazariy-qiyosiy tahlil natijasidir. Ularning real samaradorligi maktablarning hududi, hajmi, boshqaruv salohiyati va jamoatchilik faolligi hisobga olingan pilot tajriba orqali tekshirilishi kerak. Baholashda faqat ishtirokchilar soni emas, vakillik darajasi, taklifga javob muddati, qarorga ta’sir ulushi, ijro intizomi va muammo dinamikasi o‘lchanishi maqsadga muvofiq.

Milliy va xalqaro tajribalar jamoatchilik nazoratining yagona universal modeli mavjud emasligini ko‘rsatadi. Samarali tizimning umumiy yadrosi huquqiy aniqlik, vakillik, tekshiriladigan axborot, vakolatlar chegarasi, rahbariyatning javob berish majburiyati va qayta baholashdan iborat. O‘zbekiston uchun ustuvor vazifa yangi nomdagi tuzilmani tashkil etish emas, mavjud jamoatchilik nazorati shakllarini maktabning sifatni boshqarish sikliga funksional ulashdir. Angliyadan strategik vakolat va protsessual hisobdorlikni, Finlyandiyadan rivojlantiruvchi o‘zini o‘zi baholashni, Yaponiyadan maktab–oila–mahalla resurslarini muvofiqlashtirishni moslashtirish mumkin. Biroq har bir element milliy qonunchilik, maktab rahbarining vakolati, pedagogik avtonomiya, bola manfaatlari va shaxsiy ma’lumotlar himoyasi bilan muvofiqlashtirilishi shart.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

TEACHER PRESTIGE AS A SOCIAL-PEDAGOGICAL OUTCOME: A SOCIAL-INSTITUTIONAL COOPERATION MODEL FOR UZBEKISTAN

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Abstract. *Teacher prestige is often treated either as a property of the individual teacher or as a by-product of salary, formal status, and occupational rank. That framing leaves a practical question unresolved: how does professional standing become visible and credible in the everyday relationships that surround schools? This theory-building study develops a social-pedagogical answer from Kamalov's (2026) DSc dissertation on strengthening teacher prestige through cooperation among social institutions in Uzbekistan. The analysis reconstructs the dissertation's institutional typology, five functional blocks, seven strategy families, three implementation stages, and evaluation criteria, then examines their conceptual fit with research on occupational status, relational trust, social and professional capital, school-family-community partnerships, professional identity, working conditions, and teacher retention. The model treats prestige as a socially conferred outcome produced when professional quality is supported by ethical credibility, relational trust, and institutional recognition. Responsibility is therefore distributed across schools, families, mahallas, media, civil-society organizations, professional associations, public institutions, and business or sponsorship structures. The model is organized as a feedback cycle rather than a one-off campaign: actors diagnose conditions, coordinate action, evaluate changes, and revise the next cycle. Its main contribution is to connect legal and professional status with the social settings in which teachers are interpreted, trusted, and valued. The framework is conceptually grounded but not yet a causal model; empirical testing is required to establish which mechanisms are most effective and under what conditions.*

Keywords: *teacher prestige; social pedagogy; social institutions; school-family-community partnership; mahalla; relational trust; professional status; Uzbekistan.*

1. Introduction

The standing of teachers matters because teaching is exercised through authority that must be recognized, not merely assigned. A teacher may possess subject knowledge and pedagogical skill, yet the effects of that expertise depend partly on whether pupils, parents, colleagues, school leaders, and community actors regard the teacher as a credible professional. Trust, respect, and recognition shape whether expectations are accepted as legitimate, whether families cooperate

with schools, and whether professional judgment is supported in difficult situations. This makes teacher prestige more than a question of image. It is part of the social environment in which teaching takes place.

Hoyle's (2001) distinction among status, prestige, and esteem provides a useful starting point. Status refers to a formal or institutional position, prestige to the relative social standing of an occupation, and esteem to judgments about the qualities of particular practitioners. The distinction matters because improvements in one domain do not automatically produce improvements in the others. A legal guarantee can strengthen status without immediately changing public attitudes; individual excellence can generate esteem without altering the standing of the profession as a whole. The underlying dissertation (Kamalov, 2026) develops this distinction in a social-pedagogical direction by treating teacher prestige as the combined product of professional performance, moral credibility, public trust, and institutional recognition.

International policy research supports a similarly broad view. The ILO/UNESCO Recommendation concerning the Status of Teachers links the regard accorded to teachers with the conditions required for professional work (International Labour Organization & United Nations Educational, Scientific and Cultural Organization [ILO & UNESCO], 1966). OECD work has repeatedly connected the attractiveness and sustainability of teaching with working conditions, development opportunities, professional agency, recognition, and career intentions (Organisation for Economic Co-operation and Development [OECD], 2005, 2020, 2025). UNESCO and the International Task Force on Teachers for Education 2030 (2024) likewise place professional status and support within the larger problem of attracting and retaining qualified teachers. Across these sources, social standing is not presented as a public-relations problem detached from the organization of work.

Uzbekistan offers a particularly relevant setting for examining the institutional side of prestige. The Law on the Status of the Teacher recognizes teachers' rights, dignity, professional guarantees, mentoring arrangements, and protection from assignments unrelated to professional duties (O'zbekiston Respublikasi, 2024). Education legislation and national policy decisions also emphasize teacher preparation, professional development, and quality improvement (O'zbekiston Respublikasi, 2020; O'zbekiston Respublikasi Prezidenti, 2020, 2022). Formal recognition, however, is only one layer of social standing. The everyday experience of prestige is produced at the points where legal protections, school leadership, family expectations, mahalla participation, professional communities, and public communication meet.

This study asks how those points of contact can be organized as a coherent pedagogical system. Its research question is: How can cooperation among social institutions be structured so that teacher prestige is produced and sustained as a social-pedagogical outcome rather than left to individual reputation or episodic recognition? The purpose is not to estimate the causal effect of any single intervention. It is to clarify the architecture, mechanisms, actors, feedback processes, and testable propositions contained in the dissertation-derived model.

2. Conceptual framing: from personal reputation to institutional prestige

Individual qualities remain indispensable to professional standing. Uzbek pedagogical scholarship has emphasized pedagogical mastery, values, professional competence, reflective practice, educational culture, and the design of effective learning processes (Erkaboyeva, 2020; Ma'murov, 2017; Mardonov, 2006; Safarova, 2024; Tolipov & Usmonboyeva, 2006). Competence, ethical conduct, communication, and professional self-presentation all influence how teachers are perceived. Yet an individual account is incomplete because these qualities are

interpreted inside organizations and relationships. A capable teacher working under opaque evaluation, weak leadership support, persistent parent-school conflict, or demeaning public narratives may receive less social recognition than professional performance alone would predict.

Relational theory helps explain why. Bryk and Schneider (2002) describe relational trust in schools through respect, competence, personal regard, and integrity. Coleman (1988) shows how social capital embedded in networks and norms can make coordinated action possible. Epstein et al. (2018) demonstrate that school-family-community partnerships can be designed and maintained through institutional routines rather than left to goodwill. Read together, these perspectives suggest that professional standing emerges from repeated judgments within a network: people observe competence, interpret intentions, test reliability, and update their expectations through continuing interaction.

Professional-capital and professional-identity research adds a second mechanism. Hargreaves and Fullan (2012) locate teaching quality in the interaction of human, social, and decisional capital. Vescio et al. (2008) show that well-developed professional learning communities can reshape teaching practice and, in some settings, student learning. Beijaard et al. (2004) describe teacher identity as dynamic and relational, while Fuller et al. (2013) illustrate how credible recognition of expertise can reinforce professional identity and status. These traditions make it difficult to treat prestige as a stable cultural possession. The institutional environment can amplify or erode both teachers' professional self-understanding and the external recognition attached to their work.

On this basis, the present analysis defines teacher prestige as socially conferred professional standing generated through four linked foundations: professional quality, ethical credibility, relational trust, and institutional-social recognition. Professional quality concerns competence and the quality of practice; ethical credibility concerns consistency, responsibility, and moral conduct; relational trust concerns the quality of interactions among teachers and stakeholders; institutional-social recognition concerns the legal, organizational, community, and public signals that mark teaching as valued work. These foundations correspond to the dissertation's professional, social, and moral dimensions while making explicit the relational mechanism that connects them.

3. Method

The study uses structured conceptual analysis and qualitative framework synthesis. Its primary source is Kamalov's (2026) DSc dissertation manuscript, with attention to the definition of teacher prestige, the typology of social institutions, the proposed pedagogical conditions, the seven strategy families, the five-block cooperation model, the three implementation stages, and the evaluation criteria. The unit of analysis was the proposition or mechanism rather than the paragraph. Each proposition was read against four questions: Which actor is assigned responsibility? Through what mechanism is influence expected to occur? Which dimension of prestige is addressed? How is feedback, monitoring, or correction built into the process?

The reconstructed framework was then compared with international literature on teacher status and professionalism (Hoyle, 2001; OECD, 2005, 2020, 2025), relational trust (Bryk & Schneider, 2002), social capital (Coleman, 1988), school-family-community partnerships (Epstein et al., 2018), professional capital (Hargreaves & Fullan, 2012), professional identity (Beijaard et al., 2004), teacher retention (Borman & Dowling, 2008), and autonomy and occupational well-being (Skaalvik & Skaalvik, 2014). The comparison was interpretive, not meta-analytic. External

research was used to assess conceptual coherence and identify convergent mechanisms; it was not used to calculate pooled effects or to claim empirical validation of the proposed model.

A descriptive content count was retained for the institutional-coverage chart. Distinct operational mechanisms explicitly assigned to seven institutional groups in the dissertation's typology and cooperation discussion were counted once for each actor. The count indicates breadth of assigned responsibility within the model. It does not measure the real-world influence, effectiveness, or causal importance of any institution, and differences of one mechanism should not be interpreted as substantive effect-size differences.

4. Results: architecture of the social-institutional model

4.1. Five functional blocks and four foundations

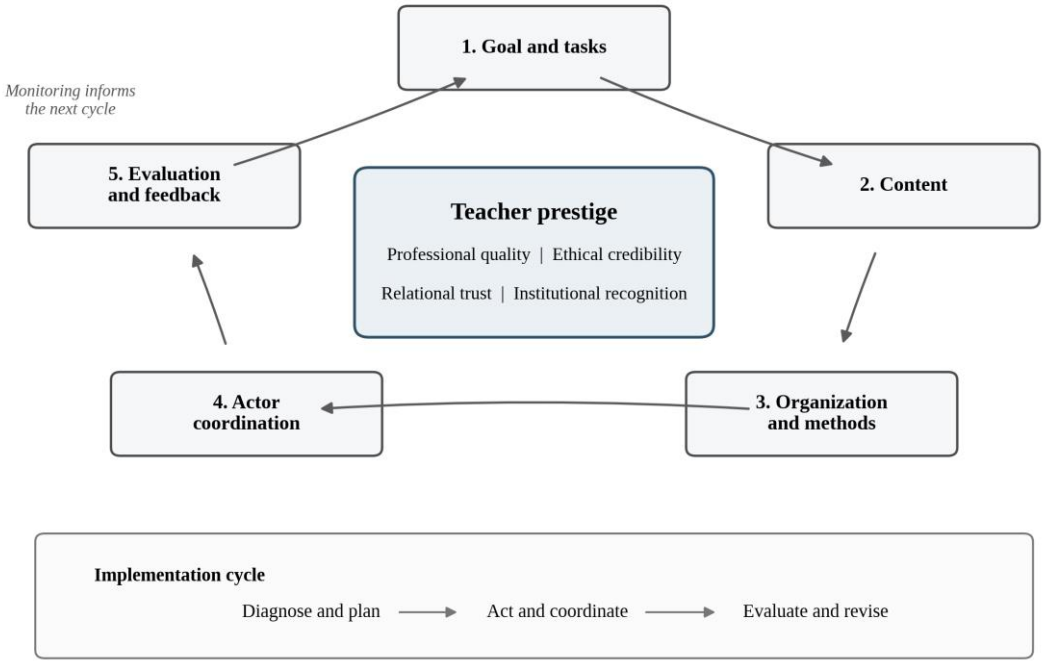
The model is organized around five functional blocks that convert a broad social goal into a repeatable process. The goal-task block defines the shared purpose and translates it into concrete objectives such as strengthening public trust, supporting professional development, protecting professional dignity, improving communication, and creating credible forms of recognition. The content block specifies what cooperation is about: professional-pedagogical development, socio-cultural recognition, information and communication, and legal-social protection. Keeping these strands together is important because a prestige initiative can become superficial if it concentrates on visibility while neglecting working conditions and professional quality.

The organizational-technological block addresses how cooperation is carried out. The dissertation identifies forums, open days, councils, community events, mentoring, project work, public communication, and digital platforms among the available forms. The inter-subject block identifies the actors and the quality of their relationships: teachers, school leaders, pupils, parents, mahalla bodies, non-governmental organizations, media, professional associations, and business or sponsorship structures. The result-evaluation block closes the loop through criteria, indicators, monitoring, and corrective feedback. In practical terms, this means that activity counts cannot substitute for evidence about trust, professional conditions, or the quality of cooperation.

The five blocks surround the four foundations of prestige identified in the conceptual synthesis: professional quality, ethical credibility, relational trust, and institutional recognition. These foundations describe the outcome that the blocks are intended to support; the blocks describe the governance architecture through which that outcome is pursued. Figure 1 presents the model as a feedback system and also shows the three-stage implementation cycle that carries the architecture into practice.

Figure 1

Social-institutional model of teacher prestige: structure, foundations, and feedback



Note. Author synthesis based on the five-block cooperation model, four conceptual foundations, and three implementation stages reported in Kamalov (2026). Arrows represent an iterative governance cycle rather than a claim of linear causation.

4.2. Differentiated institutional roles

The model does not assign identical functions to every institution. Families are positioned mainly as sites of value formation, communication, and parent-teacher trust. Schools carry the densest set of responsibilities because they organize working conditions, leadership support, professional learning, internal recognition, and formal interaction with other actors. The mahalla contributes territorial community recognition, mediation, and collective participation. Media and digital platforms shape the public representation of teachers and the transparency of school communication. Non-governmental organizations can contribute projects, advocacy, social support, or grants; professional associations can support standards, peer learning, and professional voice; business and sponsorship structures can supply resources when their involvement remains consistent with educational priorities and professional boundaries.

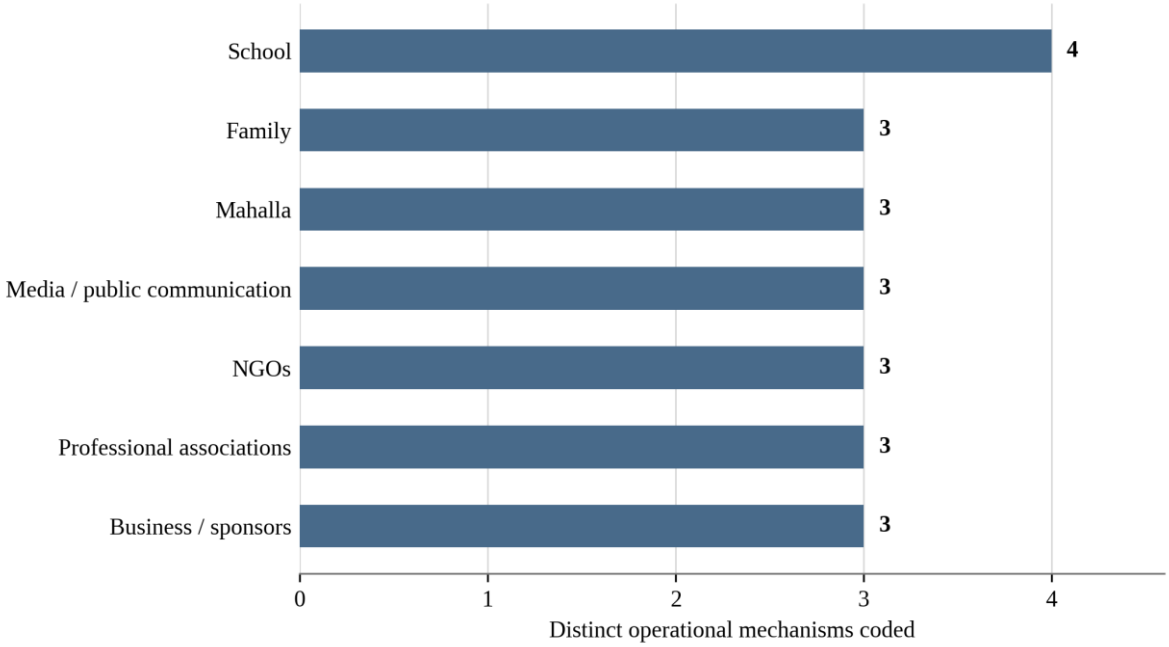
This differentiation matters because “community support” is otherwise too broad to guide implementation. The Uzbek mahalla is especially important in this respect. International partnership frameworks commonly group local actors under the general category of community, whereas the mahalla is a more structured territorial and social institution. Naming it separately preserves a locally specific mechanism without making the wider framework incommensurable with school-family-community research.

The descriptive coding confirms that implementation responsibility is broadly distributed rather than concentrated in one external actor. The school receives four distinct operational mechanisms in the source model, while the remaining six groups each receive three. Figure 2

visualizes this distribution. The narrow range is itself informative: the model assumes shared responsibility, although it gives the school a somewhat broader coordinating role.

Figure 2

Breadth of operational mechanisms assigned to institutional actors



Note. Author content analysis of institutional functions and mechanisms specified in Kamalov (2026). Each distinct mechanism was counted once within an institutional group. Counts represent model coverage, not measured influence or effectiveness.

5. Seven strategy families: how the architecture is activated

The dissertation specifies seven strategy families that connect the institutional architecture with day-to-day action. The value-ethical strategy ties prestige to the teacher's role as a bearer of national and universal values and to the consistency of professional conduct. The institutional-legal strategy turns formal status into usable protections, professional boundaries, ethical standards, and rights. The professional-image strategy concerns visible competence, communication culture, pedagogical achievement, and responsible self-presentation. These strategies are related, but they are not interchangeable: moral credibility cannot replace competence, and favorable publicity cannot substitute for legal or organizational support.

The cooperative-partnership strategy organizes reciprocal relations among teachers, pupils, parents, schools, mahalla bodies, and other institutions. Its central principle is shared responsibility rather than one-sided demands on teachers. The incentive strategy links recognition to meaningful professional achievement and allows for material as well as non-material forms of acknowledgment. The information-communication strategy creates channels through which school practices can be explained, successful experience can be shared, and disputes can be addressed before they harden into reputational conflict. The preventive-psychological strategy addresses stress, conflict, emotional exhaustion, and access to psychological support.

These seven strategies make the model more plausible than an approach built around ceremonial recognition alone. Research on teacher attrition has shown that working conditions are associated with decisions to leave or remain in teaching (Borman & Dowling, 2008). Skaalvik and Skaalvik (2014) link perceived autonomy and self-efficacy with engagement, job satisfaction, and

lower emotional exhaustion. OECD analyses likewise connect teachers' professional experience with leadership, working conditions, autonomy, development, and career intentions (OECD, 2020, 2025). Such findings do not validate the dissertation model, but they support its core assumption that social standing is difficult to sustain when professional agency and institutional conditions are weak.

6. Implementation, monitoring, and governance

Implementation proceeds through three recurring stages. The organizational-diagnostic stage identifies relevant actors, examines the existing level of trust and cooperation, locates sources of friction, and produces a joint plan. The practical-activity stage carries out the agreed work across the school year: family communication, mentoring, professional learning, community projects, recognition practices, media engagement, legal support, and other collaborative activities. The control-evaluation stage reviews evidence, identifies what has and has not changed, documents useful practice, and revises the next cycle. A designated coordination group is advisable because a task assigned collectively to everyone can easily become owned by no one.

The evaluative logic should remain multidimensional. The dissertation identifies cognitive, emotional-evaluative, behavioral, institutional, and outcome criteria. Schools can therefore examine whether stakeholders understand teachers' professional work, whether trust and respect are present, whether participation is constructive, whether cooperation agreements are functioning, and whether teachers report professional satisfaction and stability. Surveys, interviews, participation records, document review, and professional indicators can be combined. A single popularity score would be both analytically weak and potentially damaging because it could reward visibility rather than professional quality.

The feedback structure also connects the model with quality-management traditions in Uzbek education, which emphasize diagnosis, planning, implementation, evaluation, and adjustment (Ahlidinov, 2002; Qurbonov & Seytxalilov, 2006). Here, however, the object of management is not only an instructional process. It is the network of relationships and institutional conditions that shape how professional work is recognized. The model is therefore best understood as an adaptive governance arrangement rather than a fixed program.

Uzbekistan's legal framework gives this arrangement a formal boundary. The Law on the Status of the Teacher recognizes teachers' dignity and rights, provides for mentoring, and prohibits forms of interference and non-professional assignment that can undermine professional work (O'zbekiston Respublikasi, 2024). Earlier education legislation and the 2020 decision on pedagogical education address preparation and system quality (O'zbekiston Respublikasi, 2020; O'zbekiston Respublikasi Prezidenti, 2020). Institutional cooperation should therefore be designed as support around professional practice, not as a mechanism for informal control over teachers' pedagogical judgment.

7. Discussion

7.1. Theoretical contribution

The model shifts the analytical location of prestige. Instead of asking only what teachers must do to become more respected, it asks what institutional conditions allow professional quality to be seen, trusted, and protected. This shift avoids two recurrent simplifications. The first is cultural determinism: the assumption that respect for teachers is inherited from tradition and therefore largely outside the reach of educational governance. Cultural expectations matter, but they are continually reinforced or weakened by present-day working conditions, public narratives, leadership practices, and institutional behavior. The second simplification is individualism: the

assumption that prestige can be secured through self-improvement and personal image alone. Professional development is necessary, but recognition remains relational.

The resulting account also clarifies the relationship between status and lived professional standing. Law can define rights and protections, but the social meaning of those rights is realized in schools, families, communities, and public communication. Conversely, community esteem without professional safeguards can become unstable or intrusive. The model therefore links top-down institutional recognition with horizontal relationships and bottom-up social acknowledgment. Its distinctive Uzbek element is the explicit incorporation of the mahalla as a structured community actor rather than an undifferentiated background context.

7.2. Practical and policy implications

For school leadership, the most useful implication is to treat teacher prestige as part of institutional quality rather than as a publicity target. Improvement planning can examine whether leadership decisions, professional learning, parent communication, recognition practices, conflict procedures, and community partnerships create conditions in which teachers can exercise credible professional authority. This is consistent with professional-capital theory, which treats human, social, and decisional capital as mutually dependent (Hargreaves & Fullan, 2012). It also aligns with evidence that professional learning is most consequential when it is embedded in collaborative organizational routines rather than isolated events (Vescio et al., 2008).

For families and community institutions, the framework supports participation while preserving role clarity. Families, mahallas, civil-society actors, media, and professional associations can contribute information, resources, social mediation, recognition, and accountability. They should not displace the professional responsibilities of teachers or the statutory responsibilities of school leaders. The 1966 ILO/UNESCO Recommendation links the social importance of teaching with the conditions needed for professional responsibility, and Uzbekistan's teacher-status law supplies a contemporary legal basis for protecting those boundaries (ILO & UNESCO, 1966; O'zbekiston Respublikasi, 2024).

Public communication also requires restraint. Positive representation can make teachers' work more visible, but communication that is detached from professional quality risks becoming ceremonial. Digital channels can improve transparency while also increasing reputational exposure and conflict. Recognition systems can strengthen professional identity when criteria are credible (Fuller et al., 2013), but poorly designed incentives can encourage competition for visibility rather than cooperation. The governance principles implied by the model are therefore fairness, evidence, professional autonomy, role clarity, reciprocity, and transparency.

7.3. Limitations and research agenda

This article is a conceptual reconstruction, and its claims should be read accordingly. First, the primary model is derived from one dissertation and remains dependent on the completeness and internal logic of that source. Second, the international literature was used for conceptual comparison rather than through a systematic-review protocol, so the study does not claim exhaustive coverage of teacher-status research. Third, the institutional count in Figure 2 measures only the breadth of mechanisms assigned in the model; it provides no evidence that one actor is more influential than another. Finally, the framework does not yet establish causal direction. Higher trust may strengthen prestige, for example, but prestige may also facilitate trust and cooperation.

Empirical work can now test the proposed pathways. At the teacher level, studies could measure perceived social esteem, professional identity, self-efficacy, job satisfaction, emotional

exhaustion, and intentions to remain in the profession. At the school level, researchers could assess leadership support, collaboration, professional-learning structures, family engagement, conflict-resolution procedures, and communication practices. At the community level, parent and community trust, participation, and recognition could be measured separately from school-level conditions. Multilevel and longitudinal designs would be especially useful because prestige is relational, nested across institutions, and unlikely to change immediately.

Comparative research could also examine whether institutions analogous to the mahalla perform similar mediating and recognition functions in other community-oriented education systems. Such work would help distinguish context-specific components from mechanisms that travel across settings. The strongest next step is therefore not to search for a single “prestige intervention,” but to test which combinations of professional conditions, relational practices, and institutional signals produce durable changes in social standing.

8. Conclusion

Teacher prestige is not a personal asset that teachers can manufacture on their own, nor is it secured by formal status alone. It develops when professional quality is credible, ethical conduct is consistent, relationships are trustworthy, and institutions visibly support the work of teaching. The social-institutional model reconstructed here organizes those conditions through five functional blocks, seven strategy families, differentiated institutional roles, and a three-stage feedback cycle.

For Uzbekistan, the model provides a way to connect legal recognition of teachers with the social settings in which professional authority is actually experienced: schools, families, mahallas, civil society, professional networks, media, and other institutional partners. For wider teacher-status research, it offers a context-sensitive account of how community institutions can be incorporated into analyses of professional standing. Its value now depends on empirical testing. The model should be judged by whether coordinated institutional practice improves trust, professional recognition, working conditions, and teachers' experience of being socially valued - not by the number of ceremonies, campaigns, or public messages produced in its name.

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UMUMIY O‘RTA TA’LIM O‘QUVCHILARIDA VATANPARVARLIK KOMPETENSIYASINING TO‘RT MEZONLI MODELI: UCH HUDUDDAGI KVAZIEKSPERIMENTAL TADQIQOT NATIJALARI

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Annotatsiya. *Tadqiqot umumiy o‘rta ta’lim o‘quvchilarida vatanparvarlik kompetensiyasini bilish, his-tuyg‘u, xulq-atvor va amaliy faoliyat mezonlarining integrativ birligi sifatida asoslashga qaratilgan. Taklif etilgan to‘rt mezonli model doirasida Toshkent shahri, Farg‘ona viloyati va Navoiy shahridagi o‘nta maktabning 2022–2025-yillardagi kvazieksperimental ma’lumotlari tahlil qilindi. Jami 1192 nafar o‘quvchining 594 nafari tajriba, 598 nafari nazorat guruhida qatnashdi. Dastlabki uch darajali kompetensiya taqsimotlari bo‘yicha guruhlar o‘rtasida statistik ahamiyatli tafovut kuzatilmadi: $\chi^2(2) = 0{,}403$; $p = 0{,}818$; Kramer $V = 0{,}018$. Yakuniy bosqichda tajriba guruhida quyi daraja 58,4 foizdan 23,9 foizga kamaygan, o‘rta daraja 30,8 foizdan 60,6 foizga va yuqori daraja 10,8 foizdan 15,5 foizga oshgan. Nazorat guruhida quyi daraja 57,4 foizdan 57,7 foizga o‘zgargan. Yakuniy guruhlararo farq $\chi^2(2) = 141{,}775$; $p < 0{,}001$; $V = 0{,}345$; Cliff $\delta = 0{,}327$ natijalarini bergan. Ijobiy siljish uch hudud bo‘yicha kuzatilgan bo‘lsa-da, maktablar kesimida klasterlanish e’tiborga olinganda statistik xulosa zaiflashishi mumkin. Jamlangan taqsimotlar to‘rt mezonning har biri yoki alohida pedagogik tadbir ta’sirini aniqlashga imkon bermaydi. Model hali mustaqil psixometrik validatsiyadan o‘tmagan. Shu bois keyingi bosqichda validatsiyalangan o‘lchovlar, individual kuzatuvlar va klasterli randomizatsiyalangan sinovlar zarurligi asoslanadi.*

Kalit so‘zlar: *vatanparvarlik kompetensiyasi; konstruktiv vatanparvarlik; fuqarolik ta’limi; kvazieksperimental dizayn; pedagogik tajriba-sinov; ta’sir hajmi; klasterlanish; O‘zbekiston.*

Abstract. *The study conceptualizes patriotic competence among general secondary school pupils as an integration of knowledge, emotions, behavior and practical activity. It analyzes quasi-experimental data collected in 2022–2025 from ten schools in Tashkent, Fergana Region and Navoi. Of 1,192 pupils, 594 belonged to an intervention group and 598 to a comparison group. At baseline, three-level competency distributions did not differ significantly between groups ($\chi^2(2) = 0.403$; $p = 0.818$; Cramér’s $V = 0.018$). At follow-up, the low category in the intervention group declined from 58.4% to 23.9%, the medium category increased from 30.8% to 60.6%, and the high category rose from 10.8% to 15.5%. The low*

category in the comparison group changed from 57.4% to 57.7%. The final between-group comparison yielded $\chi^2(2) = 141.775$, $p < 0.001$, $V = 0.345$ and Cliff's $\delta = 0.327$. Favorable changes were observed across all three locations, but the statistical inference may weaken when clustering within schools is considered. Aggregated categorical data do not reveal change within individuals or the separate impact of individual competencies and teaching components. The four-criterion framework has not yet undergone independent psychometric validation. The paper calls for validated assessment instruments, individual longitudinal data and cluster-randomized research.

Keywords: *patriotic competence; constructive patriotism; civic education; quasi-experimental design; educational intervention; effect size; clustering; Uzbekistan.*

1. Kirish

1991-yildan keyingi o‘n yilliklarda O‘zbekiston maktabi tarixiy xotira, davlat ramzlari va milliy qadriyatlarni o‘quv mazmunining markaziga olib chiqdi. Mazmun tez yangilandi, biroq dars jarayonini tashkil etish usullari, o‘quvchi faolligini rag‘batlantirish mexanizmlari va, ayniqsa, tarbiyaviy natijalarni baholash vositalari ancha sekin o‘zgardi. Postsotsialistik ta’lim tizimlarini qiyosiy o‘rgangan tadqiqotchilar bu nomutanosiblikni institutsional moslashuvning umumiy qonuniyati sifatida tavsiflaydi: yangi g‘oyaviy maqsadlar ko‘pincha eski pedagogik va boshqaruv infratuzilmasi orqali amalga oshiriladi (Silova, 2010). Oqibatda islohot ritorikasi bilan uni amalga oshirish salohiyati o‘rtasida kechikish paydo bo‘ladi. «Ta’lim to‘g‘risida»gi Qonun (O‘zbekiston Respublikasi, 2020) va 2022–2026-yillarga mo‘ljallangan Taraqqiyot strategiyasi (O‘zbekiston Respublikasi Prezidenti, 2022) tarbiya tizimini yangilashning huquqiy va strategik doirasini belgilab berdi. Shu doirada vatanparvarlikni ramziy bilimlar majmuidan o‘quvchining fuqarolik faoliyatida namoyon bo‘ladigan kompetensiyaga aylantirish aniq pedagogik vazifaga aylandi.

Maktab Vatanga mehrni tarbiyalashi kerakmi, degan savol bahs mavzusi emas. Ochiq savol boshqa: qanday vatanparvarlik, qaysi vositalar bilan va qanday dalillar asosida tarbiyalanadi?

Ijtimoiy psixologiyada Schatz va boshqalar (1999) ko‘r-ko‘rona va konstruktiv vatanparvarlikni empirik jihatdan ajratgan: birinchisi tanqidsiz sodiqlik va muxolif fikrga toqatsizlikni, ikkinchisi jamiyatni yaxshilash istagi bilan uyg‘unlashgan tanqidiy mas’uliyatni ifodalaydi. Westheimer va Kahne (2004) shaxsan mas’uliyatli, ishtirokchi va adolatga yo‘naltirilgan fuqaro modellarini farqlab, maktab dasturi qaysi fuqaro turini shakllantirishi siyosiy tanlov ekanini ko‘rsatdi. Vatanparvarlik tarbiyasi atrofidagi xalqaro bahslar shu tanlovning davomi hisoblanadi: AQSh maktablarida vatanparvarlikning siyosiy funksiyalari (Westheimer, 2007), Britaniyada esa uning o‘qituvchilar, o‘quvchilar va matbuot nigohidagi munozarali maqomi (Hand va Pearce, 2009) batafsil tahlil qilingan.

Mazkur maqolada vatanparvarlik kompetensiyasi Vatan haqidagi bilim, unga daxldorlik hissi, kundalik hayotdagi mas’uliyatli xulq va ijtimoiy foydali faoliyatning integrativ birligi sifatida operatsionallashtiriladi. Bu mualliflik modeli. Uning to‘rt o‘lchovli tuzilmasi nazariy jihatdan asoslangan, ammo psixometrik validatsiyadan hali o‘tmagan.

Asosiy metodologik qiyinchilik dalil qatlamlarini bir-biridan ajratishda. Umumiy kompetensiya darajasidagi ijobiy siljish qaysi mezon kuchayganini ham, qaysi pedagogik komponent ta’sir qilganini ham o‘z-o‘zidan ko‘rsatmaydi. Biesta (2009) ogohlantirganidek, o‘lchash oson bo‘lgan ko‘rsatkich ta’lim maqsadining o‘rnini egallab olishi mumkin: daraja ulushining o‘sishi tarbiyaviy maqsadga erishilganining isboti deb qabul qilinsa, tarbiya mazmuni

haqidagi savollar e’tibordan chetda qoladi. Shu bois maqolada nazariy model, mavjud tajribaning jamlangan natijasi va kelgusi baholash dasturi uch alohida dalil darajasi sifatida qaraladi.

Tadqiqotning maqsadi — to‘rt mezonli modelni nazariy asoslash, uning asosida o‘tkazilgan tajriba-sinov natijalarini tartibli va klasterlanishga sezgir statistik usullar bilan baholash hamda olingan dalillarning chegaralarini aniqlash. Quyidagi tadqiqot savollari qo‘yildi:

1) Boshlang‘ich va yakuniy bosqichlarda TG va NGning umumiy kompetensiya taqsimotlari qanday farqlanadi?
2) Kuzatilgan siljish qaysi darajalar o‘rtasidagi ulushlar o‘zgarishi hisobiga yuzaga kelgan va u hududlar bo‘yicha qanchalik bir xil?
3) Guruhlararo farq maktab va sinf ichidagi o‘xshashlik (klasterlanish) to‘g‘risidagi taxminlarga qanchalik sezgir?
4) Bilish, his-tuyg‘u, xulq-atvor va amaliy faoliyatni alohida baholash uchun qanday metodik talablar zarur?

Tajriba-sinov natijalari guruh darajasida, uch darajali taqsimot ko‘rinishida qayd etilgani sababli tahlil guruhlarning umumiy taqsimotlarini taqqoslash bilan cheklanadi. Alohida mezonlar, yillik o‘sish va jins bo‘yicha gipotezalar tekshirilmaydi: bunday tahlil individual darajadagi ma’lumotlarni talab qiladi.

2. Nazariy asos va adabiyotlar tahlili

2.1. Vatanparvarlik: sodiqlik va tanqidiy mas’uliyat o‘rtasida

Fuqarolik ta’limiga oid xalqaro tadqiqotlarda vatanparvarlik mustaqil maqsad sifatida emas, fuqarolik o‘zligining qatlamlaridan biri sifatida o‘rganiladi. Banks (2008) madaniy, milliy va global identifikatsiyani bir-birini istisno etmaydigan, balki muvozanatda rivojlanadigan qatlamlar deb biladi: milliy o‘zlik madaniy ildizlarni inkor etmagan va global mas’uliyat bilan uyg‘unlashgan holdagina barqaror bo‘ladi. UNESCO (2015) ushbu muvozanatni o‘quv natijalari tiliga — kognitiv, ijtimoiy-emotsional va xulqiy natijalarga ko‘chiradi. Kerr (1999) bir qator mamlakatlar tajribasini qiyoslab, fuqarolik ta’limi mazmuni milliy tarix va siyosiy madaniyatga chuqur bog‘liq ekanini ko‘rsatgan.

Bu bog‘liqlik vatanparvarlik tarbiyasini universal shablon asosida loyihalash imkonini cheklaydi.

Nussbaum (2010) tanqidiy fikrlash va empatiyani rivojlantirmaydigan fuqarolik ta’limini demokratik jamiyat uchun xavfli deb hisoblaydi. Bu tanqid vatanparvarlik tarbiyasiga bevosita taalluqli: tuyg‘uga tayanib, tafakkurni chetlab o‘tadigan dastur ko‘r-ko‘rona sodiqlikni mustahkamlashi mumkin (Schatz va boshq., 1999). Ushbu tadqiqotdagi model affektiv komponentni bilish va amaliy komponentlardan ajratmaydi. His-tuyg‘u bilim bilan asoslangan, xulqda sinovdan o‘tgan va jamoa uchun foydali faoliyatda mustahkamlangan holdagina konstruktiv yo‘nalish kasb etadi.

2.2. Kompetensiyaviy yondashuv: konseptual iqtibos va baholashdagi kechikish

Kompetensiyaviy yondashuv ta’lim natijasini real vaziyatdagi harakatga tayyorlik bilan bog‘laydi (Zimnyaya, 2003). Vatanparvarlikka tatbiq etilganda u o‘quvchidan tarixiy faktlarni bilishdan tashqari, ularni hayotiy vaziyatda asosli qaror va mas’uliyatli xulqqa aylantira olishni talab qiladi. Postsovet makonida bu yondashuv xalqaro ta’lim siyosati diskursidan o‘zlashtirilgan atama sifatida tarqaldi. Steiner-Khamsi (2004) ta’lim siyosatidagi bunday iqtiboslarni tahlil qilib, olingan g‘oya mahalliy institutlarda qayta talqin qilinishini va ko‘pincha avvalgi amaliyotning yangi nom ostida davom etishiga xizmat qilishini ko‘rsatadi. Kompetensiya tushunchasining me’yoriy hujjatlarga kiritilishi baholash amaliyotini avtomatik ravishda o‘zgartirmadi.

Vatanparvarlikni o‘lchash hamon bilim testlari yoki o‘z-o‘zini baholash so‘rovnomalari bilan cheklanib qolmoqda.

Xalqaro qiyosiy tadqiqotlar bunday yondashuvning torligini ko‘rsatadi. IEA tashkilotining yigirma sakkiz mamlakatda o‘tkazgan fuqarolik ta’limi tadqiqoti (Torney-Purta va boshq., 2001) va uning davomi bo‘lgan ICCS 2016 (Schulz va boshq., 2018) natijalariga ko‘ra, fuqarolik bilimi, munosabatlar va kutilayotgan ijtimoiy ishtirok o‘zaro bog‘langan, ammo mustaqil konstruktlardir. Kahne va Sporte (2008) jamoat xizmatiga asoslangan o‘qitish va ijtimoiy muammolarni muhokama qilish kabi maktabdagi fuqarolik ta’limi imkoniyatlari o‘quvchilarning fuqarolik ishtirokiga sodiqligi bilan barqaror bog‘liqligini aniqlagan. Demak, bitta ko‘rsatkichga tayangan baholash kompetensiyaning faqat bir qatlamini qayd etadi, amaliy faoliyat esa alohida o‘lchovni talab qiladi.

2.3. Mahalliy metodologik meros va kvazieksperiment chegaralari

Sovet va postsovet pedagogikasida keng tarqalgan bosqichli pedagogik tajriba an’anasi boshlang‘ich holatni aniqlash, shakllantirish va yakuniy baholashni yagona sikl sifatida birlashtiradi (Skatkin, 1986). Bu tuzilma guruhlar tarkibi, baholash vositalari va tahlil birligi aniq bayon etilgandagina tekshirilishi mumkin bo‘lgan dalil beradi. Xalqaro metodologik adabiyotda u notengdosh nazorat guruhli kvazieksperiment sifatida tasniflanadi; bunday dizaynda tanlanish, tarixiy hodisalar, o‘lchov vositasining o‘zgarishi va regressiya effekti kabi ichki validlikka tahdidlar maxsus nazoratsiz istisno etilmaydi (Shadish va boshq., 2002).

Mazkur ish ana shu talablarga tayanib, tajriba-sinovning mutlaq chastotalarini bir xil asosda tahlil qiladi va nazariy model bilan olingan umumiy natija o‘rtasidagi dalil chegarasini aniqlashtiradi.

3. Metodologiya

3.1. Dizayn va ma’lumotlar manbai

Tadqiqot nazariy modellashtirish va kvazieksperimental tajriba-sinovni birlashtiradi. Tajriba-sinov 2022–2025-yillarda uch bosqichda o‘tkazildi. Tanlanmaga Toshkent shahri Olmazor tumanidagi 29-, 191-, 196- va 243-son, Farg‘ona viloyati Bag‘dod tumanidagi 17- va 35-son hamda Navoiy shahridagi 5-, 6-, 7- va 17-son umumiy o‘rta ta’lim maktablari kirgan (1-jadval). Jami 1192 nafar o‘quvchidan 594 nafari TGga, 598 nafari NGga biriktirilgan. Sinflar guruhlarga og‘zaki va yozma topshiriqlar, testlar hamda suhbat natijalari asosida ajratilgan; tasodifiy taqsimlash qayd etilmagan.

1-jadval

Tadqiqot dizayni va empirik baza

Komponent	Tavsif
Dizayn	Notengdosh nazorat guruhli kvazieksperiment (dastlabki va yakuniy o‘lchov)
Aniqlovchi bosqich	2022–2023-o‘quv yili: boshlang‘ich diagnostika
Shakllantiruvchi bosqich	2023–2024-o‘quv yili: TGda to‘rt mezonli model asosidagi tarbiyaviy ish
Yakunlovchi bosqich	2024–2025-o‘quv yili: yakuniy diagnostika va guruhlarni taqqoslash
Toshkent shahri, Olmazor tumani	29-, 191-, 196-, 243-son maktablar; TG n = 189
Farg‘ona viloyati, Bag‘dod tumani	17-, 35-son maktablar; TG n = 201
Navoiy shahri	5-, 6-, 7-, 17-son maktablar; TG n = 204
Jami	10 maktab; N = 1192 (TG = 594; NG = 598)
Guruhlarga ajratish	Og‘zaki va yozma topshiriqlar, testlar, suhbat; tasodifiy taqsimlash qayd etilmagan
Natija o‘zgaruvchisi	Vatanparvarlik kompetensiyasining uch darajasi: yuqori, o‘rta, quyi
Natijalarni qayd etish	Har bir bosqichda daraja chastotalari: TG uchun guruh va hudud kesimida, NG uchun guruh darajasida

Izoh. NG natijalari hududlar kesimida alohida qayd etilmagan.

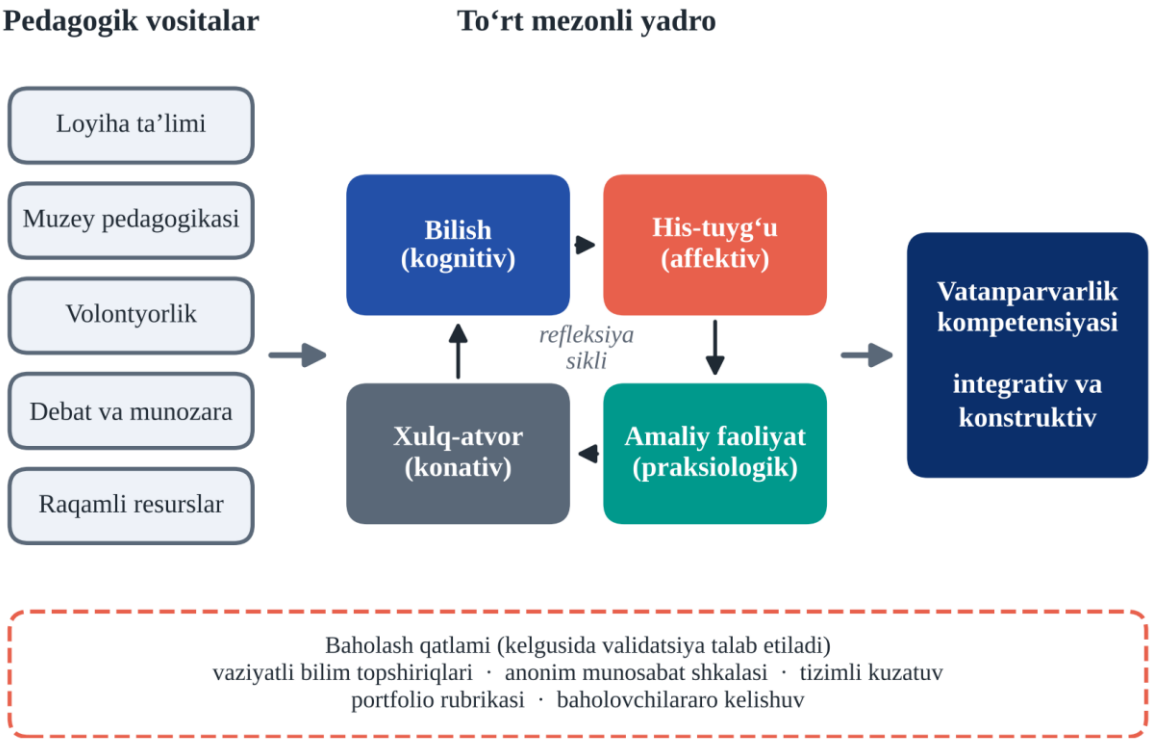
Tahlil birligi — har bir guruh va bosqichdagi daraja chastotalari. Ikkala o‘lchov bosqichida maxrajlar TG uchun 594, NG uchun 598 nafarni tashkil etadi. O‘quvchilarning individual identifikatorlari bosqichlar o‘rtasida bog‘lanmagani sababli bu raqamlar guruh hajmlarini ifodalaydi: ular individual kuzatuvlarning to‘liqligini yoki tanlanmadan chiqish bo‘lmaganini o‘z-o‘zidan tasdiqlamaydi.

3.2. To‘rt mezonli model

Model bilimni shaxsiy munosabat, kundalik xulq va ijtimoiy foydali faoliyat bilan bog‘laydi (1-rasm). Bilish mezoni Vatan tarixi, davlat ramzlari va fuqarolik burchini tushuntira olishni; his-tuyg‘u mezoni daxldorlik, hurmat va empatiyani; xulq-atvor mezoni kundalik qoidalarga mas’uliyatli munosabatni; amaliy faoliyat mezoni jamoa manfaatiga xizmat qiluvchi tashabbusni qamrab oladi. Mezonlar refleksiya sikli orqali o‘zaro bog‘langan: bilim munosabatni asoslaydi, munosabat xulqiy tanlovda sinovdan o‘tadi, xulq amaliy tashabbusda barqarorlashadi va yangi bilim ehtiyojini tug‘diradi. Mezonlar bir-birini to‘ldiradi, biroq ularning yagona konstruktning mustaqil statistik omillari ekanligi ushbu maqolada tekshirilmagan.

1-rasm

Vatanparvarlik kompetensiyasining to‘rt mezonli konseptual modeli



Izoh. Muallif ishlanmasi. Strelkalar mezonlar o‘rtasidagi nazariy bog‘lanishni ko‘rsatadi; ular empirik tasdiqlangan sababiy yo‘llar emas. Pastki qatlamdagi vositalar kelgusi baholash dasturi uchun taklif etiladi.

2-jadval

Model mezonlari va istiqboldagi baholash talablari

Mezon	Kuzatiladigan natija	Mos baholash usuli
Bilish	Tushunchani izohlash va yangi vaziyatga tatbiq etish	Yoshga mos bilim va vaziyatli topshiriqlar
His-tuyg‘u	Daxldorlik, empatiya va qadriyatli munosabat	Anonim munosabat shkalasi va refleksiya
Xulq-atvor	Qoidalarga rioya va mas’uliyatli tanlov	Bir necha vaziyatdagi tizimli kuzatuv
Amaliy faoliyat	Tashabbus, hamkorlik va loyiha natijasi	Portfolio va oldindan belgilangan rubrika

Izoh. Muallifning nazariy sxemasi. Jadvaldagi vositalar psixometrik sinovdan o‘tgan tayyor diagnostik to‘plam sifatida taqdim etilmaydi.

Loyiha ta’limi, muzey pedagogikasi, volontyorlik, debat va raqamli resurslar modelni amaliyotga ko‘chirishning asosiy shakllari sifatida qo‘llanildi. Masalan, «Mening mahallam tarixi» loyihasi tarixiy manbani tekshirishni mahalliy xotira bilan, munozara esa qadriyatni asoslashni tinglash madaniyati bilan bog‘laydi. Mashg‘ulotlarning chastotasi va davomiyligi standartlashtirilgan bajarilish (fidelity) protokoli bilan qayd etilmagan; shu bois intervensiya intensivligi tahlilga o‘zgaruvchi sifatida kiritilmadi va kelgusi tadqiqotda alohida hujjatlashtirilishi lozim.

3.3. Tahlil strategiyasi

Ulushlar har bir katakdagi o‘quvchilar sonini tegishli guruh hajmiga bo‘lish yo‘li bilan, o‘zgarishlar esa yakuniy ulushdan boshlang‘ich ulushni ayirish yo‘li bilan foiz punktida (f.p.) hisoblandi. Ulushlar uchun 95 foizlik ishonch oraliqlari (IO) Wilson (1927) usulida aniqlandi. Boshlang‘ich va yakuniy bosqichlardagi 2 × 3 taqsimotlar Pirson χ^2 mezoni bilan alohida taqqoslandi, bog‘lanish kuchi Kramer $V = \sqrt{(\chi^2/N)}$ orqali baholandi. Darajalar tartiblangani sababli tartibli farqlarga sezgirroq bo‘lgan chiziqli-chiziqli bog‘lanish statistikasi $M^2 = (N - 1)r^2$ ham hisoblandi (Agresti, 2010). Tartibli ta’sir hajmi sifatida Cliff δ olindi: u tasodifiy tanlangan TG o‘quvchisining darajasi NG o‘quvchisinikidan yuqori bo‘lish ehtimoli bilan teskari holat ehtimoli o‘rtasidagi farqni ifodalaydi (Cliff, 1993). δ uchun 0,147; 0,33 va 0,474 chegaralari mos ravishda kichik, o‘rta va katta ta’sir sifatida talqin qilindi (Romano va boshq., 2006). Amaliy jihatdan eng sezgir natija — quyi darajada qolish ehtimoli — shanslar nisbati (OR) va uning logit asosidagi 95 foizlik IO bilan ifodalandi.

Oddiy χ^2 o‘quvchilarni mustaqil kuzatuv birliklari deb qabul qiladi. Maktab va sinf ichidagi o‘xshashlikni hisobga olish uchun dizayn samarasi DEFF = 1 + (*m* − 1)ρ (Kish, 1965) asosida birinchi tartibli tuzatish qo‘llandi: $\chi^2_{tuz} = \chi^2/\text{DEFF}$ (Rao va Scott, 1984). Bu yerda *m* — klasterning o‘rtacha hajmi, ρ — klaster ichidagi korrelyatsiya koeffitsiyenti (ICC). Natijalar maktablar kesimida alohida qayd etilmagani uchun ρ noma’lum; shu sababli ikki stsenariy ko‘rib chiqildi: sinf darajasidagi klasterlanish (*m* = 30, odatiy sinf hajmiga yaqin taxmin) va maktab darajasidagi klasterlanish (*m* = 1192/10 ≈ 119,2). Har bir stsenariy uchun natija *p* = 0,05 va *p* = 0,001 chegaralarida ahamiyatini yo‘qotadigan kritik ρ* qiymati topildi.

TG ichida hududlar bo‘yicha taqsimotlarning bir jinsliligi 3 × 3 jadvallar uchun $\chi^2(4)$ mezoni bilan tekshirildi. Individual o‘tish matritsasi bo‘lmagani sababli juftlangan o‘lchovlar testi, individual o‘sish modellari va Kronbax α hisoblanmadi. Bir guruhning boshlang‘ich va yakuniy natijalari asosan aynan bir o‘quvchilarga tegishli bo‘lishi mumkinligi uchun ular mustaqil tanlanmalar sifatida birlashtirilmadi. Jadvallardagi foizlar bir o‘nlik xonagacha, matndagi o‘zgarishlar esa yaxlitlanmagan chastotalardan ikki o‘nlik xonagacha keltirildi. Hisob-kitoblar Python 3 muhitida SciPy kutubxonasi yordamida bajarildi.

3.4. Etik jihatlar

Diagnostika tadbirlari maktablarning o‘quv-tarbiya jarayoni doirasida o‘tkazildi. Natijalar faqat guruhlangan, shaxsni aniqlash imkonini bermaydigan shaklda qayta ishlandi; maqolada biror o‘quvchining shaxsiy ma’lumoti keltirilmaydi.

4. Natijalar

4.1. Boshlang‘ich ekvivalentlik va yakuniy taqsimotlar

Boshlang‘ich bosqichda TG va NG taqsimotlari deyarli ustma-ust tushadi (3-jadval, 2-rasm): har ikki guruhda o‘quvchilarning 57–58 foizi quyi, 31–32 foizi o‘rta va 10–11 foizi yuqori darajada bo‘lgan. Farq statistik jihatdan ahamiyatsiz: $\chi^2(2, N = 1192) = 0{,}403$; $p = 0{,}818$; Kramer $V = 0{,}018$. Tartibli ko‘rsatkichlar ham shu manzarani beradi: $M^2(1) = 0{,}015$; $p = 0{,}902$; $\delta = -0{,}007$. Bu natija uch darajali ko‘rsatkich bo‘yicha guruhlar mos kelishini bildiradi, ammo ularning barcha boshlang‘ich xususiyatlari — motivatsiya, oila muhiti, o‘qituvchi tajribasi — teng ekanini isbotlamaydi.

3-jadval

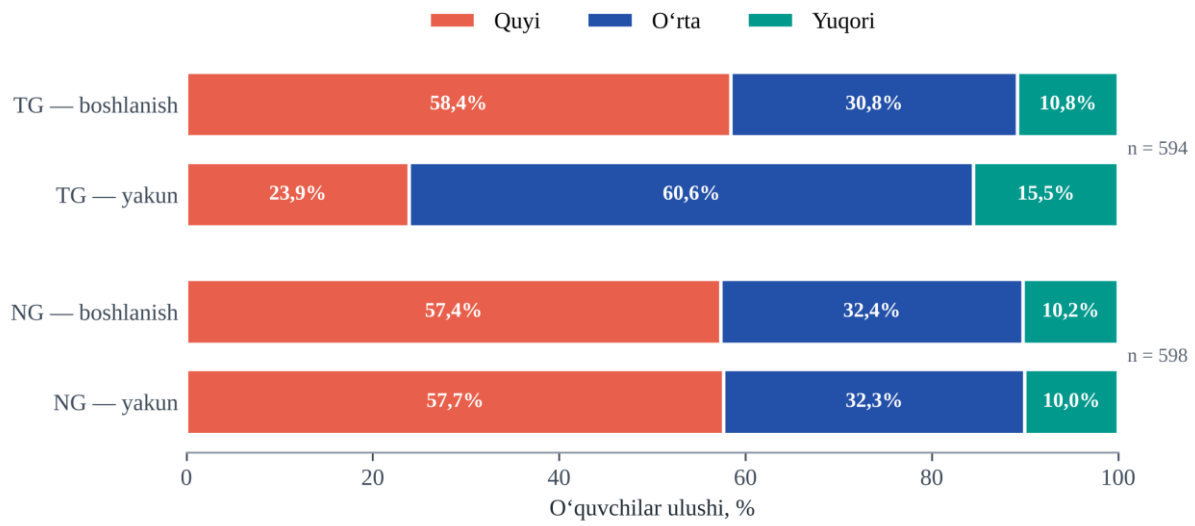
Vatanparvarlik kompetensiyasi darajalarining guruh va bosqichlar bo‘yicha taqsimoti

Guruh va bosqich	Yuqori, *n* (%) [95% IO]	O‘rta, *n* (%) [95% IO]	Quyi, *n* (%) [95% IO]
TG — boshlanish (*n* = 594)	64 (10,8) [8,5; 13,5]	183 (30,8) [27,2; 34,6]	347 (58,4) [54,4; 62,3]
TG — yakun (*n* = 594)	92 (15,5) [12,8; 18,6]	360 (60,6) [56,6; 64,5]	142 (23,9) [20,7; 27,5]
NG — boshlanish (*n* = 598)	61 (10,2) [8,0; 12,9]	194 (32,4) [28,8; 36,3]	343 (57,4) [53,4; 61,3]
NG — yakun (*n* = 598)	60 (10,0) [7,9; 12,7]	193 (32,3) [28,7; 36,1]	345 (57,7) [53,7; 61,6]

Izoh. Tajriba-sinov ma’lumotlari asosida muallif hisob-kitobi. IO — Wilson usulidagi 95 foizlik ishonch oralig‘i.

2-rasm

Kompetensiya darajalarining guruh va bosqichlar bo‘yicha ulushlari



Izoh. TG — tajriba guruhi; NG — nazorat guruhi. Segmentlar ichidagi raqamlar guruh hajmiga nisbatan foiz ulushlaridir.

Yakuniy bosqichda manzara keskin o‘zgaradi. TGda quyi daraja ulushi 23,9 foizga tushgan [20,7; 27,5], NGda esa 57,7 foiz atrofida qolgan [53,7; 61,6]; ishonch oraliqlari bir-biridan ancha uzoqda joylashgan. Guruhlararo farq: $\chi^2(2, N = 1192) = 141{,}775$; $p < 0{,}001$; Kramer $V = 0{,}345$. Tartibli tahlil siljishning yo‘nalishli ekanini tasdiqlaydi: $M^2(1) = 100{,}307$; $p < 0{,}001$. Cliff $\delta = 0{,}327$ qiymati o‘rta ta’sir chegarasining bevosita ostida joylashgan; boshqacha aytganda, tasodifiy tanlangan TG o‘quvchisining darajasi NG o‘quvchisinikidan yuqori bo‘lish ehtimoli (tenglik holatlari yarmi bilan hisoblanganda) 0,664 ga teng. TG o‘quvchisining yakuniy bosqichda quyi darajada qolish shansi NGdagiga nisbatan qariyb to‘rt baravar past: OR = 0,23 [0,18; 0,30], holbuki boshlang‘ich bosqichda bu ko‘rsatkich 1,04 [0,83; 1,31] bo‘lgan (4-jadval).

4-jadval

TG va NG taqqoslanishining asosiy statistik ko‘rsatkichlari

Ko‘rsatkich	Boshlang‘ich bosqich	Yakuniy bosqich
Pirson $\chi^2(2)$	0,403	141,775
p	0,818	< 0,001
Kramer V	0,018	0,345
Chiziqli-chiziqli bog‘lanish $M^2(1)$	0,015	100,307
p	0,902	< 0,001
Cliff δ (TG > NG)	−0,007	0,327
Ustunlik ehtimoli, P(TG > NG)	0,496	0,664
OR, quyi daraja (TG/NG) [95% IO]	1,04 [0,83; 1,31]	0,23 [0,18; 0,30]

Izoh. Barcha testlarda $N = 1192$. Darajalar quyi < o‘rta < yuqori tartibida kodlangan; δ > 0 TG foydasiga farqni bildiradi. Hisob-kitoblar kuzatuvlar mustaqilligini taxmin qiladi; klasterlanishga tuzatish 4.4-bo‘limda keltirilgan.

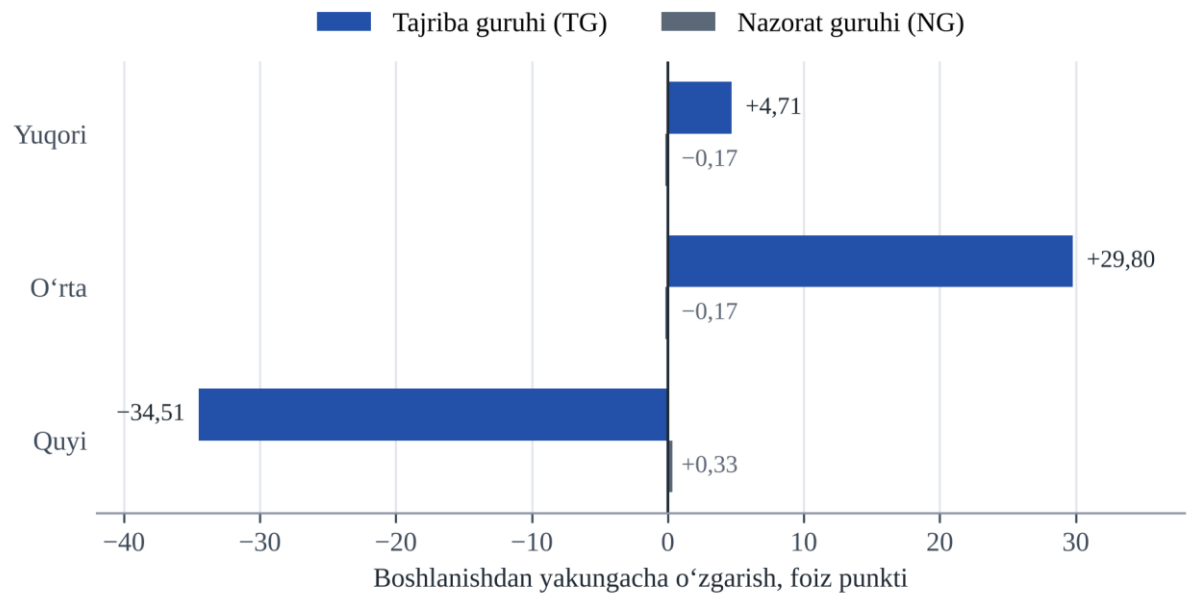
Bu ko‘rsatkichlarning barchasi o‘quvchilarni mustaqil birliklar sifatida qabul qiladi. Shu bois p-qiymatlar 4.4-bo‘limdagi sezgirlik tahlilisiz yakuniy dalil sifatida talqin qilinmaydi.

4.2. Siljishning tarkibi

TGda quyi daraja ulushi 34,51 f.p. ga qisqargan, o‘rta daraja ulushi 29,80 f.p. ga, yuqori daraja ulushi esa atigi 4,71 f.p. ga oshgan (3-rasm). NGda tegishli o‘zgarishlar +0,33; −0,17 va −0,17 f.p. ni tashkil etadi, ya’ni bir-ikki o‘quvchi farqidan oshmaydi. Quyi daraja bo‘yicha guruhlar o‘zgarishlarining ayirmasi −34,85 f.p. ga teng. Mutlaq sonlarda TGning quyi darajasidagi o‘quvchilar soni 205 nafarga kamaygan, o‘rta darajadagilar 177 nafarga, yuqori darajadagilar 28 nafarga ko‘paygan. Siljishning asosiy massasi, shunday qilib, yuqori darajaning kengayishida emas, quyi darajaning qisqarishi va o‘rta darajaning qariyb ikki baravar ortishida namoyon bo‘ladi.

3-rasm

Boshlanishdan yakungacha darajalar ulushining o‘zgarishi (foiz punkti)



Izoh. Qiymatlar yaxlitlanmagan chastotalardan hisoblangan. NGdagi o‘zgarishlar ±0,33 f.p. dan oshmaydi.

Ushbu ayirma nazorat qilinmagan omillardan xoli sababiy samara sifatida talqin qilinmaydi. Jamlangan taqsimot individual o‘tish matritsasi emas: quyi darajadagi 205 nafarlik kamayish aynan shu 205 o‘quvchi yuqoriroq darajaga o‘tganini tasdiqlamaydi. Bunday xulosa individual identifikatorlar, darajalararo o‘tishlar va tanlanmadan chiqish to‘g‘risidagi ma’lumotlarni talab qiladi. Shu sababli natijalar «guruhda o‘rta va yuqori daraja ulushi oshgan» shaklida ifodalanadi.

4.3. Hududiy tavsif

Quyi daraja ulushi uchala hududdagi TGda ham kamaygan: Toshkent shahrida 31,22, Farg‘ona viloyatida 35,82, Navoiy shahrida 36,27 f.p. ga (5-jadval, 4-rasm). O‘rta daraja ulushining o‘sishi 28,57–30,85 f.p. oralig‘ida bir-biriga juda yaqin, yuqori daraja bo‘yicha esa tafovut kattaroq: Toshkentda +2,65, Farg‘onada +4,98, Navoiyda +6,37 f.p. Boshlang‘ich bosqichda yuqori daraja ulushi eng katta bo‘lgan Toshkent (12,7 foiz) eng kichik o‘sishni, eng kichik boshlang‘ich ulushga ega Navoiy (9,3 foiz) esa eng katta o‘sishni ko‘rsatgan. Natijada yakuniy ulushlar 15,3–15,7 foiz oralig‘ida tenglashgan.

5-jadval

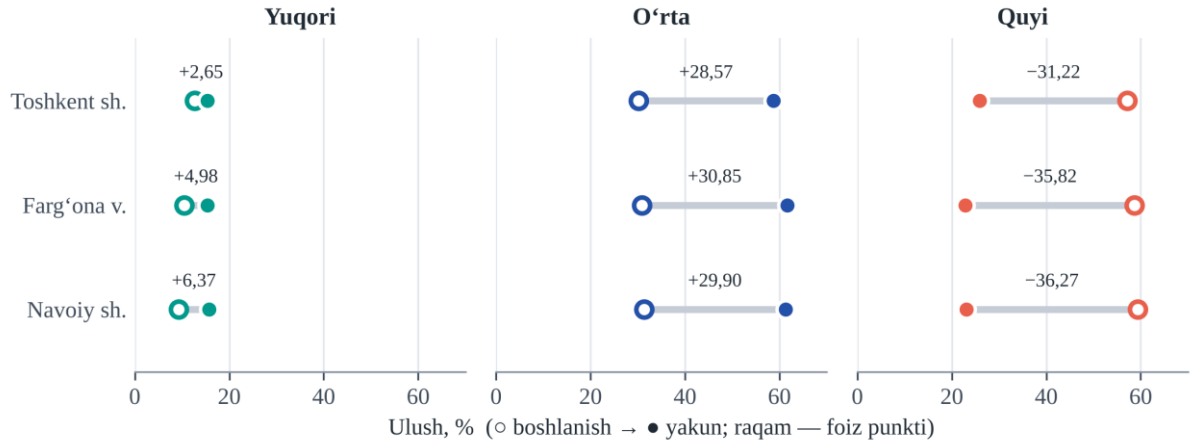
Tajriba guruhida darajalar taqsimotining hududlar bo‘yicha o‘zgarishi

Hudud	Bosqich	Yuqori, *n* (%)	O‘rta, *n* (%)	Quyi, *n* (%)
Toshkent shahri (*n* = 189)	Boshlanish	24 (12,7)	57 (30,2)	108 (57,1)
	Yakun	29 (15,3)	111 (58,7)	49 (25,9)
	Δ, f.p.	+2,65	+28,57	−31,22
Farg‘ona viloyati (*n* = 201)	Boshlanish	21 (10,4)	62 (30,8)	118 (58,7)
	Yakun	31 (15,4)	124 (61,7)	46 (22,9)
	Δ, f.p.	+4,98	+30,85	−35,82
Navoiy shahri (*n* = 204)	Boshlanish	19 (9,3)	64 (31,4)	121 (59,3)
	Yakun	32 (15,7)	125 (61,3)	47 (23,0)
	Δ, f.p.	+6,37	+29,90	−36,27

Izoh. Tajriba-sinov ma’lumotlari. Sonlar o‘quvchilar chastotasidir; Δ yaxlitlanmagan ulushlardan hisoblangan. Hududlararo bir jinslilik: boshlanishda $\chi^2(4, N = 594) = 1{,}204$; $p = 0{,}877$; yakunda $\chi^2(4, N = 594) = 0{,}646$; $p = 0{,}958$.

4-rasm

Tajriba guruhida darajalar ulushining hududlar bo‘yicha dinamikasi



Izoh. Bo‘sh doira — boshlang‘ich bosqich, to‘liq doira — yakuniy bosqich; raqamlar foiz punktidagi o‘zgarishni ko‘rsatadi.

Hududlararo farqlar statistik jihatdan ahamiyatsiz: boshlang‘ich bosqichda $\chi^2(4, N = 594) = 1{,}204$; $p = 0{,}877$; $V = 0{,}032$, yakuniy bosqichda $\chi^2(4, N = 594) = 0{,}646$; $p = 0{,}958$; $V = 0{,}023$. TGdagi siljish bitta hudud bilan cheklanmagan va poytaxt, vodiy tumani hamda sanoat shahri kontekstlarida bir xil yo‘nalishda kuzatilgan. NG natijalari hududlar kesimida qayd etilmagani bois hudud × guruh o‘zaro ta’siri tekshirilmadi. Hududlar samaradorligini qat’iy tartiblash uchun maktab tarkibi, boshlang‘ich sharoit va intervensiya intensivligini hisobga olish zarur.

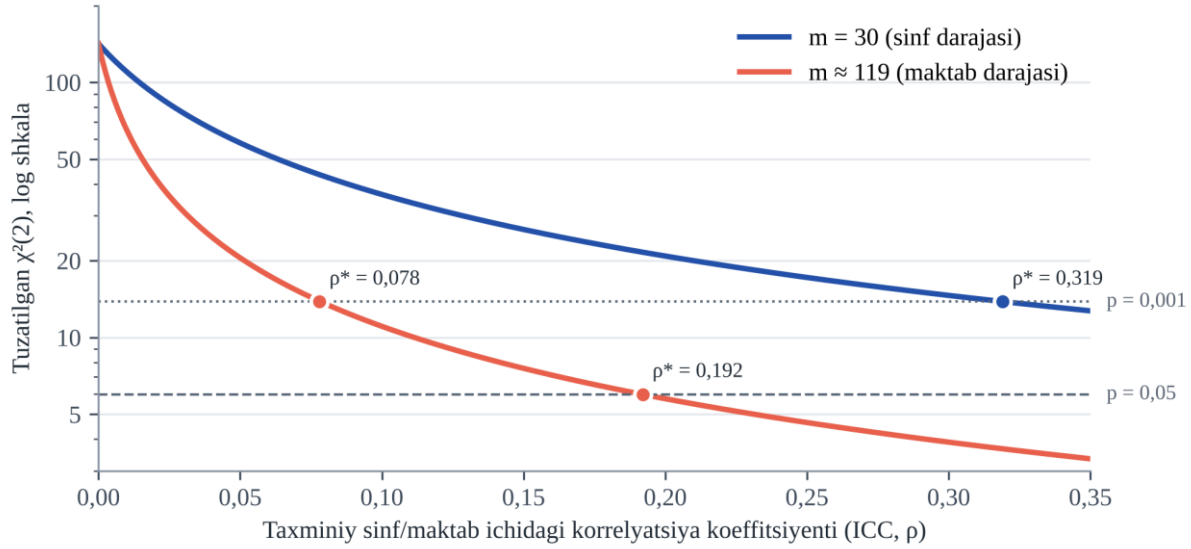
4.4. Klasterlanishga sezgirlik

Sezgirlik tahlilining natijasi tahlil birligi tanloviga bog‘liq (5-rasm). Agar o‘xshashlikning asosiy manbai sinf bo‘lsa ($m = 30$), yakuniy farq $\rho = 0{,}319$ gacha $p < 0{,}001$ darajasida saqlanadi;

ρ = 0,10 bo‘lganda tuzatilgan $\chi^2(2) = 36,35$. Klasterlanish maktab darajasida kuchli bo‘lsa ($m \approx 119$), xulosa ancha mo‘rtlashadi: $p < 0,001$ chegarasi ρ* = 0,078 da, $p < 0,05$ chegarasi esa ρ* = 0,192 da yo‘qoladi. ρ = 0,10 da tuzatilgan $\chi^2(2) = 11,08$ ($p = 0,004$), ρ = 0,20 da esa 5,76 ($p = 0,056$).

5-rasm

Yakuniy guruhlararo farqning klaster ichidagi korrelyatsiyaga sezgirligi



Izoh. Tuzatilgan $\chi^2 = 141,775 / [1 + (m - 1)\rho]$. ρ* — farq tegishli ahamiyatlilik chegarasini yo‘qotadigan kritik ICC. *m* qiymatlari taxminiydir.

Hedges va Hedberg (2007) akademik o‘zlashtirish ko‘rsatkichlari uchun maktab darajasidagi ICC ko‘pincha 0,10–0,25 oralig‘ida bo‘lishini qayd etgan; munosabat va xulq ko‘rsatkichlari bo‘yicha bunday me’yoriy ma’lumotlar kamroq. Demak, jamlangan natijaning statistik ishonchliligi maktab omilining kuchiga bog‘liq va uni faqat klasterli dizaynda aniq baholash mumkin.

5. Muhokama

Natijalar umumiy kompetensiya darajasida kompleks tarbiya modeli bilan taqsimotning ijobiy siljishi o‘rtasidagi bog‘liqlikni ko‘rsatadi. Siljishning tuzilishi esa alohida izoh talab qiladi. Intervensiya o‘quvchilarning katta qismini minimal chegaradan o‘tkazgan, ammo yuqori darajaga ko‘tarilganlar ulushi kichik. Bunday «chegara effekti»ni modelning ichki mantig‘i bilan izohlash mumkin: yuqori daraja mustaqil fuqarolik tashabbusini, ya’ni amaliy faoliyat mezonining to‘liq namoyon bo‘lishini talab qiladi, bu esa bir o‘quv yilidan iborat shakllantiruvchi bosqichdan uzoqroq vaqtni taqozo etadi. Kolb (1984) tajribaviy o‘rganishni aniq tajriba, refleksiv kuzatuv, mavhum konseptuallashtirish va faol eksperimentdan iborat sikl sifatida tasvirlaydi; bir yillik dastur ko‘pchilik o‘quvchilarni dastlabki sikllardan o‘tkazib, barqaror tashabbuskorlikka olib chiqmasligi mumkin. Bu gipoteza individual traektoriyalarsiz tasdiqlanmaydi.

Ikkinchi talqin ehtiyotkorlikni talab qiladi. «Yuqori daraja» ulushining ortishi konstruktiv vatanparvarlik kuchayganini ham, tanqidsiz sodiqlik kuchayganini ham anglatishi mumkin.

Schatz va boshqalar (1999) bu ikki shakl turli psixologik korrelyatlarga ega ekanini ko‘rsatgan, Westheimer (2007) esa maktabdagi vatanparvarlik tarbiyasini avtoritar va demokratik qutblar o‘rtasidagi tanlov sifatida tahlil qiladi. Ushbu tadqiqot ma’lumotlari bu ikki shaklni farqlamaydi. Postsotsialistik institutsional moslashuv nuqtai nazaridan bu farq hal qiluvchi ahamiyatga ega. Agar yangi model avvalgi ramziy-deklarativ tarbiyani yangi atamalar bilan qayta

qadoqlasa, Steiner-Khamsi (2004) tasvirlagan siyosiy iqtibosning odatiy natijasi — shakl o‘zgarib, mazmun saqlanib qolishi — takrorlanadi. Agar model haqiqatan bilim, munosabat, xulq va amaliy faoliyatni bog‘lasa, konstruktiv vatanparvarlik ko‘rsatkichlari mustaqil o‘lchovda ham o‘sishi kerak. Bu farqni aniqlash keyingi tadqiqotning markaziy vazifasidir.

To‘rt mezonli modelning kuchi diagnostik savollarni ajratishida: o‘quvchi nimani biladi, qanday munosabat bildiradi, kundalik vaziyatda qanday tanlov qiladi va amalda qanday ishtirok etadi? Umumiy daraja jadvali bu savollarning birortasiga alohida javob bermaydi. Keyingi bosqichda anonim munosabat shkalasi, vaziyatli bilim topshiriqlari va mustaqil kuzatuv rubrikalari qo‘llanishi lozim. Test topshiriqlari intervensiyada o‘rgatilgan iboralarni takrorlash bilan cheklanmasligi kerak: Cheung va Slavin (2016) tadqiqotchi ishlab chiqqan o‘lchov vositalari mustaqil vositalarga nisbatan taxminan ikki baravar katta ta’sir hajmini berishini aniqlagan. Baholovchining guruh tarkibidan xabardorligi kuzatuv va portfolio natijalariga ta’sir qilishi mumkin, shu sababli mezonlar oldindan belgilanishi va baholovchilararo kelishuv tekshirilishi zarur.

Klasterlanish texnik tafsilot emas, xulosaning o‘zagiga taalluqli masala. Sezgirlik tahlili ko‘rsatganidek, asosiy dispersiya maktablar o‘rtasida bo‘lsa, dalil amalda o‘nta birlikka tayanadi. TG va NG sinflari bir maktab ichida bloklanganda maktab omili qisman muvozanatlashadi va sinf darajasidagi klasterlanish birinchi o‘ringa chiqadi; guruhlar turli maktablarga to‘g‘ri kelganda esa maktab va intervensiya ta’sirini bir-biridan ajratib bo‘lmaydi. Natijalar maktablar kesimida alohida qayd etilmagani uchun ushbu tadqiqotda bu ikki holatni statistik jihatdan farqlash imkoni bo‘lmadi. Keyingi tadqiqot maktab yoki sinf darajasida randomizatsiyalangan va ko‘p darajali modellar bilan tahlil qilinadigan dizaynda o‘tkazilishi kerak (Hedges va Hedberg, 2007).

Hududiy natijalarning bir jinsliligi modelni turli ijtimoiy kontekstlarga ko‘chirish mumkinligiga dastlabki ishora beradi. Biroq barcha hududlarda intervensiya bitta tadqiqot jamoasi tomonidan muvofiqlashtirilgan, ya’ni kontekst omili hali amalga oshiruvchi omildan ajratilmagan.

5.1. Tadqiqot cheklovlari

Tajriba-sinov protokolida o‘quvchilarning jinsi, aniq yoshi, sinfi, individual o‘tishlari va uzoq muddatli natijalari qayd etilmagan. Shu sababli jins bo‘yicha taqqoslash, 0–100 ballik integral indeks, yillik traektoriya va alohida mezonlar uchun standartlashtirilgan samara hisoblanmadi. Guruhlar tasodifiy ajratilmagan: natijalarga tanlanish, o‘qituvchi shaxsi, qo‘shimcha o‘quv vaqti va maktab muhiti ta’sir qilgan bo‘lishi mumkin (Shadish va boshq., 2002). Konstruktiv vatanparvarlik va ko‘r-ko‘rona sodiqlik alohida o‘lchanmagan. Sezgirlik tahlilidagi *m* va ρ qiymatlari taxminiy bo‘lib, haqiqiy klaster tuzilmasi o‘rnini bosmaydi. Nihoyat, intervensiya dasturini ishlab chiqqan muallif uning natijalarini ham baholagan; ishlab chiquvchi-tadqiqotchi pozitsiyasi ta’sir hajmini oshirishi mumkinligi sababli natijalarni mustaqil jamoa takrorlashi maqsadga muvofiq.

6. Xulosa va amaliy tavsiyalar

Vatanparvarlik kompetensiyasining to‘rt mezonli modeli bilim, munosabat, xulq va amaliy faoliyatni yagona pedagogik sikl sifatida rejalashtirish imkonini beradi. Tajriba-sinov natijalari TGda quyi darajaning keskin qisqarishi va o‘rta darajaning qariyb ikki baravar kengayishini ko‘rsatdi; NGda taqsimot amalda o‘zgarmagan. Siljish uchala hududda bir xil yo‘nalishda kuzatildi, ammo uning statistik ishonchliligi maktab darajasidagi klasterlanish kuchiga bog‘liq. Bu natija kompleks modelni mustaqil tekshirishga asos bo‘ladi, mezonlar bo‘yicha sababiy samara va individual rivojlanish haqidagi xulosalar uchun esa qo‘shimcha ma’lumot zarur.

Ta’lim amaliyoti va siyosati uchun quyidagi tavsiyalar kelib chiqadi:

1) O‘quv dasturida bilim topshiriqlarini loyiha, muhokama va refleksiya bilan bog‘lash, mashg‘ulotlar hajmi va ularning bajarilishini protokolda qayd etish.
2) To‘rt mezonning har biri uchun yoshga mos indikatorlar, mustaqil baholash rubrikalari va psixometrik tekshiruvdan o‘tgan vositalarni ishlab chiqish; konstruktiv va ko‘r-ko‘rona vatanparvarlikni farqlovchi shkalani ularga kiritish.
3) Keng joriy etishdan oldin maktab yoki sinf darajasida randomizatsiyalangan pilot dizaynda dastlabki, yakuniy va kechiktirilgan o‘lchovlarni o‘tkazish, individual identifikatorlarni anonim shaklda saqlash.
4) Quyi darajada qolayotgan o‘quvchilarni yorliqlamasdan, ularning individual o‘quv va ijtimoiy qo‘llab-quvvatlash ehtiyojlarini aniqlash.

Vatanparvarlik tarbiyasi samaradorligi haqidagi bahs endi niyatlar darajasida emas, o‘lchov vositalari va tadqiqot dizayni sifati darajasida olib borilishi kerak.

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CONTENTS

So‘zboshi…….. 3

05.00.00 – TECHNICAL SCIENCES

1 **Asqaraliyev O.U., Abdumalikov A.A., Norqo‘ziyev Q.K.** - AVTONOM MOBIL ROBOTLAR NAVIGATSIYASI VA BOSHQARUVI UCHUN SLAM ALGORITMLARINING QIYOSIY TAHLILI (ROS2SIMULYATSIYASIDA)…… 6

2 **Govindh Madhavankutty Ambika, Mrs. Elmira Galieva** - ALTERNATIVE COARSE AGGREGATE IN CONCRETE: A COMPREHENSIVE REVIEW OF RECENT RESEARCH ……..……..… 21

3 **Turg‘unboyev Abrorjon Karimjon o‘g‘li** - ATROF-MUHITNI MUHOFAZA QILISHDA DAVLATLAR EKOLOGIK JAVOBGARLIGINING XALQARO-HUQUQIY ASOSLARI VA MILLIY QONUNCHILIKDA UNI TAKOMILLASHTIRISH YO‘LLARI …… 33

4 **Danaev Alisher** - IMPLEMENTATION POTENTIAL OF SMOG FREE TOWER TECHNOLOGY IN URBAN UZBEKISTAN…… 39

5 **A'zamov Temur Narzullayevich** - FORMALIZING THE DIGITAL LIFECYCLE OF STATE SCIENTIFIC PROGRAMS USING IDEF0 AND IDEF3 PROCESS MODELS…….. 45

10.00.00 – PHILOLOGICAL SCIENCES

6 **Erkaboyeva Nargiza Tojiyevna** - THE ROLE OF AGE AND SOCIAL STATUS IN UZBEK AND ENGLISH HOSPITALITY……..... 57

7 **Jurayeva Iroda Axmedovna** - INGLIZ VA O‘ZBEK TILLARIDA ANTROPONIMIK LUG‘ATLARNING LEKSIKOGRAFIK MODELI VA QIYOSIY TAHLILI …… 62

8 **Turg‘unov Shuxratjon Nozimjon o‘g‘li** - SALBIY EKSPRESSIV BIRLIKLARNING LINGVISTIK VA PRAGMATIK XUSUSIYATLARI……. 67

9 **Turg‘unov Shuxratjon Nozimjon o‘g‘li** - A LINGUISTIC STUDY OF INSULTING EXPRESSIONS AS MANIFESTATIONS OF NEGATIVE EXPRESSIVENESS…… 72

10 **Xidirov Olmosbek Abdurazak o‘g‘li** - DIPLOMATIK TERMINLARNING RASMIY USLUBDAGI VAZIFASI: INGLIZ VA O‘ZBEK TILLARI MISOLIDA …….. 77

11 **Заидова Валерия Муйиновна, Худенко Елена Анатольевна** - ИМАГОЛОГИЯ КАК МЕЖДИСЦИПЛИНАРНАЯ ОБЛАСТЬ ИССЛЕДОВАНИЙ: ИСТОРИЯ, ТЕОРИЯ, МЕТОДОЛОГИЯ ……. 85

12 **Temirova Maqsuda Maxmud qizi** - LUG‘AT TURLARI: O‘QUV LUG‘ATLARI…… 90

13 **Obodon Istamovna Adizova** - FRANSUZ FOLKLORSHUNOSLIGI TARIXI VA UNDA BOLALAR O‘YINLARINING O‘RNI…….. 93

13.00.00 – PEDAGOGICAL SCIENCES

14 **Гульноз Баходирова** - ПРОБЛЕМЫ СООТВЕТСТВИЯ ВЫСШЕГО ОБРАЗОВАНИЯ ТРЕБОВАНИЯМ СОВРЕМЕННОГО РЫНКА ТРУДА ….…… 100

15 **Baxodirova Gulnoz Kamalovna** - OLIY TA'LIM MUASSASASIDA INNOVATSION TA'LIM MUHITI TUSHUNCHASI, MOHIYATI VA TUZILMASI…… 109

16 **Имамов Э.З, Имамов А.Э.** - ПРЕДЛОЖЕНИЯ ПО СОВЕРШЕНСТВОВАНИЮ ПРОФЕССИОНАЛИЗМА БУДУЩИХ СПЕЦИАЛИСТОВ В ИННОВАЦИОННЫХ НАПРАВЛЕНИЯХ ОБРАЗОВАНИЯ …… 116

17 **Jo‘rayeva Gulxayo Sabirovna** - TALABALARNING O‘ZINI O‘ZI TASHKIL ETISHINI RIVOJLANTIRISHNING PEDAGOGIK TAMOYILLARI …… 121

18 **Zulfiya Khabirova** - PROJECT BASED LEARNING TO IMPROVE THE CAREER READINESS OF THE ECE STUDENTS IN ESP: A CASE STUDY FROM AJOU UNIVERSITY IN TASHKENT…….. 127

19 **Nasirova Umida Abdusattarovna** - AQLIY RIVOJLANISHDA ORQADA QOLGAN BOLALARNING INTELLEKTUAL BUZILISHLAR VA ERTA ANIQLASHNING DOLZARB MASALALARI…….. 131

20 **Nurjamol Normatova, Suyunbek Nazarov** - INTEGRATING FOREIGN LANGUAGE EDUCATION AND ARTIFICIAL INTELLIGENCE: AFFORDANCES AND CHALLENGES …..……..……..…… 136

21 **Ravshanov Surat Botir o‘g‘li** - JINOYATCHILIKNI OLDINI OLISH BORASIDA PEDAGOGLARINING HISSASI ……. 142
22 **Ro'zimov Ulug'bek Boltaboyevich** - OLIY TA‘LIM MUASSASALARIDA QURILISH VA ARXITEKTURA SOHALARI UCHUN MUTAXASSISLAR TAYYORLASHDA INNOVATSION USUL VA O‘QITISH TEXNOLOGIYALARINI QO‘LLASH ……... 148
23 **Sadikova Lobar Amirdjanovna** - KASBIY INGLIZ TILINI (ESP) O‘QITISHDA ZAMONAVIY METODLARNING SAMARADORLIGI…… 152
24 **Sadikova Lobar Amirdjanovna** - POST-PANDEMIYA DAVRIDA TA’LIM TIZIMIDAGI O‘ZGARISHLAR VA YANGI YONDASHUVLAR……..…….. 156
25 **Saydaliyeva Gavharxon Avazovna** - KORPUS ASOSIDA SINONIMLARNI O‘QITISH METODIKASI: LINGVODIDAKTIK MODEL VA TAJRIBA NATIJALARI…… 160
26 **Usmanova Gulnoza Uchqunbayevna** - UYUSHMAGAN YOSHLARNI RAQAMLI TA’LIM MUHITIGA INTEGRATSIYA QILISH: GLOBAL PLATFORMALAR VA TRANSCHEGARAVIY KASBIY TRANSFORMATSIYA ……..……..……..……..……..……..……..……..……..…… 164
27 **Ozodakhon Uktamova** - THE INFLUENCE OF DIGITAL COMMUNICATION ON MODERN POLITENESS STRATEGIES…..……..……..……..……..……..……..……..…… 174
28 **Ismailova Nargiza Baxramjonovna** - METHODOLOGY FOR ORGANIZING INDEPENDENT WORK IN THE ESP COURSE FOR LAW STUDENTS: FROM THEORY TO PRACTICAL IMPLEMENTATION…..……..……..……..……..……..……..……..…….. 180
29 **Beknayeva Shahnoza Vladimirovna** - MAKTABGACHA TA’LIM TIZIMIDA FINLANDIYA TA’LIM MODELINI JORIY ETISHNING PEDAGOGIK ASOSLARI…..……..……..…… 185
30 **Supiyeva Buxolida Abduvaliyevna** - FINLANDIYA TA’LIM MODELI PARADIGMASI: FALSAFIY ASOSLAR VA PEDAGOGIK TRANSFORMATSIYA……... 190
31 **Rejaboyev Ahrorbek** - AUTOMATIC TEST CONSTRUCTORS FOR ASSESSING GEOGRAPHIC COMPETENCY……. 196
32 **Jamshid Matnazarov** - ARALASH TA’LIM RESURSLARI VOSITASIDA TALABALARNING KIBERIJTIMOIYLASHUVINI OPTIMALLASHTIRISHNING DIDAKTIK IMKONIYATLARINING DASTURIY TA’MINOTI…….. 200
33 **Ulugov Zafar Atakulovich** - OLIY TA’LIM MUASSASALARIDA KORPORATIV BOSHQARUV MADANIYATINI RIVOJLANTIRISHNING TASHKILIY-PEDAGOGIK SHART-SHAROITLARI….. 207
34 **Muslimova Yulduz Choriyevna** - KOMPETENSIYAVIY YONDASHUV ASOSIDA ASTRONOMIYA FANINI O‘QITISHDA DASTURIY-METODIK TA’MINOT SAMARADORLIGINI PEDAGOGIK TAJRIBA-SINOV ASOSIDA BAHOLASH……. 215
35 **Vaxobov Ma’rufjon Malikovich** - MEHNAT BOZORIDA KASBIY TA’LIM VA MALAKANI OSHIRISH ORQALI ISH BILAN TA’MINLASH STRATEGIYALARI……. 221
36 **Zokirova Sevinch Zokirovna** - THE IMPORTANCE OF PEDAGOGICAL APPROACHES AND MODERN TEACHING METHODS IN ARCHITECTURAL EDUCATION…….. 227
Д.Н.Латипова, К.И.Ахметова - ДИФФЕРЕНЦИАЛЬНЫЙ СОЦИАЛЬНО-ПСИХОЛОГИЧЕСКИЙ АНАЛИЗ ПРОФЕССИОНАЛЬНЫХ ДЕФОРМАЦИЙ В IT-СРЕДЕ……. 232
37 **Akramova Nozima Akramovna** - TIBBIY TA’LIMNING RAQAMLI TRANSFORMATSIYASI: ZAMONAVIY YONDASHUVLAR VA TALABALARNING RAQAMLI TAYYORGARLIGI OMILLARI……..... 238
38 **Temirov Dilshod Sheraliyevich** - JAMOATCHILIK NAZORATINI TASHKIL ETISH BO‘YICHA MILLIY VA XALQARO TAJRIBALAR……. 247
39 **Azamat Jamalovich Kamalov** - TEACHER PRESTIGE AS A SOCIAL-PEDAGOGICAL OUTCOME: A SOCIAL-INSTITUTIONAL COOPERATION MODEL FOR UZBEKISTAN……. 253
40 **Farhod Esonovich Boqiev** - UMUMIY O‘RTA TA’LIM O‘QUVCHILARIDA VATANPARVARLIK KOMPETENSIYASINING TO‘RT MEZONLI MODELI: UCH HUDUDDAGI KVAZIEKSPERIMENTAL TADQIQOT NATIJALARI……. 264

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